

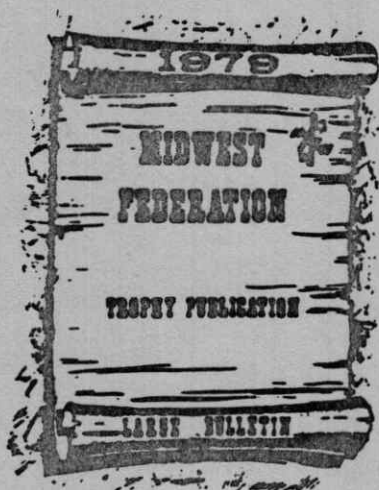
THE PICK & SHOVEL



May 1983

In this issue

SPECIAL SUMMER ACTIVITIES
Think About This
Zeitner Collection...
ATMOSPHERE
CANADA - Petrified Woods



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, Vera Lyman
3 years - Roger Pabian, John Abel

STANDING COMMITTEE CHAIRPEOPLE:

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

Auditing Committee 1982.....Ray Lambert, Chairman
Florence Boring, Vera Lyman

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.



Club Calendar

May							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, May 21, 1983, 7:30 P.M.
Nebraska Center, 33rd & Holdrege
Parking north of Building

(PLEASE NOTE) It has been moved up 1 week due to Memorial Day!

SPECIAL PROGRAM: "Spinoffs From Space"
Presented by Florence Boring

SILENT AUCTION: Please remember to bring your
donations!

Proceeds going to Club Scholarship at the
Nebraska Academy of Sciences

BOARD MEETING: Thursday, September 8, 1983, 7:30 P.M.
Taylor Home, 910 New Hampshire

(Please note this is the second Thursday)



JUNE: Saturday, June 25th
Field trip to Richardson & Pawnee Counties
to collect fossils and minerals.
Look at glacial deposits for cutting material.

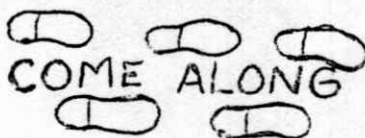
JULY: Saturday, July 30th
Sponsoring a program at Chet Ager Nature
Center at Pioneer Park. Displays, programs,
demonstrations. All day affair.
Picnic at 6:00 P.M. Bring a meat dish;
Salad, vegetable or dessert.
Own table service.

AUGUST: Tentatively planned Field Trip.
You will be notified by calling
committee.



* * * * *

SHOW & SWAP DATES: June 4-5 Swap - Fort Butler Rock & Gem - Hebron
June 18-19 Show - Homestead Gem & Mineral - Beatrice
July 16-17 Show - Loup Valley - Schuyler
Sep. 3-4 Swap - Northwest NE Rock Club - Crawford
Sep. 3,4,5 Show - NE Gem & Mineral - Omaha
Sep. 10-11 Swap - Fort Kearney Rock Club - Kearney
Sep. 17-18 Show - Plains Rock Club - Kimball
Sep. 17-18 Show - Arbor Valley - NE City
Oct. 15-16 Show - GI Earth Science - Grand Island
Sep. 30, Oct. 1-2 Show - Platte Valley - N. Platte



SAVE

this page for reference to
SUMMER FUN!



GREETINGS FROM THE SUNSHINE CORNER:

Now the sun is rising
calm and bright,
The birds are singing . . .
The sky rejoices . . .
All things
that love the sun
are out-of-doors.

William Wordsworth

This past month a get well card was sent
to Mrs. Raymond Pfeiffer who had surgery.

If anyone hears of an illness, etc.,
let me know.

Have a "sunny" summer!

* * * * *

MAY 8, 1983



"A WONDERFUL MOTHER"

The door that leads to a mother's heart
Is always open wide,

And in her heart is a special place
Where peace and love abide.

There is no lock on a mother's heart,
Her children freely go

For a pat on the cheek or a comforting word,
Or something they want to know.

Through years of work and prayer, she's learned
Her wise and tender art,

For the nearest thing to the love of God
Is the love of a mother's heart.

President's Message

May is the month which signifies to everyone that Spring has finally arrived and that Summer is just around the corner. It is the time that many of us start to plan our summer vacations and other summer time activities. I hope that rock collecting trips and attending many of the shows and swaps sponsored by other Nebraska clubs will be a part of everyone's plans for the summer.

