

THE PICK

&

SHOVEL

January

1983

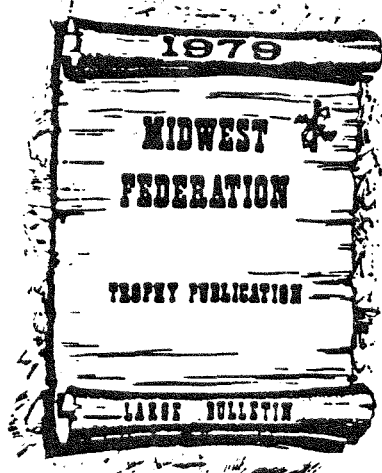
highlights

*in
this issue...*

ROCKS DRAW 'HUNTERS' TO CANADA

CAVES and CAVERNS

EDUCATION, 1983



OFFICIAL PUBLICATION OF

Lincoln Gem and Mineral Club, Inc.

P. O. Box 5342

Lincoln, Nebraska 68505

LINCOLN GEM AND MINERAL CLUB, INC.
P.O. BOX 5342, Lincoln, NE. 68505-0342

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.

MEMBER: American Federation of Mineralogical Societies (AFMS)
Midwest Federation of Mineralogical and Geological Societies (MWF)
Nebraska Association of Earth Science Clubs, Inc. (NAOESCI)
Nebraska Academy of Sciences (NAS)
Community Arts Council of Lincoln (CAC)

Regular Meetings: 4th Saturday of the month, September thru May; 7:30 P.M.
At Nebraska Center, 33rd & Holdrege

1983 ELECTED OFFICERS:

President.....	Howard Taylor, Jr.	910 New Hampshire	Lincoln, 68508	476-3707
1st Vice Pres....	Glenn Lyman	420 N. 56th St.	Lincoln, 68504	464-6089
2nd Vice Pres....	Claude Scott	4917 Normal Blvd.	Lincoln, 68506	488-0739
Secretary.....	Gail C. Scott	4917 Normal Blvd.	Lincoln, 68506	488-0739
Treasurer.....	Phyllis Parks	2435 S. 19th St.	Lincoln, 68502	476-6798
Board Member....	John Abel	2829 Van Dorn	Lincoln, 68502	423-7654
Board Member....	Florence Boring	2836 S. 40th St.	Lincoln, 68506	488-6243
Board Member....	Virginia Green	6120 The Knolls	Lincoln, 68512	423-5032
Board Member....	Frank Rule	6333 Kearney	Lincoln, 68507	466-1697

Nominating Committee -- 3 years: Richard Haney, Wilfrid Wittman
2 years: Vera Lyman, Frank Rule
1 year: Marie Taylor, Jim Parks

LONG RANGE PLANNING AND BY LAWS COMMITTEE:

1 year - Jim Parks, Phyllis Parks
2 years - Marie Taylor,
3 years - Roger Pabian,

STANDING COMMITTEE CHAIRPEOPLE:

Programs.....	1983 Show.....	John Abel		
Education/Publicity.	Roger Pabian	MWF Liaison.....	Marie Taylor	
Hospitality.....	Historian.....	John & Lillie Lewis	Refreshments/Party...	Marj Heedick
Librarian.....	Jim Parks	Scholarships.....	Marie Taylor	
Membership.....	Bob & Mary Walker	Outside Displays.....	Housing/Property.....	Claude Scott
Field Trips/Safety..	Sunshine Corner.....	Susan Taylor	Editor.....	Vera Lyman
NAOESCI Reporter....	Vera Lyman	'83 Rockhound of Year Chairman....	John Abel	

Auditing Committee 1982.....

PICK & SHOVEL STAFF:

Editor.....Vera Lyman, 420 North 56th St. Lincoln, NE 68504
Club News.....Helena Baegl
Sunshine.....Susan Taylor

DEADLINE: 1st of Month of Issue. Original articles may be reprinted if credit is given the author and THE PICK & SHOVEL and a copy of the publication is sent to the Editor.

CALENDAR

January							1983
S	M	T	W	T	F	S	
						1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	31						

GENERAL MEETING: Saturday, January 22, 1983
& SWAP 7:30 P.M.

5th ANNUAL SWAP: Saturday, January 22, 1983
beginning at 12:00 Noon 'till 7:00 P.M.
Silent Auction in conjunction with this meeting
(Please bring your donations)

PROGRAM: MWF Color Slide presentation by
Roger Pabian entitled:
"How To Make a Jade Bowl"

28th ANNIVERSARY of LGMC: Birthday Cake and
coffee will be served after meeting

BOARD MEETING: Thursday, February 3, 1983 7:30 P.M.
910 New Hampshire (Taylor home)

SHOW MEETING: Committee members will be receiving call as
to day, time and place.

* * * * *

FEDERATION SHOWS - 1983

June 10 thru 12, Oklahoma City, OK
ROCKY MOUNTAIN

June 17 thru 19, San Jose, CA
CALIFORNIA

July 8 thru 10, Charleston, WV
EASTERN

July 14 thru 17, Kalamazoo, MI
MIDWEST

August 4 thru 7, Spokane, WA
AMERICAN/NORTHWEST

November 11 thru 13, Dallas, TX
SOUTH CENTRAL



* * * * *

If living conditions don't stop improving
in this country, we're going to run out of
humble beginnings for our great men.

- Sunshine Magazine

If you ever find your cloud with the silver lining, don't tell
the government. They'll find some way to tax the metallic con-
tent.

- Anonymous

NEW YEAR



Hello from the
Sunshine Corner:

Our lives are filled with simple
joys and blessings without end.
One of the greatest joys in life
is to have or be a friend.

* * * * *

No cards sent this month ---
1983 is off to a healthy, happy
beginning!

If anyone hears of an illness, accident, whatever - let me know!

