

THE PICK & SHOVEL

NOVEMBER 1986

1986

In this issue . . .

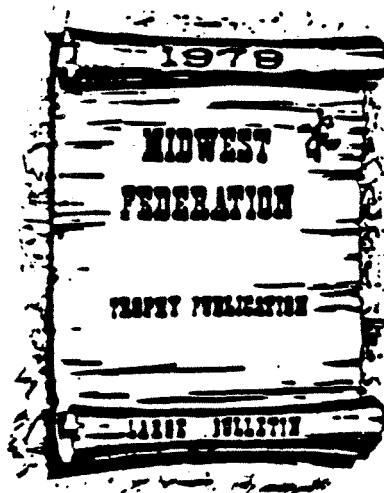
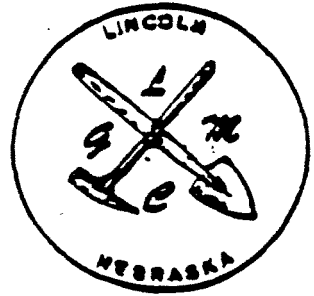
CHRISTMAS PARTY

Show Report

Library & Exchange Notes

BURT COUNTY MUSEUM, TEKAMAH

DEVILS TOWER NATIONAL MONUMENT



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)
Friends of the Museum

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

1986 ELECTED OFFICERS:

President.....	Linda Parks	2435 S. 19th St.	Lincoln, 68502	476-6798
1st Vice Pres.....	Janet Wright	3715 S. 33rd St.	Lincoln, 68506	488-1884
2nd Vice Pres.....	Kevin Schwartzman	1134 West Avon Ln	Lincoln, 68505	464-3059
Secretary.....	Vera Lyman	420 N. 56th St.	Lincoln, 68504	464-6089
Treasurer.....	Phyllis Parks	2435 S. 19th St.	Lincoln, 68502	476-6798
Board Member.....	Fred Holbert	2822 S. 13th St.	Lincoln, 68502	423-5639
Board Member.....	Nelia Miller	1101 Rosewood Dr.	Lincoln, 68510	489-6093
Board Member.....	Tom Simmons	2970 South St.	Lincoln, 68502	488-1619
Board Member.....	Marie Taylor	910 New Hampshire	Lincoln, 68508	476-3707

NOMINATING COMMITTEE -- 3 years: Irl Everett, Richard Miller
2 years: Vera Lyman, John Lewis
1 year: Jim Parks, Ervin Marshall
Claude Scott, Chairman

LONG RANGE PLANNING AND BY-LAWS COMMITTEE:

1 year - John Abel, Roger Pabian
2 years - Jim Taylor, Irl Everett
3 years - Claude Scott, Phyllis Parks
Claude Scott, Chairman

STANDING COMMITTEE CHAIRPEOPLE:

All-American Award...	Janet Wright	Librarian.....	Jim Parks
Calling.....	Phyllis Parks Marie Wells	Membership.....	Shirley Rockel
Education.....	Roger Pabian	MWF Liaison.....	Marie Taylor
Field Trips.....	Tom Simmons	Programs.....	Kevin Schwartzman
Historian.....	John & Lillie Lewis	Publicity.....	Roger Pabian
Hospitality.....	Ed Ridge	Scholarships.....	Marie Taylor
Housing/Property.....	Claude Scott	XMAS Party.....	Janet Wright
Jr. Activities.....	Nelia Miller Janet Wright	1986 Rockhound/Yr....	Janet Wright
		1986 Annual Show.....	Fred Holbert
		1987 Annual Show....	Jim Marburger

AUDITING COMMITTEE 1985.....Lois Everett, David Heffelbower,
Ervin Marshall, Shirley Rockel,
Phyllis Parks, Treas.

PICK & SHOVEL STAFF:

Editors.....Board of Directors
Co-ordinator...Vera Lyman, 420 N. 56 St. Lincoln, NE 68504 (NAOESCI Reporter)
Circulation....Dave Heffelbower
Sunshine Corner..Gail Clare Scott
Reporters....."CLUB MEMBERS"

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 PAGE

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

GENERAL MEETING: November 29, 1986, 7:30 P.M.
Nebraska Center, Norfolk Room
33rd & Holdrege Streets

Annual Meeting - Vote for the 1987 Officers and
nominate & vote for nominating committee.

PROGRAM: "Underwater Dredge Operation" at Ogallala this summer
by George Corner

YOUTH MEETING: 7:00 P.M., November 29, same place.

December Board Meeting: To be announced later by calling committee.