The May meeting is our last regularly scheduled meeting until September. To avoid any conflicts with the Memorial Day holiday weekend, I have moved the meeting back 1 week. Our meeting will be held May 21, 1983. Please mark your calendars.

A silent auction will be held in conjunction with this meeting. The proceeds of this auction will go to our club scholarship fund. Everyone please bring something for the auction. Some material from the collection of Mr. C. Ray "Pappy" Waddle will be available at this silent auction. Please join us for our last meeting before summer.

This year we will not be holding our summer program meetings but instead we have planned a series of summer events including field trips and a club picnic. Roger Pabian has volunteered to coordinate our summer events. See Roger's article in this issue of the pick & Shovel for information about the dates, times and locations of all of these events.

I hope that all of you have an enjoyable summer doing the things that you have planned. Please join us at all of our summer time events. Happy Rock-Hunting!

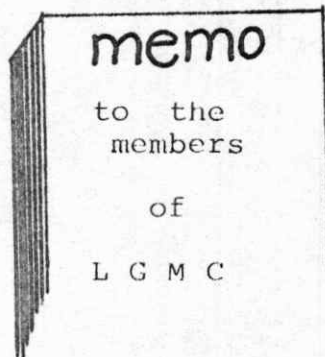
JIM

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Claude Scott is attempting to get an up to date inventory of all the Club properties. If you have any properties in your home, please contact Claude at 488-0739, or just drop a post card to him at:

4917 Normal Boulevard, 68506

THANK YOU



EDITOR'S CORNER

Being Editor is not the easiest task in the world, but still remains a very challenging and rewarding one for me. Some discussions came up at the last Board Meeting about the Pick & Shovel. One of the suggestions which I brought up that perhaps would help make the task a little easier was to appoint persons to do certain tasks to arrive at the finished copy each month.

After reading many exchange bulletins, I find that a number of clubs do this very thing. Each month the names of the persons and their responsibilities for the following month are listed in their bulletin.

I came across the following article just this week.

ARTICLES:

Some say that the best way for editors to obtain articles is to assign an article month to selected club members. Either assign them a subject or trust them to come up with something interesting. By involving club members each month one editor makes assignments using the alphabet method; A-C one month, D-G next month and so on. This with the understanding that if space does not permit all to be published in one issue the ones of greatest timely interest will be used first.

- via AFMS Newsletter, April '83

Personally, the feeling is that the volunteer method is best and results in the best material. Simply said, "If you do it because you want to, you give it your best; if you must do it, it's not always so good."

Volunteer. Please help me out. Thank you.

Think About This

From the Cairo Record, May 5, 1983

Submitted by Florence Boring

THANK YOU

Xvxn though my typxwritxr is an old modxl, it works quitx wxll xxexpt for onx of thx kxys. I'vx wishxd many timxs that it workxd pxrfxctly. Trux, thxrx arx forty-two kxys functioning wxll xnough, but just onx kxy not working makxs thx diffxrxnx. Somxtimxs, it sxxms to mx that our organization is somx-what likx my typxwritxr--not all thx kxy pxoplx arx working propxrlly. You may say, "Wxll, I'm only onx pxrson. It won't makx much diffxrxnx." But you sxx, thx organization, to bx xffixxnt, nxxds thx activx participation of xvxy pxrson. Thx nxxt timx you think your xfforts arxn't nfxdxd, rxmxxbxx my typxwritxr, and say to yoursxlf, "I am a kxy pxrson and nxxdxd vxry much."

LINCOLN GEM & MINERAL CLUB, INC. Board of Directors April 7, 1983

board of Directors meeting called to order by President, Jim Taylor on April 7, 1983, 7:30 P. M. at the Taylor home. Seven board members, Vera Lyman and Marie Taylor present.

Minutes of March meeting read and approved by motion of Claude Scott, second Virginia Green. Motion carried.

Treasurers report given by Phyllis Parks. Treasurers report approved as read on motion of Glen Lyman, second Virginia Green.