Suze Sunshine

* * * * *

FROM YOUR EDITOR:

RECIPE FOR A HAPPY YEAR

- 2 Cups of Friendship
- 4 Cups of Love
- 2 Cups of Forgiveness
- 3 Cups of Loyalty
- 3 Spoons of Tenderness
- 5 Spoons of Hope
- 6 Quarts of Faith
- 2 Barrels of Laughter

Take Friendship and Love and mix them with Tenderness.
Blend thoroughly with Loyalty; add Hope and Faith.
Sprinkle with Forgiveness. Serve with abundant Laughter.

- via Slab & Gab, Jan. '82

FAREWELL TO '82

The year just past is like a door
Shut tight and locked forevermore;
Gone is the year of Eighty-Two--"
No longer yours, no longer mine;
Some days were good, some days were bad,
Some were joyful, and some were sad;
I made mistakes---and so did you;
What has been done, we can't undo;
But we can pray and God will hear;
Help us improve in this New Year!

- Roy J. Wilkins

President's Message

I wish to take this opportunity to express my sincere appreciation and to say "thank you" to the members of the Lincoln Gem & Mineral Club for showing their confidence in me by electing me as their club president. This responsibility is something that I have looked forward to for quite some time. I have learned quite a lot from some "very good" leaders and I know that I have some very big shoes to fill.

This year the Lincoln Gem & Mineral Club will host it's 25th Annual Gem & Mineral Show. This is a very outstanding accomplishment for our club, and one that we should all take a lot of pride in. I hope that all club members will participate in this show! Work is progressing quite well but there is a lot of work that needs to be done and a lot of people are needed to do it. Our Show Chairman, John Abel, will be giving us reports as work on the show progresses. All club members wanting to volunteer their time and talents please talk to John. We have some added responsibilities this year since we will be hosting the annual show and convention of the Nebraska Association of Earth Science Clubs, Inc. in conjunction with our club show.

The January meeting will be preceded by our 5th Annual Mid-Winter Swap. The swap will be held in the Scottsbluff & Minden rooms of the Nebraska Center for Continuing Education, 33rd & Holdrege. The swap will begin at 12:00 o'clock noon and run until 7:00 P.M. Swap-per bucks will be available. At least one silent auction will be held with the proceeds going to the Nebraska Academy of Sciences. Donations of materials for the silent auctions will be greatly appreciated.

The January meeting will be the 28th birthday of the Lincoln Gem & Mineral Club. A Birthday cake and coffee will be served. I hope many club members will join us for the January meeting.

1983 membership dues were due January 1, 1983 and become delinquent January 31, 1983. Dues may be paid to Treasurer, Phyllis Parks at the meeting or can be mailed to LGMC, P.O. Box 5342, Lincoln, NE. 68505-0342.

You, the members of the Lincoln Gem & Mineral Club, have elected another group of officers and a board of directors that are interested in working for you. Please let us know about the things that are of importance to you.

Jim

HAPPY NEW YEAR

Christmas Party --

The annual Christmas Party of Lincoln Gem & Mineral Club was held on December 11, 1982 at the Nebraska Center.

Thirty seven people attended, which included 6 guests and Dr. Lloyd Tanner. They enjoyed a delicious meal of salad, relish plate, baked potato, turkey with dressing, corn o'brien, and cranberry sauce, with pumpkin pie for dessert.

Dr. Lloyd Tanner from the University of Nebraska presented an interesting slide program of the "Paleo-Indian Site in Garden County, NE."

Prairie Ranch Site was opened in 1978. Dr. Tanner was working with Dr. Bertrand Schultz and Dr. Milan Stout at that time. Evidence of Paleo Indians, Bison and other extinct animals were found. Interesting slides were shown where Bison had been driven over a cliff. Many skeletal bones were found at its base. Indications were that the Indians were very hungry. As many as 18 Bison had been driven into a swamp area. They had been eaten at that location. Many of the bones had been split to eat the bone marrow.

The giant Bison had a horn spread of as much as 8 feet. They were able to tell from the size of the Bison horns how many years ago they lived. They can tell by maturity of the jaw, the age of the animals.

They were, however, unable to find any skulls of the Indians. A number of slides were viewed showing skin scrapers of various types and points. From all indications, the Indians used all parts of the Bison; meat for food, skins for shelter and clothing, bones for tools.

A special 'thanks' to Dr. Tanner for this fine presentation.

Roger Pabian presented Helena Baegl with a plaque and life membership for her service to the Club all these past years.

Phil Abel, a junior member, was then presented with a trophy for the "Rockhound of the Year Award". What a surprised young man! Congratulations, Phil.

Roger then presented the gavel to our new President, Jim Taylor.

THIS IS A FIRST FOR LINCOLN GEM & MINERAL CLUB...A son to follow in his father's footsteps to the Presidency. Your family has every right to be proud, Jim. Our Best Wishes go out to you!

Jim thanked the Club for their vote of confidence, and as his first duty as the new President, he presented Roger with a plaque for his service as President during the year past.

An enjoyable evening came to a close with a gift exchange.

- Your Editor

Lincoln Gem & Mineral Club, Inc.
Board of Directors December 1, 1982

Board of Directors meeting called to order by Roger Pabian, Nebr. Hall at 8:00 P.M. with 6 board members, Vera Lyman, Editor and 2 incoming members present.

The minutes of the November meeting were read and approved as read.

The Treasurer's report was given:

Cash on hand	\$ 20.00
F.N. 3 Cert. of Dep	15,000.00
F.F. Cert. of Dep.	5,012.84
Nat'l Bank Comm. ckg.	940.49

Income since 11/4/82

1983 Dues Pd. advance	144.00
Memorials/Glen Ulrich	55.00
Christmas Dinners	123.00
Silent Auction Nov. Mtg.	75.40

Expenses Paid

Postmaster	20.00
------------	-------

Approved by Virginia Green, 2nd Jim Taylor

Bills read by President Roger Pabian

Vera Lyman, P&S mailing	22.24
U of N printing P & S	43.03
Postmaster Bulk Mail fee	40.00
Comm. Arts Council Memb.	10.00
Postmaster P.O. Box rent	26.00

Jim Taylor approved, Virginia Green 2nd.