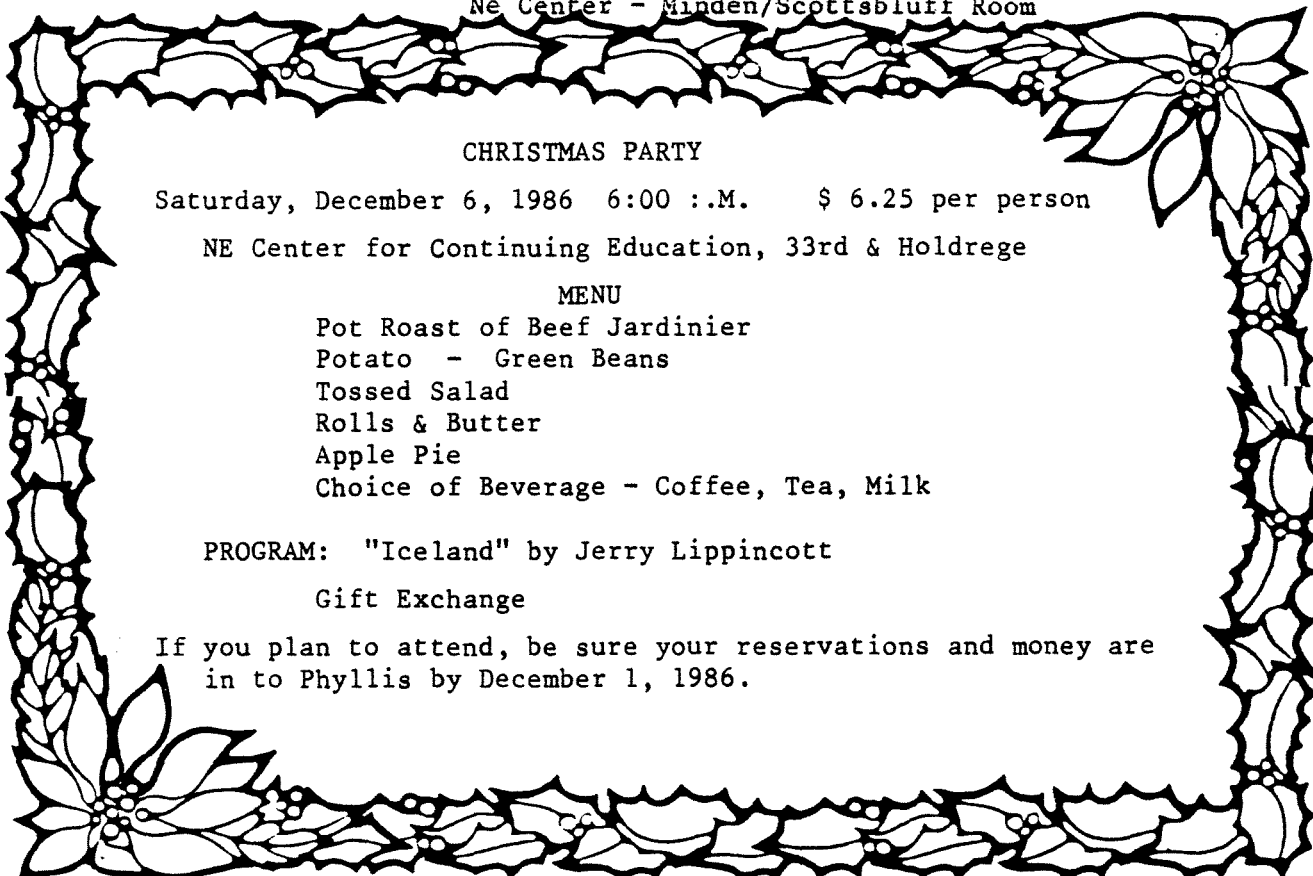
December 6, 1986 - ANNUAL CHRISTMAS DINNER - get your reservation
to Phyllis before December 1, 1986.
Details elsewhere.

December							1986						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
													6
													13
													20
													27
													31

* * * * *

COMING ATTRACTIONS FOR YOUR CALENDAR:

- November 21-23 Show Rocky Mountain Federation, Phoenix, Arizona
- November 23, Sunday "Arts in the Aisles", Downtown & Gateway Miller & Paine, 1 to 5 p.m., Lincoln Arts Council.
5% of days sales to grant fund of L.A.C.
- February 4-8, 1987 Show Quartzsite Gem & Mineral, 21st annual
- March 28-29, 1987 Show Lincoln Gem & Mineral Club, Inc., 29th annual
- LGMG - MID-WINTER SWAP - Saturday January 24, 1987. Noon till 10:00 P.M.
Ne Center - Minden/Scottsbluff Room



CHRISTMAS PARTY

Saturday, December 6, 1986 6:00 :.M. \$ 6.25 per person
NE Center for Continuing Education, 33rd & Holdrege

MENU

- Pot Roast of Beef Jardinier
- Potato - Green Beans
- Tossed Salad
- Rolls & Butter
- Apple Pie
- Choice of Beverage - Coffee, Tea, Milk

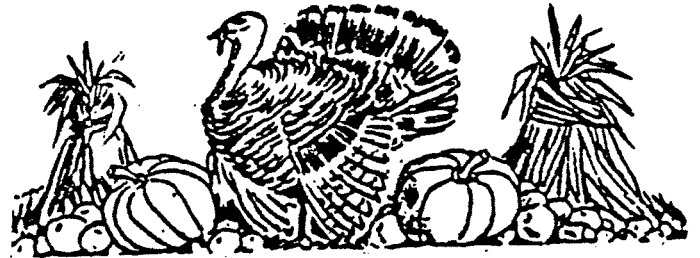
PROGRAM: "Iceland" by Jerry Lippincott
Gift Exchange

If you plan to attend, be sure your reservations and money are
in to Phyllis by December 1, 1986.

S
C
I
E
N
C
E

BETTER SHARED

Some things are better shared
A grief, a joy,
A meal, an open fire,
A book, a toy---
Yes, some things must be shared
To fully please---
And our own faith is not
The least of these.



Helen Lowrie Marshall

Richard Miller is battling ill health and we wish him all the best.

Be thinking of the many things you have to be thankful for. THANKSGIVING IS UPON US.

CORNER

JCS

NOMINATING COMMITTEE MEETING

Nominating Committee Meeting - Tues. Sept. 23, 1986 7:30 P.M.
American Charter Bldg. 4000 South 27th St.