Paid bills presented for approval:

- \$ 26.03 Marge Heedick for Dec. Xmas Party decorations
- 33.53 Marge Heedick for Donuts, Coffee, etc at 1983 Show
- 14.30 Marge Heedick Additional donuts for set-up day 1983 Show
- 22.24 Vera Lyman - Mailing March P & S
- 20.00 Postmaster - Stamps (Education chm., Roger Pabian)
- 47.00 Reynold Simmons - Nelson Ins. Performance Bond for Treas. + Pres.
- 30.00 Nebr. Center Continuing Edu., Meeting room rent in February

Motion by Virginia Green, 2nd Glen Lyman that bills be approved. Motion carried.

Bills presented for approval and payment:

- \$ 21.32 Claude Scott for spare projector bulb.
- 52.68 UN printing of March P & S.

Motion by Virginia Green 2nd Claude Scott that these bills be approved. Motion carried.

'83 Show bill presented for payment:

- \$ 110.10 Page Trophy for show ribbons.

Motion Virginia Green 2nd Glen Lyman that this bill be approved and paid. Motion carried.

'83 Paid show bills presented for approval:

- \$ 25.00 Norm Francis -program on Tornado preparedness
- 25.00 Jim McAllister - Game & Parks film at show
- 33.70 Printing of 1000 Handout Programs
- 110.00 Harry Stewart for Security
- 110.00 Kirk Price for Security
- 87.50 Pantry - for 25 guests of the club at Breakfast
- 2.64 Jim Taylor, Phone Calls
- 25.16 Jim Taylor - Dealer expense, stamps & phone calls
- 3.75 Marie Taylor - frame for rockhound proclamation
- 14.53 Marie Taylor - Printing of Certificates of Recognition
- 21.52 Vera Lyman - Breakfast menu printing, Duty & postage on additional
Postage to mail flyers to Editor pins
of Gem Palette
- 13.74 Vera Lyman - Phone calls
- 1858.00 Nebr. State Board of Agriculture for building and floor expense.
- 25.00 A. O'Henry, refund on working demonstration (ill)
- 106.20 Dick Schaeffer & Assoc. rental of mobil sign at entrance
- 276.26 AAA Tables and drapes 272.75 (3.51 CR.)
- 24.35 Schwarz Paper Co. Table paper
- 35.00 Allen D. Moeller - use of P.A. System
- 12.54 Sun Papers, Classified ad
- 105.00 Sun Papers, Display ads
- 12.70 Thrifty Nickle, Classified ads
- 294.14 Journal Star, Display ads

LGMC Board of Directors - continued

Paid '83 Show bills for approval:

 \$ 80.91 Journal Star printing Co. for classified Ads

 56.32 Omaha World Herald for Classified Ads

 5.63 Mary Walker - printing of silent auction sheets

Motion to approve by Glen Lyman 2nd Claude Scott. Motion carried.

Club viewed letter accompanying rock specimens sent to Iowa student by Florence Boring. Club participation in this project commendable. Vacancies on Long Range Planning Committee & By Laws considered by Roger Pabian. Roger Pabian as past president will become Chair Person of the committee and he appointed John Abel to a 3 year term. Phyllis Parks made a motion that these appointments be accepted and Virginia Green seconded motion. Motion carried.

To fill the third vacancy created by the death of Howard Taylor, suggestion made by Jim Taylor that Vera Lyman serve the remaining 2 years of this member. Motion by Virginia Green that this appointment be approved. Motion seconded by Phyllis Parks. Motion carried.

New Business:

Bev Bartek of the Nature Center at Pioneer Park had contacted Roger Pabian concerning participation of the Club in a program at the Center.

The possibility of some demonstrations, slides etc. were considered.

After discussion the Board felt the club would favorably consider such a participation, possibly July 30. Roger Pabian will be in touch with Bev Bartek and get back to the club on this. Possibility of a club picnic following the demonstrations at the Nature Center. Pres. Jim Taylor appointed Roger Pabian to coordinate this project.

Motion Virginia Green, second Claude Scott that the club dispense with the summer meetings (June, July, August) and strive to substitute other activities. Motion carried.

Silent Auction suggested for May General Meeting.

Letter received from Lee Pivonka expressing his appreciation of the memorial scholarship awarded him.

John Abel not present to give Committee report on '83 Show so Phyllis Parks gave a preliminary report.

Two members have applied for reinstatement to active membership.

Richard Hornung and Dr. Harold Krieger. Motion Virginia Green 2nd Glen Lyman that these members be approved. Motion carried.