Pre-approved show expense for pins (200) and patches (100) discussed and money given for order.

Motion by Florence Boring, 2nd by Virginia Green to accept fund for Glen Ulrich presented by Evelyn Ulrich.

Motion Virginia Green, 2nd Florence Boring to approve a \$25.00

Memorial for C. Ray Waddle, Life member.

Jim Taylor motion Virginia Green 2nd to approve application for membership by James Null.

Motion Virginia Green, 2nd Florence Boring that the club pay the dinner tickets for guests Dr. & Mrs. Lloyd Tanner.

Motion Jim Taylor, 2nd Virginia Green, Dr. & Mrs. Schultz be extended an invitation to the Christmas Dinner.

Virginia Green made motion to adjourn.

Next meeting to be held January 6, 1983, location announced later.

Respectfully submitted,

Gail Clare Scott, acting for secretary Nelda Oliver.

Lincoln Gem & Mineral Club, Inc.
Board of Directors January 6, 1983

The Board of Directors has proposed the following budget for 1983 for your approval.

Programs	\$ 200.00
Historian	10.00
Librarian	100.00
Membership	10.00
Field Trips	-----
Sunshine Corner	25.00
Pick & Shovel (Printing/Postage)	800.00
Refreshments	100.00
Scholarships	250.00
Outside Displays	25.00
Housing/Property	25.00
Junior Activities	50.00
Officer Performance Bond	60.00
Meeting Hall (Rent)	360.00
Dues to Affiliate Organizations	125.00
P.O. Box Rent	26.00
Bulk Mailing Permit	40.00
Awards	125.00
MWF Delegate (Michigan)	100.00
Miscellaneous Postage/Supplies	100.00
	<hr/>
	\$ 2,531.00

ROCKS DRAW 'HUNTERS' TO CANADA

By the millions a new breed of hunters is prowling the land--and also the beds of streams and the shores of lakes--every dry sunny weekend in every state in every season, except less in winter. And these hunters spend their vacations doing the same--small armed groups consisting not of Dad and some of his pals, but of Dad and Mother and all their offspring, including pre-school youngsters, all hunting the plentiful quarry in exciting new areas.

Their "arms" are not guns, they are chisels, hammers, picks, spades. Their quarry is rocks or hunks of minerals, or precious and semiprecious stones, all waiting to be found and shaped and polished, to be turned into jewelry, or ornaments such as bookends or tabletops, or added to collections.

At vacation time, rock-hunting families in increasing numbers are heading north to the western part of the Canadian Province of Ontario, not only to seek the famed agates along the wild north shores of Lake Superior and Huron and along the beaches of the Manitoulin Islands, but also to explore the countryside northeast of the city of Thunder Bay (formerly the twin cities of Fort William and Port Arthur), an area containing one of the world's great deposits of the semiprecious genstone called amethyst.

In the same province, there also is an exciting new quarry, locally called puddingstone -- actually a jasper conglomerate-- that is found farther to the east, on St. Joseph Island, the westernmost of the Manitouline, and also along a 50-mile band near the town of Bruce Mines, Ont., both sites about 35-40 miles east of the Canadian Zoo.

Most rockhounds, even those who have been collecting for years, never have heard of puddingstone--they know it well when the word of its polished beauty finally gets around, but the very thought of the possibility, in the Thunder Bay area, even the probability--of returning home with great crystals of amethyst sends a rock-hounding family into a state of ecstatic anticipation.

Amethyst is a colored crystalline variety of the silica mineral called quartz, and often is built up of dark and light layers. To the transparency of quartz, amethyst brings the beauty of color in shades of lavender, lilac, dark purple, and deep violet. For the most part it displays deep rich tones of dark blueish purple, but the amethyst's color ranges all the way to reddish violet and very pale tints.

Tourists to the Thunder Bay area will find necklaces, pendants, bracelets, rings and earrings fashioned from the colorful genstone, as well as bookends, clocks, ashtrays, and pen sets. Visitors also buy great chunks of amethyst to enhance patios and fireplaces.

Six mines are open to visitors and at least three of them welcome rockhounds to pick and dip for their own specimens. Because amethyst is surface-mined, it is not necessary to descent into mining shafts to find it. Among those favoring rockhounds is Ontario Gem Amethyst Mine, 40 miles east of Thunder Bay and 25 miles west of Nipigon.

ROCKS DRAW 'HUNTERS' TO CANADA - continued

A free brochure, "Collecting Ontario's Amethyst" is available by writing the Ontario Ministry of Tourism, Dept. C.T., P.O. Box 5000, Thunder Bay, Ont., PTC5G6, Canada.

And then there is puddingstone, rounded pieces ranging in size from beans to giant boulders -- bright red and brown pebbles of jasper mixed with pebbles of gray and white quartz and cemented by nature into a ball of white quartzite -- that are to be found in the fields, gravel pits, and on the shoreline of Bruce Mines and the St. Joseph Island area, east of Sault Ste. Marie, Ont.

Unique to Ontario's Algoma district, the jasper conglomerate is popularly called puddingstone because to early English settlers its imbedded dots and blobs of brilliant red and reddish brown against a white or gray background looked like suet pudding.

For more than 100 years the raw but attractive boulders have been used in the area as garden ornaments cemented in fences, but it is only in the last few years, ever since a transplanted Newfoundlander named Harry W. Courtney began slicing the stone to fashion charms, necklaces, and bracelets, that its spectacular inside beauty had been revealed -- splashes and specks and spots not only of red and brown, but orange, green, black and blue, in a glazed and patterned background.

A former boat builder, Courtney had become a rock collector while stationed on the south coast of Britain during WW II, so it was only natural that he pick and polish some small puddingstones when he returned to St. Joseph Island to set up a craft shop. The next step was a mechanical tumbler to polish the smaller pebbles. Then he built and set up a diamond-bladed stone saw with a slow-paced, screw-drive feed, giving him the ability to cut bookends, coasters, hot-pot plates, and clock faces. Thickness in the harder-than-steel quartz is possible down to 1/16th of an inch.