Committee Members present:

Chairman - Claude Scott

Vera Lyman, John Lewis, Jim Parks, Richard Miller

The Nominating Committee is presenting the following slate for Officers of Lincoln Gem & Mineral Club for 1987:

President - Kevin Schwartzman

First Vice - Janet Wright

Second Vice - Jim Parks *

Secretary - Vera Lyman

Treasurer - Phyllis Parks

Board of Directors - 4 needed - Marie Taylor
Fred Holbert
Tom Simmons
Shirley Rockel

Respectfully submitted,
Claude Scott, Chairman

* Nominated from floor at September General Meeting

PRESIDENT'S MESSAGE

Members and friends:

Really enjoyed seeing so many of you at the October meeting. I had a good time and enjoyed all of the demonstrations - hope that we can do that again sometime, only have the whole room full of workers, with more time to spend. As usual we had more goodies than we could eat and still kept going back for another nibble.

School is going really hard at this point so I'm getting in an extra amount of study time, and not much time to think of anything else.

I do plan to be at the November meeting so that I can cast my vote and hope that all of you will do the same. It's time to get started with plans for the meetings in 1987 and for you to volunteer assistance to the 1987 Show Committees.

I shan't be able to attend the Christmas Dinner as I'll be near the end of a semester and it's no time for travel.

See you November 29th!!

Lyn

P. S. Don't forget to Pay Your 1987 Dues and Don't forget to make your Christmas Dinner Reservations with the treasurer!!!

* * * * *

From your 1987 Show Chairman:

Several of the Committee Chairmen report progress in their areas of show preparation and the enthusiasm keeps building. Roger Pabian has agreed to plan and set up the Working Shop and is planning some interesting ideas.

Jim reports much interest from Dealers all across the country and has contracts out. Several people have expressed an interest in demonstrating at the show and invitations have gone out. Kevin reports interesting features & displays being considered including a special "Fossil Preparation" exhibit.

We've put in a bid for 'good weather' and an extra large attendance. In fact we are going to do a lot of advertising and promoting to assure a good attendance.

Now we are planning some small group committee meetings to work out details for various parts of the show and will plan on having sign up sheets at the January meeting for all you eager workers to volunteer for the final activities at the show.

Jim Marburger

From your club librarian and Exchange Editor -

More 'Thanks to Irl for the following new additions to our Library from the collection of Mrs. Grant Woodward on October 8, 1986:

MINERALS AND ROCKS, a color guide to familiar, by Dr. Jiri Kourimsky and illustrated by Ladislav Pros, Octopus Books Limited

ADVANCED CABOCHON CUTTING, by Jack R. Cox (paperback), Gem Books

WESTERN GEM HUNTERS ATLAS, by Cy Johnson & Son, 11th Edition-1971 (paperback)

ROCKS & MINERALS, The Collector's Encyclopedia of, Edited by A.F.L. Deeson, MA PhD DSc

PRACTICAL GEM KNOWLEDGE FOR THE AMATEUR, Charles J. Parsons G.G.,F.G.A. (paperback)

GEM CUTTING, A Lapidary's Manual, Second Edition, John Sinkankas

Also a small folder of Gem-Mineral & Fossil Guide to Siskiyou County, California and a sheet of instructions for cleaning Chalcedony Roses.

If any of these sound interesting to you, come on out to the library or call Jim or Phyllis to have one brought to the next meeting. (466-5440)

* * * * *

Short 'Gems' from our Exchange Bulletins -

An optimist is a person who sees the light at the end of the tunnel and puts on suntan lotion!

The average man has five senses: touch, taste, sight, smell and hearing. The successful man has two more: horse and common.

Both via Tule Smoke Signals, Mary Halstead Editor

Waiting for some people to stop talking is like looking for the end of a roller towell.

via American River Currents, Naomi Fletcher Editor

Remember one of the most difficult mountains for people to climb is the one they make out of a mole hill-----

Happiness is-----

A fresh morning---a summer rainbow--

A nod from a stranger---

A smile from a friend.

PSYCHIATRISTS'tell us that one out of four people is mentally ill-- so check your friends-if three of them seem to be all right, you're the one!!!!

These three from Mineral Memo's, LoRee Timmerman Editor

It's a good time to remind people that many elections are decided by NON-Voters!

via BRECCIA, Editors A. M. Frost and Judy Schutz

* * * * *

LINCOLN GEM & MINERAL CLUB, INC. - BOARD OF DIRECTORS - Oct. 6, 1986

The meeting was called to order by First Vice Janet Wright on Oct. 6, 1986, 7:30 P.M. at American Charter, 40th & South St.

Minutes of the September Meeting were read. Motion by Tom Simmons, 2nd by Phyllis Parks for approval. Carried.

Treasurer's report was read. Motion by Fred Holbert, 2nd by Kevin Schwartman for approval. Carried.

BILLS: Paid but for approval:

\$ 53.66	UN Printing - Sept. P & S
33.00	Security Storage - Oct.
25.00	City Park & Rec Dept. - Oct. Meeting at Bethany Park
62.50	Postmaster - Roll of 500 (.12½6) stamps

Check (\$ 25.00) returned from Bill White (Show Program) along with nice letter of thanks.

Motion for approval of bills paid by Fred Holbert, 2nd by Marie Taylor. Carried.

Payment & approval:

\$ 29.42	Phyllis Parks - Hot dogs & Ice Cream, etc.
----------	--

Motion for approval by Marie Taylor, 2nd by Fred Holbert. Carried.

OLD BUSINESS:

RE: contract with Sec. Storage. They stated Sept. payment was late. Added \$5.00 fee. Treas. called & indicated no forwarding address sent. They cancelled late fee.