Fred Holbert applying for membership. Motion Virginia Green, 2nd Claude Scott that this member be approved. Motion carried.

April 15-16 Nebraska Academy of Sciences will be holding the 93rd annual meeting at Olin Hall Nebraska Wesleyan.

Next General Meeting will be held April 23, 1983 at 7:30 P.M. Dr. Tanner will present the program on Egypt.

Board Meeting to be held May 5, 1983 at 7:30 P.M.

Motion Virginia Green 2nd Glen Lyman meeting be adjourned.

Respectfully submitted, Gail Clare Scott, Secretary

Zeitner collection to be at auto museum



Ropes bar the entrance, snow is on the ground and the parking lot is empty. It looks as though nothing is happening at the Pioneer Auto Museum in Murdo.

But inside workers are busy remodeling the entry and first display room which will house four major collections.

New to the museum and a highlight of the room will be the world-famous Zeitner Collection of rocks, gems and fossils, according to Dave Geisler, owner of the museum.

June Zeitner is known in this area, having taught in Mission. A majority of the items in her collection were gathered in this area and the Zeitners want to keep it in South Dakota where it can be seen.

Zeitner has also been assistant editor of the *Lapidary Journal*, and in 1976 she was named First Lady of Gems by President Gerald Ford. Geisler hopes to have her crown on display along with the collection.

Also on display in the remodeled room will be what Geisler calls "a good variety of America's finest cars." The cars will be

in an area which is more accessible so they can be easily brought out for promotions and for better viewing by the people.

Completing the room will be a larger gift shop and a collection of music boxes and rare musical instruments.

Geisler calls the new room the "Gem Room", not only because it will contain the Zeitner Collection, but also because it will have his "gem cars" and "gem music boxes."

If remodeling is finished before the tourist season, Geisler says he plans to have an open house for everyone to view the new displays.

Murdo can be proud to be the home of the Pioneer Auto Museum. It is recognized by AAA as one of the top three auto museums in the country along with Harrah's in Reno, Nevada, and the Henry Ford Museum in Dearborn, Michigan. Unlike the other two which are foundations, the Pioneer Auto Museum is a private enterprise.

- via The Murdo COYOTE, Vol. 7 # 7
Submitted by J.D. Young, THANK YOU

Your 1983 Regional Show Schedule

Here are the dates and locations of the six regional shows in 1983. Note, the National Show and Convention will be held in Spokane, Washington in conjunction with the Northwest Federation Show August 4-7.

CALIFORNIA San Jose, CA June 17 thru 19	EASTERN Charleston, WV July 8 thru 10	MIDWEST Kalamazoo, MI July 14 thru 17	NORTHWEST AFMS SHOW Spokane, WA Aug. 4 thru 7	ROCKY MOUNTAIN Oklahoma City, OK June 10 thru 12	SOUTH CENTRAL Dallas, TX Nov. 11 thru 13
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ODDS 'N' ENDS

Anyone who was not at the April General Meeting certainly missed an excellent program by Prof. Lloyd Tanner of the University of Nebraska, on his "Trip To Egypt".

A great part of the program included history of Egypt and human interest stories which proved very interesting. It is astounding what people were able to accomplish thousands of years ago without today's technical knowledge.

The great lengths scientists and archeologists will go to in order to obtain historical facts is overwhelming.

It was certainly an interesting program, and we do THANK YOU, Prof. Tanner.

* * * * *



Prof. & Mrs. Lloyd Tanner & family
RFD 6 Lincoln 68502
475-5212

Please add this listing to your Who's Who.



Lincoln Gem & Mineral Club...plus all of NAOESCI

THANK YOU, THANK YOU...You all were so kind to take time to drop me a note and tell me you all missed me. Words are not adequate to tell you how much the cards and note you sent to me while I was in the hospital. They really cheered me up; after all, I believe this is the first ever LGMC show I have ever missed....also to my "Secret admirer", you will just have to wait till we see each other again to collect on your hug and kiss.

Thank You All Again
"Evey"

Oh yes, I want to also thank Ray Lambert for the snow job he did for me.

* * * * *

We are very pleased to report that Myrtle Young is doing very well. J.D. is having a hard time keeping her from overdoing. She seems to insist on being out amongst her flowers and working.