Tourists who come to Courtney's gift shop like the result (he can barely keep up with demand) as do other rockhounds who now scour the area for puddingstone pieces of their own. He may be reached: Harry W. Courtney, C.T., Richards Landing, Ont. POR 1J0, Canada.

By Kermit Holt, Chicago Tribune
November 21, 1981

Submitted by Helena Baegl



AMERICA is free and
beautiful!.
Let's do our part to
keep it that way.

PLEASE DON't LITTER!

CAVES and CAVERNS

"A hollow in the earth, especially one opening more or less horizontally into a hill, mountain, etc." is said to be a cave. A cavern is larger, but there is no definite line of distinction. They are mostly natural formations dissolved and scoured out by wind and water, usually in limestone, or by shoreline wave action.

Some caves may be formed as holes or tunnels in lava beds. They may occur after a volcanic flow of molten lava cools and hardens quickly at the surface, with liquid streams beneath the solid layers. When they flow out at a lower level the hollow tube remains. We visited some like that in the Lava Caves Park near Bend, Oregon in 1959.

Robber's Cave in Lincoln is in sandstone, probably of natural origin, but later enlarged by humans. It is not well known in recent years, but in early Nebraska history it was a very popular local place to visit. College students had school organization functions there, wiener roasts, frat parties and class picnics. There was a time when nearly every rural home had its own cave for food and produce storage, before modern methods. The old "cyclone cave" was a safe haven in stormy weather. Eastern Nebraska loess subsoil made good cave sites.

Some rockhounds are also speleologists (spelunkers) whose hobby is to explore and study caves; and there is an increasing number of tourists and vacationers, not afflicted with claustrophobia, who enjoy them too. Modern cave attractions usually have well lighted, easy passage ways with no "fat man's lament" crawl spaces to squeeze through. Some have yummy refreshment stations for tired, hungry, thirsty patrons.

I am not a speleologist, but as an interested tourist I have been through several well known caves, beginning with "Wind Cave" in the southern Black Hills in 1920; then with few facilities. We each carried a lighted candle, inserted in the wall of a metal lard pail. The guide carried a gasoline lantern, and a roll of magnesium ribbon to illuminate special features. At that time there were no elevators, no snack bars!

When atmospheric pressure is high in the Wind Cave area, the air blows into the cave, and reverses when it is low. An early day cowhand discovered it when his hat was sucked into an inconspicuous hole in the ground. This was later enlarged to permit access by people.

The "Cave of the Winds" near Colorado Springs is small, but attractive. I remember a rather amusing feature there: ladies wanting a husband were told to add a hairpin to the already growing pile and they would soon meet their future spouse. The stack of hairpins was already shoulder high, 62 years ago. I have no report to give about the current 1982 situation.

- Continued

CAVES and CAVERNS - continued

We visited "Timpanogos Cave" near Salt Lake City, Utah in 1929. It is also easily traversed and attractive. The guide referred to a huge stalactite, with red back-lighting, as "The Great Heart of Timpanogos", and he said it was a woman's heart. of course, some one would then ask why it was of the feminine gender. The answer from the male chauvinist guide was, "Because it is so hard and cold!" There seemed to be no argument.

Carlsbad Caverns in S.E. New Mexico provided our cave thrills in 1965; the largest we have visited together. (Myrtle and our daughter, Kay, visited Mammoth Cave, Kentucky in the late 1970's while Kay was a graduate student at Bowling Green.) Carlsbad Caverns and Mammoth Cave, both underground giants, probably differ in their background formation causes. Carlsbad may have been dissolved out by action of water charged with sulfur from nearby natural gas and oil deposits. Mammoth probably was more of the usual type, where water and carbon dioxide were the solvents; and powerful "acid rain" thus formed would "eat up" the rocks, probably over eons of geologic time.

"Underground Worlds" by Time-Life Books Inc., 1982, is fascinating reading for anyone interested in natural caves and caverns, world-wide in its scope, very well illustrated, and written in understandable terms. Some elementary knowledge of chemistry and geology helps, and so does biology. Cave life differs greatly from that above ground, though alike in fundamental principles. Animals tend to become sightless, replacing vision with super-sensitiveness to vibrations and touch. Very delicate balances of food, water and waste cycles are necessary. Some living things have adapted to the complete cave environment, and some, for example cave bats, spend part of their time inside and outside the cave. Each form of life depends on other forms for its existence. That fact of ecology seems to be universal. Even bat guano is a very necessary part of the life cycles inside the caves, as well as for human agriculture.

The above-mentioned book gives a detailed account of the cave tragedy in 1925 which cost the life of Floyd Collins. At that time radio news broadcasting was just beginning (no TV. yet), and one of the world's most exciting news stories came out of the Kentucky cave country. World-wide headlines carried day-by-day progress of the futile attempt to extricate the lone cave explorer from a narrow crawl-space where he had been wedged by loosed rocks. Great crowds of people assembled outside the cave. Temporary hot dog stands sprang up. The rescue crews worked day and night. Finally after several days of unsuccessful efforts by relatives, friends and others, Floyd Collins died. His body was not removed for several years. Old timers will remember this, one of the all-time great human-interest stories.

- Continued

CAVES and CAVERNS - continued

Though I was interested in visiting several caves during my younger (and less rotund) years, I never had the ambition to become a spel- eologist, or even a spelunker. The nearest to it was to crawl un- der our family corncrib to retrieve a nest of Plymouth Rock eggs (not thunder eggs), hidden there by a seclusive, broody hen. That induced no local hot-dog stands---only a hot biddy; she was furious!

- Submitted by J. D. Young

* * * * *

DON'T FORGET!

DUES ARE DUE!

Dues are due, and what do you get?
A year filled with fun and friends - You bet!
You learn about rocks and minerals, too;
There's oodles and oodles of things to do.