Noone located yet to fix Club Screen.

NEW BUSINESS:

Lisa Kitchen & Glen Stroker present at meeting. Requesting financial support of their organization. AWG (Assoc. for Women Geoscientists) Discussion following. Good organization, but at present time does not fit our goals.

Motion by Fred Holbert that we give no consideration of contribution at this time. 2nd by Vera Lyman. Carried. One abstention

Motion by Vera Lyman, for consideration by rank & file, that we send \$ 200.00 to MWF Endowment Fund. 2nd by Kevin Schwartman. Carried.

Motion by Phyllis Parks that Club pick up gratuity, tax & speaker dinners for Christmas Party. 2nd by Fred Holbert. Carried. Program on "Iceland" by Jerry Lippencott.

Motion by Phyllis Parks that we award two \$ 150.00 scholarships via our Scholarship Chairman by choices she recommends to Board. 2nd by Vera Lyman. Carried.

Nov. 15 - No rooms available for General Meeting. Change to 29th.

Nov. 3 - Board Meeting - American Charter - 40 & South at 7:30 P.M.

Respectfully submitted,

Vera Lyman
Vera Lyman, Secretary

LINCOLN GEM & MINERAL CLUB, INC. - GENERAL MEETING - Oct. 25, 1986

Bethany Park Shelter House - 7:30 P.M. - "Halloween" - President Linda Parks

Motion for approval of the minutes as printed by Irl Everett, 2nd by Fred Holbert, carried.

Motion for approval of the treasurer's report as printed by Tom Simmons, 2nd by Claude scott, carried.

Present: 31 Adults - 3 Juniors - 3 guests.

OLD BUSINESS:

Financial statement available for those who did not receive one yet.

Janet Wright asked Roger if he had checked on purchase of camera for Club. Will report at the next meeting.

After glancing at Financial statement, Irl Everett noted Club has lost money. Discussion followed.

Motion by Vera Lyman that the Long Range Planning Committee meet and discuss the matter and report back to the rank & file. 2nd by Irl Everett. Motion carried. 1 abstention.

Slate of officers for 1987 was read.

No Show Committee Report. Chairman not present.

Christmas Party:

Menu: Pot Roast of Beef Jardinier at \$ 6.25. Make reservation and pay by Dec. 1.

BOOK: "How to Paint on Rocks" by A.O. Henry has been added to the Club Library.

Fred Holbert donated a box of "Casting Stones" to the Club members. He had located them in SW Lincoln,

ANNIVERSARIES:

Presentation was made by Vera Lyman, on behalf of the Club, to J.D. & Myrtle Young; #63; and to Ed & Vivian Johnson; #64; an Anniversary Cake & Card to each couple with all our Best Wishes.

HALLOWEEN COSTUME AWARDS:

Dave Heffelbower - Opal - most subtle	Billie Heffelbower - Ruby - prettiest
Anthony (guest) - cutest	Bryan Taylor - Fluorite - most realistic
Adeline Nolde - silliest	Tom Simmons - Crazy lazy - craziest
Phyllis Parks - Pearl - rarest find	Janet Wright - Indian - Apachy Tear
Reagan - Bearite - Puniest	Andrea - Fool's gold - funniest
J.D. & Myrtle Young - Youngite - Best Couple	Linda Parks - Ash - the grayest

Meeting adjourned for refreshments and demonstrations.

Respectfully submitted,

Vera Lyman

Vera Lyman, Secretary

LGMC Treasurer's Report - October 1986

NBC Checking 10/1/86 \$ 288.48

Receipts:	1986 Member Christmas Dinners	18.75	
	1987 Prepaid Dues	5.00	
	1987 Subscription Pick & Shovel	<u>5.00</u>	28.75

	1986 Show program fee returned check uncashed		25.00
--	---	--	-------

Accounts paid:	For anniversary cakes	20.00	
	Security Storage	33.00	
	Nehr. Center Sept. Meeting	47.50	
	U.N.L. Prtg./Dupl. Oct.PS	58.76	
	Misc.Postage,copy,picnics	<u>29.42</u>	188.68

NBC Checking 10/31/86 \$153.55

BURT COUNTY MUSEUM, TEKAMAH

There are numerous city, county, state and national museums, but this one has special interest for me, and again, I hope LGMC readers may find the topic not too extraneous to our hobby of gems and minerals. Burt County, Nebraska saw one of this state's earliest pioneer settlements, and my father, still diapered (not "Fampered"), was in the 1856 vanguard, long before rockhounding became popular. Near Tekamah, he grew up, married Clementine Lillie, also a territorial pioneer, and I am the youngest of their nine--six boys and three girls--two of us still surviving. Family interest in Burt County history was recently rekindled by a visit to the local museum in Tekamah.

We had long known of the Burt County Museum, but this was our first visit there. It has outgrown earlier facilities and moved to the stately E.C. Houston pioneer residence on a large plot of ground at 319 North 13th Street, Tekamah's main street. This is an unusually large house, but it is already filled with historic memorabilia donated and loaned largely from pioneer family sources.

Though much of this museum's labeled material is not directly related to gem and mineral hobbies, there are artifacts and fossils in the area, and also nearby clay deposits which have been used for brick, pottery and molds. There are glacial deposits with transported materials containing varied specimens, and there are ancient Indian sites--one near Oakland in western Burt County is estimated to be nearly 10,000 years old. Yummy gravel pits are numerous!