Happy to hear your're doing so well, but please don't overdo it, Myrtle. It would be super to see you both at the May meeting.

Also very please to hear that Mildred Pfeiffer is doing well after her surgery. A speedy return to good health for both of you ladies.

HAPPY MOTHER'S DAY to all MOTHERS! And to everyone's MOTHER all over this great land.

ATMOSPHERE

Earth, air, fire and water. People once believed these four terms included all of planet earth's material, and they called them the four elements. In a broad sense the idea was true but it involves the wrong use of the word "element" and its meaning. The four are featured in the classical art theme in the ceiling of the Governor's Reception Room in the famed Nebraska State Capitol Building, considered by experts to be one of the World's architectural wonders.

In modern usage "elements" means "materials that can not be separated into different substances by ordinary chemical methods." Instead of only four they now number over 100! The list recognizes 92 "natural" elements ranging in atomic number from hydrogen No. 1 to uranium No. 92 plus about a dozen "artificial" "Johnny-come-lately" nuclear monstrosities. The original four are not in the list. Those beyond 92 atomic number are said to be "transuranic" and are usually short-lived and radioactive. They are the pets of nuclear scientists. We "have come a long way" from the classical four to the more than 100 now believed to compose all earth materials. These are classified as solid (lithosphere), liquid (hydro-sphere) and gas (atmosphere). There is also an electrically neutral high temperature plasmatic state now added.

These states of matter are now known to be much more complex in their nature than early humans thought. They could understand solids and liquids more than they could the invisible forms or states. Because air is invisible, odorless and rather imponderable, people were unaware of the facts about the atmosphere, its composition, physical characteristics and functions.

Most of the atmospheric knowledge has been learned in the last four centuries and much of that during the present generation's memory. There was an ancient belief that the earth was a flat disk floating in a universe of water. The water-air relationship in evaporation, condensation and freezing was then little understood. Winds were thought to be the result of trees waving back and forth!

One elderly philosopher who had fostered the 4-element idea wished to disappear from the earth so completely that people would believe he had been wafted away to become a god. So he jumped into the active Mt. Etna crater. The eruption spit out his bronze sandals, and the act was "snafued." Most old-timers could not "savvy" the atmosphere and its behavior; even the genius Aristotle had very unscientific ideas about it. The great reputation of his famous intellect was unchallenged for many centuries. (he probably had good press agents) Of course, everyone subscribed to the old cliché "Nature abhors a vacuum".

What the future holds for the atmosphere now concerns thinking people. Air pollution is a very popular subject, not to be disregarded. Current living standards demand processes and techniques that were no problems until the current century. Factories and

ATMOSPHERE - continued

modern living practices discharge unbelievable quantities of gases, vapors and small particles. Volcanoes, hot springs and forest fires pour out enormous amounts of pollutants. Decay of organic matter is another natural, silent factor; and so is lightning, though not silent.

The character of the earth's weather and climatic conditions are so dependent on atmosphere that scientists now are taking much keener interest in this once mysterious part of the classical "four elements." The present generation of earthlings is the first one in all human history to be so pampered by weather reports and road-conditions information through various media. Though they may not always be completely reliable, they are becoming more-and-more of our daily concern and guidance.

Modern devices, techniques and services are prime necessities for comfort, safety and success in all human activities. The old adage "Everyone talks about the weather but nothing is done about it" is still partly true, but it is being altered. Much is being done about it to soften the adverse effects of weather and climate for all life on earth. The actual control of weather factors has not yet been very successful, but progress is being made through more research and learning about the hitherto least understood part of our world - the atmosphere.

Such devices and techniques as are involved in the Sandsat and other satellite programs have been in the news for several years, and they are good examples. The March, 1983 issue of The Pick and Shovel, pp 9, 10, 11, "Eros Data Center, Sioux Falls, South Dakota", by L.G.M.C. member, Florence Boring, is an excellent source of information about this.

The atmosphere is more than just a lot of free air overhead. It is packed with air-space craft, volcanic ash, contrails, exhaust and other particles, (and we hope no ballistic missiles.) Some are harmless, but others are potential dangers to all life on earth.

No wonder the jet stream occasionally goes awry!