There are field trips and shows and programs galore.
Now what do you mean.. "Can't we offer you more?"
Sure, there are scads of books you can read
To keep your old noggin" from going to seed.

There are auctions and door prizes and raffles to boot;
If you are luck enough, you can win lots of loot.
You do not have to remember...you are reminded to meet
By your monthly bulletin which we hope is a treat.

There are displays at each meeting for you to see
And hot coffee and cake, for cake eaters like me.
You can visit with friends to your heart's content,
So PLEASE PAY YOUR DUES - 'TIS MONEY WELL SPENT.

So plunk down your money and smile when you do,
'Cause there are lots of pleasures in store for you.
Can't think of a way you get more for your dough
Than by joining a rock club with get up and go.

Via Jaspilite 2/82

* * * * *

A diamond in the rough is a diamond sure enough
For before it ever sparkles, it has the diamond stuff.
Of course, someone must find it or it never would be found.
And then someone must grind it or it never would be ground.
But when it's found and when it's ground, and when it's polished bright,
The diamond is everlasting just sending out its light.
Oh, members of our Rock Club, don't say "I've done enough,"
The newest member in our club may be a diamond in the rough.

Via Jaspilite 2/82

EDUCATION, 1983

In my closing presidential message, I lamented over my failure to have developed a strong educational program. Your new president has given me an opportunity to rectify this situation. The educational program for 1983 will entail a rock of the month and an honors night at each meeting. The rock of the month will be featured in the bulletin each month. The second educational page will deal with the area, federation, country, state, system, etc. that will be honored. For example, if one does not have any metallic sulfides to show in April, one should bring something that represents the Pennsylvanian System--a coral from Weeping Water, a leaf from Mazon Creek, etc.

Following is a list for the year:

MONTH	ROCK OF THE MONTH	HONORS NIGHT
January	Jade	South Dakota
February	Soft Carbonates, Malachite, Rhodochrosite, Dolomite	Iowa
March	Sagenitic Agate	Eastern Federation
April	Metallic Sulfides	Pennsylvanian System
May	Petrified Woods	Canada, including Nova Scotia, New Brunswick, etc.
June	Plume and Dendritic Agate	Africa
July	Phenomenal Stones, Stars, etc.	Australia
August	Quartz	Cretaceous System
September	Faceting Material	Montana
October	Opal, Tourmaline	Rocky Mountain Federation
November	Fortification Agates	Brazil
December	Gems and Religions	Europe

Remember that you can gain points toward the Rockhound of the Year award by bringing rocks for display to the regular meetings. Display cases will be furnished each month.

Also, the club's library has numerous books that have a lot of material about either the rock of the month or the honors area of the month. See our club's librarian, Jim Parks, and study ahead to get the most out of the monthly educational program.

Roger Pabian
Education Chairman

SOUTH DAKOTA GEM OCCURRENCES

South Dakota is probably one of the more important states to the gem collector. Though the state is best known for the Black Hills, several other areas are quite important to the collector.

Most of eastern South Dakota is covered by either glacial or wind-blown loess deposits. Low lying areas may have outcrops of late Cretaceous Age chalk deposits, most of which are members of the Niobrara Formation. These chalk deposits may contain fossils of marine organisms, including foraminifers, clams, ammonoids, shark remains, and an occasional mosasaur or plesiosaur. The glacial deposits sometimes yield Lake Superior agates although small, honey-colored agates that probably originated in the Lake Winnipeg area of Manitoba are more abundant. Some of the latter may have very fine dendritic patterns. Glacial deposits also yield some jaspers and some petrified wood.

The Black Hills were formed by intrusions of late Precambrian age plutonic and metamorphic rocks into younger, overlying marine and continental sedimentary rocks of the Paleozoic and Mesozoic. The plutonic rocks may be cut with numerous coarsely crystalline pegmatites that yield some tourmaline. This tourmaline may be of a very fine blue color, but it is usually badly fractured and has numerous inclusions so little is faceted. The metamorphic schists sometimes contain garnet crystals but most of these are too small for gem work.

The late Paleozoic sedimentary rocks, especially those of the Pennsylvanian System, sometimes contain fortification agates, most of which are known to collectors as Tepee Canyon agates. These are the parent material of various fortification agates found in the Tertiary Age sediments in the Oligocene Chadron Formation which was derived from the older Black Hills and Front Range. These agates have numerous names such as Fairburn, for Fairburn, South Dakota, State Park agates, Lane Johnny Creek, etc. At best, most of these names are synonyms and present a very confusing terminology to the agate collector.

The Cretaceous Age sedimentary rocks have provided some very fine mineral and fossil specimens. Large septarian nodules in the Carlile Shale have yielded some exceptionally fine dog-tooth calcite and superb, yellow-orange barite crystals. The Pierre Shale has provided some exceptionally well-preserved ammonoid fossils and many of these are very important for correlation of Cretaceous age strata around the world.

The badlands area has yielded some very fine fortification agates, as mentioned above. Fracture systems in the Oligocene rocks may be filled with veins of chalcedony. Some of this is gem grade. Some very lovely black and white agates were once collected from an area that is now on the Badlands National Monument.

Display cases will be available at the meeting. Bring a few specimens from South Dakota to share with your fellow collectors.

Roger Pabian

JADE

Jade is unique among the world's gems because two distinct minerals, each having somewhat different chemical and physical properties are included in its scope. Jade is possibly the first gem material to have been used by humans. Jadeite adzes have been found associated with paleolithic man in Poland. Gem use of jade is much later, however, and the Chinese began using this material about 3,000 years ago.

Jade includes the minerals jadeite and nephrite and the properties of these minerals are listed below. Both minerals are included in jade largely because they have nearly identical lapidary characteristics.