The staff in charge of this museum are pleasantly helpful to visitors, and we were given the attention of the Curator, Bonnie Newell, and Volunteer, Bette Stork (whose husband was a relative of early settlers going back to my pioneer family's time). The Museum is open without charge Tuesday, Thursday and Saturday, 1:00 to 4:00 p.m. in winter and 1:00 to 5:00 p.m. in summer.

The objects are varied in nature and most are plainly labeled as to their source and usage. Their meanings may be obscure to some visitors, and viewed with enthusiasm by others, a common difference everywhere. A visitor with some family history, background and rural experience always enjoys it more than one not so endowed.

Being from midwestern pioneer families with many friends and relatives, we've found the experience thrilling. The donors stated on the displays brought back to me long-forgotten names, places and experiences, many of which had been tucked away in my mind's memory file since childhood. My folks knew most of the Burt County pioneers, and frequently mentioned them. As a boy I drove the family Model-T for my father on numerous business and other trips. He never learned to drive a car until his six boys were grown and gone from home. Then, at nearly seventy years of age he had to learn. Drivers licenses were not yet needed, no age limit, early or late. (I drove an uncle's car in Omaha at age fourteen--no problem!) So my early youth brought me in touch with many pioneers.

BURT COUNTY MUSEUM, TEKAMAH - continued

One item in the Burt County Museum collection had been provided a few years ago by the Young family. It is an old-style, flat, common tombstone of a white unweathered rock material, not limestone nor marble--probably white sandstone--about three feet tall, with the name of a deceased girl, her age, the names of her parents and the date "1875," as well as the statement that she was the first white child born in Arizona (Nebraska). Arizona was a pioneer community east of Tekamah. There was North Arizona and South Arizona.

The deceased was the second child in my father's family of ten (five boys and five girls) of which he was the eldest, the only one born before their 1856 migration to Nebraska. This second child was born shortly after their arrival, and was an eighteen year-old before her death by typhoid fever in 1875. She was buried in the Arizona Cemetery where her tombstone remained for nearly 100 years, but in more recent years it had been broken into two pieces across the middle. These had been placed side-by-side in an upright position on the grave until we relatives decided "something ought to be done about it." Though this cemetery was given better care than most rural cemeteries, we thought the stone should be repaired and either replaced in its original position or mounted in the Burt County Museum at Tekamah.

After several family biennial reunions, the relatives favored the Museum with a simple replacement marker to be installed in its place. The problem was how to repair the two halves into one slab of stone. The break was across the main inscription, making repair difficult. Myrtle and I agreed to do it as a solution to the problem. We did it carefully and the repaired place can be detected only by very close inspection.

In my garage I built a jig to hold the stone rigidly on a flat surface with precise alignment. Then I placed several suitable screw clamps both horizontally and vertically. I coated the broken surfaces on each side of the cleavage with epoxy cement and slowly applied even pressure by the different clamps and removed the excess adhesive. After this had thoroughly set, Myrtle carefully built in the damaged portions of the words with a well-matched shade of particles scraped from the bottom edge of the stone and mixed with the adhesive. The stone has not been in outdoor weather since, but its repair has held up well indoors for several years.

Perhaps a little review of Nebraska history may now be in order. After much federal debate, Nebraska Territory was approved in May, 1854; the bill was signed by President Pierce. It included all of the present state of Nebraska, a large portion of the Dakotas, Montana, Wyoming and a part of Colorado. The first governor was Francis Burt from South Carolina who died two days after he took office--his death the result of exposure during the arduous four-week journey to Nebraska. The present Nebraska became a state in 1867, eleven years after my father came as a baby with his parents by covered wagon from Columbus, Ohio, and my mother came with her parents just a few years later from the Icarian French colony in Nauvoo, Illinois.

- Submitted by J.D. Young

DEVILS TOWER NATIONAL MONUMENT

Any thought of the stark magnificence of Devils Tower brings back much of the initial thrill of seeing the gigantic stump-like formation for the first time. There is nothing anywhere quite like it.

Statistics do little to communicate the feeling of grandeur and awe evoked by the Tower and its beautiful park, so we will dispose of them quickly: From an 18-acre base with a diameter of 1,000 feet, the Tower rises almost vertically 867 feet to its teardrop-shaped top of 1½ acres. With the base 1,267 feet above the Belle Fourche River, the top rises to 5,117 feet above sea level, only 163 feet less than a mile. Devils Tower National Monument, an area of approximately two square miles, was proclaimed by President Theodore Roosevelt on September 24, 1906, as the first national monument in the United States. The Tower is about 28 miles northwest of Sundance and is the most conspicuous landmark in northeastern Wyoming.

Much of the history of this area was collected by Newell Joyner, then superintendant of Devils Tower National Monument, whom older LGMC members may remember as a guide at Morrill Hall Museum. Although revered by the Sioux, Cheyenne, Shoshone, and Crow Indians, Devils Tower seems not to have been loved as was, and is, Bear Butte. Perhaps this is understandable in view of the inaccessibility of the top of the Tower. Certainly the Indians had their legends, summarized so well in the Devils Tower Handbook:

"Place names in the West can be powerfully suggestive of history, but they can also be very unreliable: Devils Tower, for instance. To the Indians this singular occurrence of dramatically upthrust rock marked the dwelling place of bears, hence Mateo Tepee or 'Bear Lodge.' Their stories told of lost youngsters who were chased by a giant bear and climbed on top of a rock in a last desperate effort to save themselves. The children appealed to the spirits and the rock grew up out of the ground to lift the children out of the giant bear's reach. Versions of this story belong to different tribes, but most have in common the bear's futile attempt to claw its way to the top. This clawing left permanent grooves on the Tower.