- Submitted by J.D.Young

safety

BE AWARE OF EMERGENCY PLANS OF SCHOOLS YOUR CHILDREN ATTEND.

PRACTICE WHAT YOU WOULD DO IN AN EMERGENCY WITH YOUR FAMILY.

BE AWARE OF THE EMERGENCY PLANS OF THE CHURCHES AND THE COMMUNITY.

- via AFMS NEWSLETTER, April 1983

SUMMER ACTIVITIES

There will be no summer program meetings this year, but these will be replaced by several other activities.

On Saturday, June 25, there will be a field trip into Richardson and Pawnee counties. We will have an opportunity to look at some new fossil bearing outcrops of Late Pennsylvanian sedimentary rocks that are quite fossiliferous. These are unconformably overlain by Pleistocene age glacial deposits that contain some good cutting material. We will look at some Permian rocks too, and will have a chance to collect some fossils and minerals there.

On Saturday, July 30, we will sponsor a program at the Chet Ager Nature Center at Pioneers' Park. This will be an all day affair, and displays, programs, and demonstrations will be needed. We will follow the day up with a picnic and a get together at the park.

An August event is in the planning stage. It will be a little bit bigger and a little bit better than the others. Nuf said for now.

Roger Pabian

"Coordinator?"

NEW PUBLICATION

"Bibliography of Nebraska Geology 1843-1976" is now available from the Conservation and Survey Division, 113 Nebraska Hall, University of Nebraska, Lincoln, NE 68588. The cost is \$5.00 for paper bound and \$10.00 for hardbound. The publication was compiled by John Sandy and Jay Fussell. It includes a nearly complete listing of geological literature pertaining to Nebraska, including geology, stratigraphy, paleontology, mineralogy, sedimentology, and other topics. This publication is a must for the collector of Nebraska's gems, minerals, and fossils.

Submitted by Roger Pabian

CANADA

Our neighbor to the north affords the gem cutter numerous opportunities to expand horizons. A brief gem tour from east to west will serve to highlight some of Canada's better known gem, mineral, and fossil occurrences.

Labradorite, of course, received its name for Labrador, where it occurs in Precambrian age plutonic rocks. Its' particular iridescence is sometimes called "labradorescence" and it is caused by twinning planes of the plagioclase feldspar crystal causing interference with the light. The natural tendency for cutters is use the cleavage plane of the feldspar crystal as a "natural base" for a cabochon. This is easy but does not produce a fine iridescence. We will demonstrate how to orient labradorite at the meeting.

Nova Scotia is well known for fine agates. These occur in Triassic age di-basic rocks that are well exposed around the Bay of Fundy and the smaller Scots Bay. The agates are generally small, but they have many features of the much older Lake Superior agates. In addition to fine agates, these diabases have yielded some excellent zeolites including Thomsonite. Fine fern fossils are found in Middle Pennsylvanian age shales and coals that occur in Nova Scotia.

As we go westward through Quebec, we should take time to look at some of the Ordovician age strata that crops out there. These outcrops have yielded many fine fossils including trilobites, cystoids, brachiopods, crinoids, bryozoans, and many others. Many pioneer North American geologists did work in Quebec.

One should not forget to visit the Royal Ontario Museum in Toronto. There are many superb fossil and mineral displays there. The museum staff is very active in research and at least two of its' staff, Drs. Peter von Bitter and Ildi Munro, are doing research on the conodont fossils found in the Heebner Shale that crops out near Weeping Water, Nebraska.

Many fine Lake Superior agates have been found in the Lake Nippigon area in Ontario. This area has been a classic locality for many years. The mineral collector will find the area around Bancroft, Ontario, to be very productive. One of our former club members, Dave Doherty, displayed Bancroft minerals at our shows in 1975 and 1976. Dave was one of the first recipients of our club's scholarships and he is now employed as a geologist in Alaska.

The Thunder Bay area in Ontario is world famous for fine amethyst crystals. Several club members, past and present, have collected there. Some of the crystals are quite large and quite attractive.

Manitoba is not too well known for gem materials, but gravel pits in the southern part of the province have paid out some moss agates and dendritic agates that bear striking similarities to Montana moss agates. There are some isolated occurrences of agates in both Saskatchewan and Alberta.