	JADEITE	NEPHRITE
Composition	$\text{NaAl}(\text{SiO}_3)_2$	$\text{CaMg}(\text{OH})_2(\text{Si}_4\text{O}_{11})_2$
Crystal system	Monoclinic aggregate	Monoclinic aggregate
Hardness	$6\frac{1}{2} - 7$	$6 - 6\frac{1}{2}$
Toughness	Very tough	Extremely tough
Specific gravity	≈ 3.35	≈ 2.95
Refractive index	1.66-1.68	1.606-1.632
Colors	White, yellow, olive, green, black, etc.	Olive, green, black, etc.

Some jade fanciers grade jade on the basis of color first and then smoothness, lack of inclusions, etc., although I prefer the more traditional approach of grading smoothness first and placing color lower on the scale. All things being equal, the emerald green jade is more desirable than the apple green, etc.

In North America, jade is found in Wyoming and in British Columbia in Canada. These occurrences possibly helped speed up the construction of the transcontinental railways because coolie labor came to both the United States and Canada with the vision of finding valuable jade during their off hours.

Jades were once very popular materials among the home lapidary worker and gem shows of the late 1950's and early 1960's were well stocked with jade, some dealers carrying only this material. Jade has declined some in popularity since then.

The development of diamond tools has made jade somewhat easier to work as much of it has a tendency to undercut badly. When buying jade slabs, the material that appears frosty is usually the finest and those slabs with sparkly textures usually undercut. Literature abounds with formulas for polishing jade, but my experience shows that fine jade can be handled almost as casually as an agate, being sanded with old paper and polished with tin oxide on leather or even felt.

Bring some examples of jade to display at the meeting. Cases will be furnished.

Roger Pabian

DUES ARE DUE

Remember; dues are due January 1st and delinquent January 31st. If your dues are not paid by February 1, you will not receive the February issue of the Pick & Shovel.

Cost of membership dues published on inside back cover of Pick & Shovel.

Please pay your dues to club treasurer, Phyllis Parks at our general meeting, January 22, or mail to: LGMC, P.O. Box 5342, Lincoln, NE 68505-0342.

* * * * *

THE MIDWEST FEDERATION SEAL

Early in the MWF's 40-year history, the Executive Committee decided to adopt this Seal. The doubly terminated quartz crystal was suggested because quartz is one of the most abundant materials on our planet and the Midwest is a prime source of quartz.

The doubly terminated crystal is within a circle, a symbol of continuity, as the WMF founding fathers expected the Federation to continue on until the end of history, as do we, the current and future members of the Midwest Federation. The crystal is positioned within the circle so that one termination points to between one and two o'clock and the other between seven and eight o'clock.

The letter "M" is placed in the upper left quadrant and the letter "W" in the lower right quadrant of the circle. The letter "F" shall be placed in front of the quartz crystal and shall extend from the top to the bottom of the circle, with the center bar dividing the crystal into equal parts, according to the official description of the seal. The colors used are red, white and blue red for the background, white for the quartz crystal, and blue for the lettering.

Provided by Larry Nawojski, MWF Past Pres.
- via MWF Newsletter Sept. '82

* * * * *

NEWS ON MINERAL LOCATIONS AND MINES

Arthur E. Smith, Geologist

This summer I was told by two collectors about their visits to the same mine at different times during the same month. The results of these trips were strikingly different. Neither party knew of the others visit and I do not know the sequence of the trips. The only question I ask is: "Which would be your trip?"

The mine is not a famous name on Rocky Mountain mineral specimens but some good material has been available in recent years. The location of the mine is such that you would probably find it only if you were looking for it or accidentally stumbled on it. It can be driven to by car but is far from the main highway. Production from the mine is lead, zinc, silver, and gold. It had been recently shut down and put on standby to wait for better metal markets.

- continued

NEWS ON MINERAL LOCATIONS AND MINES - continued

Party #1 consisted of 2 avid and serious mineral collectors both males, geologists and over 30 years of age. They knew the mine was not operating so parked along the road away from the buildings and casually prospected the loose material and dumps. After a short time their investigations were interrupted by two men who came charging out of the mine spoiling for a fight. They were told to leave or else they would make them leave faster than the speed limit. No amount of calm reasoning or explanation did anything to change the situation. Finally the two collectors knew that their situation was hopeless and unless they wanted a fight they had better leave. So they left with little better than nothing to show for their trip and a bad feeling about the whole situation.

Party #2 consisted of a serious collector who has been around for awhile, a retired geologist. He first went by the office of the mine and politely asked to see the superintendent or whoever was in charge. After explaining to this person about his desire to do some collecting and showing a few small microminerals in boxes, he was told politely that he would not be given permission to collect. However, their geologist who was laid-off several weeks ago still had access to the mine workings and maybe he could help. The result was that for a modest fee he gained access to the mine's underground workings and had a knowledgeable guide with him through the day. Not only did he have good collecting but he learned much about the mine, its geology, history, mineralogy, and operation. Truly it was a memorable experience even for a veteran collector.

About now you expect to hear that the moral of the story is to always introduce yourself at a mine and you will be treated well and have good collecting there for the day if not forever after. Unfortunately that is not true. I can tell you of one mine that I collected on the dumps for several years. I never asked anyone and was never bothered. On one occasion when there was a little larger group than usual I decided to ask permission. It was so vigorously and emphatically denied that I have not been back.

The point I want to bring across is that when you want to collect at an operating mine or construction site, try to evaluate the situation. If the area is posted there is no question that you ask permission first. If not posted and the area is safe and the mine is operating some collecting will probably be tolerated because most workers are probably too busy to bother with you. If the mine is shut down for any reason but still in operating condition, chances are there are maintenance men or watchmen on duty. Checking with them is a must because their business is to know what you might be doing and if they decide that your are up to no good, no amount of talking will change their mind. You can't always make the right decision but if you think first and assess the situation your chances of doing the right thing first will be better. Young children and mine collecting seldom ever mix anywhere. (a definite #1 "no-no").

Midwest Federations NEWSLETTER

Published monthly except July and August as a service to member clubs. All news and articles should be sent to the Editor, Mrs. Bette Smith, 10507 Mary Ann, Zeeland, MI 49464. All subscription orders should be sent to Parrot Printing Service, 2125 Forest Avenue, Des Moines, IA 50311.