"Colonel Richard I. Dodge apparently had not heard these stories when he entered the Black Hills in 1875. In charge of a large military escort to a scientific team, he came in violation of Indian treaty rights after Custer's 1874 expedition which had reported gold. Dodge noted that his questions to the Indians about this 'terra incognita' known as the Black Hills were met with 'studied silence.' This only heightened a true explorer's curiosity. Perhaps the Indian scouts affected a calculated silence, hoping the whites would leave. When the great rock tower first loomed in sight, they told Dodge it was named, 'with proper modification by our surveyors,' the Devils Tower. In later years few could recall why this name was used.

"If it was meant to scare off these white explorers and those to follow, it did not. The new wave of American settlers did not believe that natural objects held supernatural powers. No matter how awesome or unusual, science had an explanation for everything in nature, or would eventually. Devils Tower was determined to be the core of an ancient volcano, an obelisk of volcanic trachyte, with sides so straight that one 'could only look upward in despair of ever planting his feet on the top,' as one geologist in Dodge's expedition put it."

The trachyte making up Devils Tower is classed as phonolite porphyry, Tertiary in age. The rock is made up primarily of easily visible crystals

of white feldspar with smaller crystals of pyroxene, giving it a hardness that "rings like a bell when struck," according to a sign on the trail around the base of the Tower. Fresh surfaces have a gray to greenish gray color, which weathers to light gray or brownish gray, tempered by the lichens which may grow on it. Its most distinctive feature is the columnar jointing of the rock. Most of the columns are 5-sided, but some are 4-or 6-sided. Charles S. Robinson in Geology of Devils Tower gives the most concise explanation of columnar jointing that I have yet read:

"Columnar joints form as the result of contraction within a rock mass. In igneous rock the contraction is the result of cooling; that is, the cold solidified rock requires less volume than the same rock when molten. As a rock cools it contracts, and the resulting tension is in a plane parallel to the cooling surface. When rupture takes place, these fractures radiate from numerous centers in the plane parallel to the cooling surface. Ideally, the fractures are at 120° to each other. If the centers were evenly distributed the fractures from different centers would join forming hexagonal (6 sided) columns. These fractures will go deeper and deeper into the rock as cooling progresses. This condition because of many factors, is seldom attained in nature, so the columns may have 4, 5, 6, or even more sides."

Among other famous examples of columnar jointing are Devils Postpile in California, southeast of Yosemite National park in the central Sierra Nevadas, and the Giant's Causeway on the northeastern coast of Northern Ireland. Both are basalt flows and are predominately 6-sided, the most efficient shape, as any honey bee knows. It seems that the 6-sided shape occurs wherever rock composition and cooling are uniform.

The real question has been: How did the rock of Devils Tower get there in the first place? Though the first popular theory was that it is the neck of an extinct volcano, the probability seems to be that it and the more rounded and less spectacular Missouri Buttes, of the same rock, about 4 miles to the northwest, are the remnants of a laccolith which was originally covered by sedimentary rock to a depth of 1,000 to 2,000 feet. The Spearfish Formation of siltstone and sandstone of Triassic age, the oldest exposed rock, forms the beautiful brownish red and maroon cliffs that border the Belle Fourche valley near the monument.

Within the park, just west of the Belle Fourche River, a large and very interesting prairie dog colony now spreads to both sides of the park road. These highly sociable little rodents, curious about everything and everyone, are a delight to watch. They eat nearly all plants that grow in and around their towns, cutting down tall plants not only for food but to increase visibility. Since they are active above ground on most warm winter days, visitors to the park, which is open year round, will be able to see them at any time.

Prairie dogs are only one of hundreds of species of animals, birds, and plants living in the food chain of this remarkable bit of land. A hike along either of its two well-planned trails will reveal much worth seeing. The Red Beds Trail is 8 miles long, but I chose the 1 1/4 mile Tower Trail, which circles the base, giving photographic vantage points from every side. Gilbert waited patiently for the 40 minutes it required. (I hurried, and the hard-surfaced trail is much easier now than it was the many times he and his geology students circled it in earlier years.)

While I admired the Tower from every angle in each nuance of changing light, Gilbert used his binoculars to watch the climbers on the Tower. There were 40 of them this day. When we first saw some of them inching their way upward--most precariously, we thought--we were very apprehensive. We felt much better when a charming young couple from Canada, who had just returned from the top, showed us their many different items of high technology gear and explained how each item is used. We were further reassured by learning that all climbers are registered and only those of certified skill and experience are permitted to climb. Learning that the upward-tapering joints are somewhat wavy rather than perfectly smooth and are often cross-fractured into small blocks also made climbing seem more possible. More than a thousand people climb the Tower each year, using more than 80 separate routes. It is climbed from all sides in all seasons. No one has yet been killed in climbing the Tower. The most skilled can climb the easy route in less than an hour. If the weather turns nasty, a climber can use a double rope to rappel off in 40 to 60 minutes.

It has not always been so. The best-known early event was the feature attraction provided for a Fourth of July celebration in 1893 when William Rogers, a local rancher, made the first public climb to the top. Devils Tower National Monument: A History gives an interesting account:

"Rogers made elaborate preparations for the big event. With the assistance of Willard Ripley, another local rancher, he prepared a 350-foot ladder to the summit of the Tower. This was accomplished by driving pegs, cut from native oak, ash and willow, 24 to 30 inches in length and sharpened on one end, into a continuous vertical crack found between the two columns on the southeast side of the giant formation. The pegs were then braced and secured to each other by a continuous wooden strip to which the outer end of each peg was fastened. Before making the exhibition ascent, the men took a 12-foot flagpole to the top and planted it into the ground. The building of the ladder by Rogers and Ripley was an undertaking perhaps more hazardous than the climbing of the Tower itself.