Mount Wapta in British Columbia is known for its' Middle Cambrian age fossils that are found in the Burgess Shale. The Mount Wapta area is protected for these fossils include some of the most phenomenal forms of ancient life. The fossils are so well preserved that the musculature and intestines of many of the animals are still intact. The Cambrian diorama that is now on display at our museum depicts the life forms that are now known as fossils from the Burgess Shale.

Ellesmere Island in the Northwest Territories contains one of the most complete sections of sedimentary rocks in the whole world. It is the subject of much research. Finally, some of the earliest evidence of man in North America has been found in the Yukon area. Some of these artifacts may be over 40 thousand years old.

Be sure to bring specimens of gems, fossils, minerals, etc. from Canada to the May meeting. Cases will be provided.

Roger Pabian
Education

AGATIZED WOOD

Agatized wood is a very popular medium for the gem cutter. There are several reasons for this. It is common and occurs in almost every state in the Union as well as most of the Canadian Provinces and most areas of Mexico. Some fine examples of agatized wood is now being collected in Brazil.

Most agatized wood is inexpensive. Much of it is very colorful, but choice gems of agatized wood are still few and far between. There are two grades of wood that really concern the lapidary. The most sought after pieces are complete limb sections that are commonly called rounds. Some areas are well known for the many fine examples of wood rounds that they produce. Eden valley in Wyoming has been known for many years. There one finds a black wood that has a blue or gray agate filling fractures within the rounds. This wood may contain some calcite and much of this is highly fluorescent. Complete logs up to several feet in length have been found here. The wood occurs in Eocene age strata.

The petrified forest in Arizona is well known to almost everybody. Although the wood there is protected, similar varieties are found on some of the private ranches in the area and some of these areas are open to fee collecting. The wood here includes some very rare varieties such as Woodworthia and it is all found in a Triassic age rock unit called the Chinle Formation.

Some other examples of petrified woods have been collected near Escalante, Utah. These woods are strikingly similar to the Arizona woods, although yellows are more common than reds here.

McDermitt Nevada is well known to wood buffs. There one finds some fine logs that vary from a tan on the outside to a dark brown on the inside. Such wood has been offered for sale by a number of dealers at a number of shows.

Cherry Creek in Oregon is well known for fine petrified wood. Much of this is very colorful and fine rounds are not uncommon. Much of this wood is preserved in Miocene age volcanic rocks.

Associated with petrified wood one can find such things as seeds, cones, and leaf imprints. The latter occur in very fine grained sediments, whereas the former can be found in sand and gravel sized sediment fractions.

Nebraska has a great deal of petrified wood. Some of this occurs in place. Some fine black wood occurs in the Chadron Formation of Oligocene age in Sioux and Dawes counties. This wood can be bleached in a commercial chlorine bleach to show a wood structure and restore a woody color. Late Miocene age strata exposed along the Niobrara and Republican rivers has yielded some very fine examples of wood rounds. Much of this wood is opalized and much of it is difficult to polish even if it is not very hard.

Streams flowing from western sources have transported a great deal of fossil wood into Nebraska. Brief stops on gravel bars found in almost all of Nebraska's streams will usually yield an example of petrified wood. Fine examples can be found in the Loup, Republican, Niobrara, and Platte River drainage systems. Ancient streams are known from the terraces that they have left high on modernday hilltops. These terraces are often more productive than the modernday river bed.

Some excellent examples of agatized woods have been found in the terraces of Lodgepole Creek and the South Platte River in Deuel County, near Chappell. The wood found there may include such varieties as palm, cottonwood, oak, or rather, forms that are ancestral to these. An occasional cycadophyte can be found there.

Bring examples of petrified wood for display at the May meeting. Cases will be furnished. Also, we will have a long-wave ultraviolet light to check for some of the fluorescent varieties.

Roger Pabian
Education Committee

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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)

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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.... Save your first page for reference to all the SUMMER ACTIVITIES. There will be no special flyers mailed to remind you. Special activities which do not yet have a specific time or date, will be announced later via the calling committee.

HAVE A SAFE AND HAPPY SUMMER!

SEE YOU ALL IN SEPTEMBER!



H.E.L.P.

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Lincoln Gem & Mineral Club
Box 5342
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Exchange Editor: Vera Lyman
420 N. 56th St.
Lincoln, NE 68504

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