PRESIDENT
MRS. DIANE DARE
747 E. Blackford Ave.
Evansville, IN 47713

1st VICE PRESIDENT
REX WEBB
2600 W. 87 1/2 St.
Bloomington, MN 55431

2nd VICE PRESIDENT
JAMES EDWARDS
306 Somonauk
Park Forest, IL 60466

SECRETARY
MISS JEAN REYNOLDS
107 Tuttle Ave.
Clarendon Hills, IL 60514

TREASURER
WILLIAM PARCH
P.O. Box 180
Fountain City, WI 54629

HAPPY NEW YEAR

JANUARY 1983.- Issue No. 230

HAPPY NEW YEAR

GEMSTONE PACIFICA - TOUR OF NEW ZEALAND

Plans are underway for a Rockhound's trip to New Zealand, starting February 22nd, 1984, and lasting 22 days. John and Gwyneth Cooke of Hamilton, New Zealand, will host this tour which will be made by motor coach in New Zealand. An exciting highlight will be that on 'Day 3', we will attend the first International Gem Show, Gemstone Pacifica, in Auckland. This show will have displays of all the South Pacific Islands.

The tour will also be hosted at three Mineral Clubs of New Zealand for a get together and rock swap. Other features will be trips to favorite hunting spots, Rock Shops, viewing private collections along the way, scenic visit to Te Anu and the famous Milford Sound boat trip, Christchurch and the gold mines, The Paua Shell factory, Museums, Jade shops at Hokitato, famous Waimaito Glow Worm caves, formal flower gardens, and many other places.

This trip will be limited to thirty persons and while age is no hindrance, it will be nice if the travelers are interested in the earth sciences.

For further information, your contact in the U.S.A. is LUCILLE BISHOP, Missouri State Director of MWF, 2465 Mullanphy Lane, Florissant, MO 63031 phone (314) 921-2557

PRESIDENT'S MESSAGE ..FROM DIANE DARE

The magician DOUG HENNING says, "The art of a magician is to create wonder. If we live with a sense of wonder our lives will be filled with joy." And JOEL VANCE wrote in Missouri Conservationist, "There is much fragile, almost hidden beauty in the outdoors, if only we will trouble to look for it."

In our hobby, there is so much to look at, to wonder about, to learn. Where does one begin? Many of our Committees can help, such as:

Program Requests - LOUISE STINNETT, 29462 Aspen Drive, Flat Rock, MI 48134

Education - KATHERINE NELSON, Dept. of Geo. Sciences, U. of WI, Milwaukee, WI 53201

Library - BERNICE MCCLOSKEY, Box 527, Elm next column please...

Grove, WI 53122

Special Displays - ART MILLARD, 1512 Ford, Zion, IL 60099

A change in Committee Chairman - ARMIN STEIN - HAUSER has resigned from the Geology Committee and ROGER PABIAN will assume the job of Chairman.

HELEN NEUMANN has been reappointed to the AFMS Safety Committee as the Midwest Representative.

Remember, Discover, Appreciate, Recognize and Experience this hobby!

5 ARRESTED IN ST. JOHNS, ARIZONA, FOR THEFT OF INDIAN ARTIFACTS

In May 1982 it was reported in a newspaper in Arizona that five people were arrested in April for digging in ancient Indian ruins and removing artifacts. Evidently, if the ruins are on private property the apprehended cannot be tried on the state and federal antiquities laws but if the ruins are on state or federal land they can be prosecuted under the antiquities laws. Part of the above five people were on private land and part on land owned by the state. No dates has been set for the trials.

LEO LEARNED, Assistant State Director from Ohio, voiced his opinion as such: If the material is collected on a Sacred or Holy place or site, it should not be disturbed. But how do we know if it is a special place, it could be a garbage dump, of which I've ran across a number of these in my hunts. My beef is, if not picked up for collections, and educational value, they can become destroyed by the elements, by plowing by the farmers, and in many places the cattle can destroy the pottery, as in three places I've collected. These are some of my thoughts and observations over the years as a collector.

DID YOU KNOW!!! FACTS ABOUT THE MWF

The Membership Committee handles all correspondence necessary to assist new societies in becoming Federation members.

The Bulletin Editor's Aids Committee encourages clubs to publish bulletins, helps editors produce better bulletins and has charge of an annual bulletin contest.

SCHOLARSHIP COMMITTEE REPORT

The Sunday Scholarship Auction held during the St. Paul 1982 Show and Convention netted \$1189.15 for the Scholarship Foundation. 38 Midwest Clubs participated and one club from California. Credit has been recorded for these clubs in our Midwest record book and the California Federation notified. Participation in the Scholarship Auction is truly an easy way for a club to donate to the Foundation and at the same time advance their Scholarship Status.

Since my report at St. Paul we have received over \$3190 (including the Auction receipts) for the Foundation. The following clubs have advanced their status as follows:

Indian Mounds Rock & Mineral Club	1000%
Calumet Gem & Mineral Society	1600% - 1700%
Peru Rocks & Minerals Club	4000% - 5400%
Minnowa Rock & Gem Club	3600% - 3800%
Midwest Mineralogical & Lapidary Society	1800%
Lincoln Gem & Mineral Society	1700%
Central Michigan Mineral & Lapidary Society	600%
Duneland Rock Club	1800% - 2100%
Coulee Rock Club	1200%
Des Moines Lapidary Society	1100%
Little Crow Lapidary Society	200% - 500%
*Gem City Rock Club	1900%
*Duneland Rock Club	2200%
*Minnowa Rock Club	3900%
*Des Moines Lapidary Society	1200%
*Lake Agassiz Rock Club	800%
*Park Forest Earth Science Club	500%
*Minnesota Mineral Club	500% - 600%
*Bay de Noc Gem & Mineral Club	300% - 500%
*Esconi	600%
*Tulip City Gem & Mineral Club	600% - 700%

* From Scholarship Auction

A Special Thank You to the Good Earth Mineral Society for when they disbanded they gave the Balance in their Treasury to the Scholarship Foundation. Also a thank you to all the Midwest Clubs for supporting the Scholarship Foundation.