"People came for a distance from 100 to 125 miles to witness the first formal ascent of the Tower. The more conservative estimates are that about 1,000 people came by horseback, wagon and buckboard to see the spectacular feat. For many of them it was a trip requiring several days of tedious travel over rough and dusty trails. Rogers began his ascent following proper ceremonies which included an invocation. After climbing for about an hour he reached the top. Amid much cheering from the many open-mouthed spectators some 865 feet below, he unfurled an American flag, which had been specially made for the occasion, from the flagpole. Devils Tower had at last been conquered in the full view of an assembled throng. During the afternoon, a gust of wind tore the flag loose and it drifted down to the base of the Tower. Here the promoters tore it up and sold the pieces for souvenirs."

On July 4, 1895, William Rogers' wife became the first woman to climb the Tower. Probably at least 25 people used the ladder before it was partially dismantled for safety's sake. However, some of the upper part of the ladder can still be seen on the southeast side of the Tower, where a small telescope with an exact focus has been installed on the trail. The first ascent using rock-climbing techniques alone was made in 1937 by three members of the American Alpine Club of New York City. They reached the top in 4 hours and 46 minutes.

The most serious predicament was brought about in 1941 when George Hopkins, a professional parachutist, jumped from an airplane to land on top of the Tower. This foolhardy stunt had neither the consent nor the knowledge of National Park Service officials. Hopkins expected to make his descent by means of a ½-inch, 1,000-foot rope, which he had dropped from the plane. The rope landed on the side of the Tower and Hopkins was marooned for six days while rescue plans were worked out and effected. Having been supplied throughout the ordeal with food, water, and blankets dropped from planes, he was said to be "in excellent physical condition and in good spirits." No doubt his spirits were very good. Obviously this was a publicity stunt. During the six-day period more than 7,000 visitors came from all parts of the U.S. to see him and to watch the rescue operations. The story was headlined in all the leading newspapers. Justice would have been better served had he received a whopping bill for the cost of rescue operations.

As we prepared to leave Devils Tower National Monument, the sinking sun was rapidly changing the color of the rock from tan to reddish gold. But that was only the beginning of another adventure.

At the Dahn Fine Arts Center in Rapid City we had purchased a lovely painting titled "The Group," done by Gisele Robinson, who, we were told is the wife of Homer "Pete" Robinson, the superintendant of Devils Tower National Monument. The painting shows a group of small trees against the background of a tremendous gray-blue storm. As we were preparing to leave the park, we asked the ranger on duty to tell Mrs. Robinson, when he happened to see her, that the people who purchased her painting had visited the Tower. Having other business with her as well, the ranger rang her number and handed me the phone. In response to my question as to where the group of trees was, she directed us to a locked gate at the northwest boundary of the park, and invited us to take still another road on our return and to stop at her home so that she and her husband could meet us.

When we reached the boundary of the park there was just enough light to photograph the distinctly recognizable group of little trees, actually five chokecherry bushes whose lower branches had been eaten off by deer. In the process of being turned around, however, the back wheels of the car slipped off the soft, grass-hidden shoulder of the road, and the car was inextricably stuck. Fortunately the Robinson home was only about a mile away and it was not yet dark. Efforts to pull the car out with their pickup were fruitless. Sundance, 28 miles away, had the nearest tow truck, but the owner was not at home. Mr. Robinson phoned the sheriff, who rounded up two men to get the tow truck and come to our rescue. It may sound like a misadventure, but it was far from that. We had a wonderful evening with the artist and her husband and mother, seeing her paintings, her studio, and her up-coming exhibit.

And--yes, you guessed it--we purchased another of her paintings. This one is titled "Overlook" and shows Devils Tower and the Missouri Buttes dwarfed by a magnificent (and anatomically correct) thunderstorm backlighted by shafts of golden sunlight. What might have been a disaster was transformed by two lovely, warm-hearted people, the park superintendant and his artist wife, into one of our finest experiences. We are ready to go back to Devils Tower any day.

Florence (Boring) Lueninghoener

MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES

Member of The American Federation of Mineralogical Societies

OFFICERS 1985-1986

President
Mr. William Parch
PO Box 64
Wyeville WI 54671
608-372-6819

First Vice President
Mrs. Esther Mullaly
30018 Dawson
Garden City, MI 48135
313-427-6790

Second Vice President
Mr. Paul Clifford
2955 Berkshire
Cleveland Hts. OH 44118
216-371-2749

Secretary
Miss Jean Reynolds
107 Tuttle Ave
Clarendon Hills IL 60514
312-323-1682

Treasurer
Mrs. Kitty Starbuck
7636 V Avenue East
Vicksburg MI 49097
616-649-1991



PRESIDENT'S OCTOBER MESSAGE

It is with sadness that I report the passing of Charles Walker, our recently retired director of Indiana and Kentucky. Not enough can be said of his dedicated service to both our Federation and the member organizations from these states. He will be missed by all of us.

In our efforts to enhance the endowment fund of MWF, the profits from silent auction of the 1987 MWF Show will be channeled to this endowment fund instead of the AFMS scholarship foundation. For those clubs and individuals unable to contribute directly, this is a grand opportunity to donate material to the silent auction next year at Dearborn.

I would again like to invite your organization to consider presenting a bid to host a MWF Show and Convention for the years 1989 or 1990 and the combined AMFS-MWF show in 1992. The reason for the early bidding is to allow enough lead time to prepare for the undertaking. The interested parties should see or contact Lee Kirby, our convention and show chairman. Bill Parch, MWF President.