KATIE STEINBRENNER, Mwf Scholarship Chairman

TOLSON RADLOFF

TOLSON RADLOFF, 83 years young, of Lincoln Park, MI, died on October 10, 1982 after a long bout with cancer. He was born in Detroit and developed an interest in the mineral hobby and became an expert in lapidary and silver smithing.

For many years TOLSON was the Rules Chairman of the Midwest Federation. He had an important part in establishing the rules for competitive judging and was a judge at shows all over the country. In 1965, TOLSON was awarded an Honorary Membership in the MWF.

He was a giant in our hobby and was always willing to share his knowledge and expertise. TOLSON RADLOFF will be missed by a great many of us.

NEW PUBLICATION:

A new one time magazine is being considered. The first issue is planned for April 1983, and will include collecting sites, museums, etc, in different states. If you have any items, suggestions, photos, etc, contact: RICHARD DAY, 822 S. Galena Ave., Dixon, IL 61021

TO 1982 CLUB PRESIDENTS AND TREASURERS:

The 1983-84 Directory of the MWF is now being prepared and the up-to-date listing for your club or society is needed. Your dues are also payable on December 31, 1982.

The forms are being distributed through the combined efforts of your State Directors and the Assistant Directors for your state. Please completely fill out these forms and return promptly. The information provided to us by this form is utilized in many ways by the Midwest Federation.

The April issue of the Lapidary Journal will contain a list of clubs. Please indicate on the form how you want your club listed.

PUBLIC IMAGE & COURTESY:

In keeping with the Public Image & Courtesy Committee recommendation, MRS. RUTH MOGG, Chairman, the Show Committee for the Central Iowa Mineral Society will stress this at their May 14-15, 1983 show which will include the All Iowa Round Up and Swap in its program, so it is something that should benefit the image of rock and mineral club's all over the state of Iowa. This represents an effort to forward this worthy and commendable project. The show will be held at the United Workers' Hall, 245 Broadway on the North side of Des Moines, Iowa.

Submitted by JOSEPH H. BROWN

A man with a green thumb is a gardener...but one with a purple thumb is a near-sighted rockhound.
..via Chips and Facets

Lincoln Gem and Mineral Club, Inc.

P. O. Box 5342

Lincoln, Nebraska 68505



PRESENTS
THE
5TH ANNUAL
MID-WINTER

BRING
DONATIONS
FOR SILENT
AUCTION

ROCK SWAP

SWAPPERS
BLICKS



TIME: NOON - 7:00 P.M.

PLACE: NEBRASKA CENTER,
33RD & HOLDREGE STS.

DATE: SATURDAY, JANUARY 22, 1983

SILENT AUCTIONS - FREE COFFEE

THE SWAP WILL BE FOLLOWED BY THE REGULAR MEETING OF THE LINCOLN GEM & MINERAL CLUB. VISITORS ARE INVITED TO ATTEND EITHER OR BOTH EVENTS. FOOD SERVICE IS AVAILABLE AT OR NEAR THE SWAP SITE - CHOOSE FROM SEVERAL FINE EATING PLACES. THE MEETING WILL BE FOLLOWED BY AN EDUCATIONAL PROGRAM RELATING TO GEMSTONES.

PATRONIZE YOUR ADVERTISING DEALERS

MEXICAN MINERALS - SLABS - TUMBELED STONES

Everett Lapidary Shop

THE CAPITOL CITY'S FIRST ROCK SHOP

2941 North 65th

PHONE 466-6204



AUTHORIZED DEALER FOR ALL LAPIDARY EQUIPMENT

"Satisfied Customers Are Our Best Advertisement"

J J & L ROCKS & MINERALS

"Supplies for the novice to the discriminating Rock Hound"

(402) 792-2337

Shop at 330 Locust, Hickman, Ne.

Mail order & Free Catalog, Box 68, Hickman, Ne. 68372

Jim Marburger

John Harrison

CUSTOM CUTTING
FOSSILS

ROUGH
MINERALS
SPECIMENS

CABACHONS
FINDINGS
SLABS

FINISHED JEWELRY
SUPPLIES

Read your bulletin to spot *new materials* or *specials* of the above advertisers.

Advertising by a rock-hobby business or interest is permitted with approval of the Board, at a rate now set at \$15.00 per full page per insertion, paid in advance.

1/2 page \$7.50, 1/3 page \$5.00 1/4 page \$3.75 (min). These ads will be placed throughout the bulletin as space permits.

Subscriptions to THE PICK & SHOVEL are \$5.00 per year mailed.

Dues to LINCOLN GEM & MINERAL CLUB are as follows:

Adult membership fee \$5.00 (age 16 and over)

Junior membership fee \$1.00 (age 12-16)

Family membership fee \$11.00 (husband, wife and all children under 16 - permanent residents of household)

New membership must be approved by the Board, after applicant attends at least one (1) regular meeting of the club, and pay the above dues plus \$1.00 registration fee.

DON'T FORGET - - 5th Annual Rock Swap 12:00 Noon to 7:00 P.M.

General Meeting beginning at 7:30 P.M. with
Cake and Coffee in conjunction with our 28th Birthday!

To be held at Scottsbluff-Minden Rooms
Nebraska Center for Continuing Education
33rd & Holdrege
Lincoln, NE

Lincoln Gem & Mineral Club
Box 5342
Lincoln, Nebraska 68505-0342



**BULK RATE
U. S. POSTAGE
PAID
LINCOLN, NE
PERMIT NO. 769**

Exchange Editor: Vera Lyman
420 N. 56th St.
Lincoln, NE 68504

John & Lillie Lewis
6225 Judson St.
Lincoln, NE 68507