NEW PROGRAMS TO BE PLACED IN YOUR PROGRAM BOOKLET--Louise Stinnett

The AFMS Prizewinning Program--1. MINERALS OF INDUSTRY produced by John A. Powloskey of Danbury Mineralogical Society, Ct. Presents an overview of mundane as well as exotic use of minerals from hematite (rails, nails and pails) to diamond drilling teeth, stone and oil.
#149--130 slides

Second Prizewinner--"Lake Superior Agate--Naturally" from MWF, Peter Rodewald of St. Croix Rockhounds, gives us data on geological formations various minerals, and of course finding them. Program #150 with 140 slides.

Third Prizewinner--"Ginkgo Petrified Forest" by Frank and Frances Rusche. Oregon Agate and Mineral Society, Portland, Or. A not too well known state park in Washington, shown to have many interesting and rare formations of petrified wood. Ginkgo, a grandfather of the tree, known today as elm, sequoia, beech, gum, and Douglas fir. The formation of petrified wood in lava beds is also pictured which shows differences from the Az. state Petrified Forest. Program #151--100 slides .

New monthly mineral publication--MINERAL NEWS--in a newsletter format; Its closing date is the 10th of the month--Subscriptions will be \$12.00 per year for 12 issued. Contact Lanny R. Ream, Editor, Mineral News P.O. Box 1154, Coeur d'Alene, Idaho 83814. With the closing of Gems and Minerals--perhaps some of our members will desire to subscribe to this material.

Midwest Federation NEWSLETTER

Another outstanding display was that of Bobbe Hunting. Her education/paleobotanical case was easily the outstanding case of its type at the show. She displayed fossil plants that make up the great coal beds of our country. With each fossil plant, she drew a picture in color of the "reconstructed plant." ---I haven't even mentioned the competitive wood cases. All were very, very good. Editors of the NWF Newsletter are Dee & Sue Holland of Pocatello, ID. Thank You and we'll use more.

Did you know? Wheat germ is not contagious?

Did you know that the Panguitch Chapter of Future Rockhounds of America provided funds for five \$200 scholarships for high school seniors? That is really interesting when you consider that the Future rests in this groups work!!! (Rocky Mountain Fed. News.)

Did You Know? "Gems of the Golden West" The Mineralogical Society of ARIZONA, Inc., observes a 50th anniversary with a Rocky Mountain Fed- of Mineralogical Societies Show and Convention at the state fairgrounds Exhibit Bldg. in Phoenix, Az., Nov. 21-22,23 1986. For the benefit of the Snow Birds in much of the MWF territory.

Did you know? Eastern Fed. Show in Warwick, RI Oct. 25-26.

Did You Know? Southeast Fed. Show in Panama City Mall, Hwys 77 & 231, Panama City, FLA. Drive carefully Snow Birds. This show Nov 6-9, '86.

American Federation Scholarship Auction, - South Bend, IN July 17 - 20
From Marian Parch, MWF Scholarship Chairman,

The Scholarship Auction at the South Bend convention brought in a total of \$1,310.35. Following is a list of clubs that contributed to the auction and the amount that is being credited to them. The clubs that advance their status will be notified of their new status. The others will be notified when their next contribution is received.

Thank
You!

Charles & Helen Asher - Peoria, IL	56.00
Austin Gem & Mineral - Minnesota	16.00
Bay de Noc Gem & Mineral Club - Michigan	48.15
Calumet Gem & Mineral - Indiana	12.00
Cedar Valley Rock & Mineral - Iowa	127.10
Central Mich. Lapidary & Mineral - Michigan	18.25
Chicago Lapidary - Illinois	21.75
Driftless Area Gem & Mineral - Wisconsin	34.00
Duneland Rock Club - Indiana	89.25
Earth Science Club of No. Illinois - Illinois	25.50
Gen City Rock Club - Illinois	27.00
Illowa Gem & Mineral - Iowa	13.75
Iowa State Rock & Mineral Assn. - Iowa	8.50
Lake County Gem & Mineral - Illinois	7.75
Nichiana Gem & Mineral - Indiana	305.20
Mid-Iowa Rock Club - Iowa	202.00
Minnesota Mineral Club - Minnesota	83.75
Neville Public Museum Geology Club - Wisconsin	84.50
Muncie Rock & Gems - Indiana	33.95
Park Forest Earth Science - Illinois	.50
Petoskey Rock Club - Michigan	7.50
Siloam Springs Earth Science - Illinois	16.50
Three Rivers Gem & Mineral - Indiana	4.50
West Suburban Lapidary - Illinois	14.50
Valley Rock & Mineral - Wisconsin	7.20
Rollin' Rock Club - South Central Federation	17.25
Rock Rollers - Northwest Federation	10.75
Oregon Trail - Northwest Federation	5.00
Geobrook Rock Shop - Australia	2.25



Our sincere thanks to all who participated in the silent auction.

PATRONIZE YOUR ADVERTISING DEALERS

MEXICAN MINERALS - SLABS - TUMBLED 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.

REMEMBER - November General Meeting - November 29, 1986 7:30 P.M.
- Election of Officers for 1987

CHRISTMAS PARTY: Saturday December 6, 1986 - 6:00 P.M. NE Center
Delicious Meal!
Excellent Program!
Exciting Gift Exchange!



h.e.l.p.

HELP ELIMINATE LITTER PLEASE!

MAIL ALL EXCHANGE BULLETINS TO:

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



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