

CALENDAR

- Meeting: Saturday, November 17, Nebraska Center for Continuing Education, 7:30 PM
ANNUAL MEETING-Election of Officers for 2002. See your October Pick & Chovel for your Nominating Committee Slate of Officers for 2002.
- Program: **'Advanced Cutting Tips - using price as a guide', David Heffelbower, Chairman**
- Youth Meet at 7:30 with the club.
- Roger says Bring **Crystals** for Show and Tell
- December Annual Christmas Meeting, Sunday Dec. 9th, 5 to 9 PM.. Antelope Shelter with Susy McMahan in charge. Information on Page 2 of this Pick & Shovel.
- January 26, 2002- **24th Annual Indoor Swap.** Noon to 5 PM, followed by our 48th Anniversary Meeting.

LGMC SHOW - MARCH 23-24, 2002, Pershing Auditorium
 (Our 44th Annual Show)
 "A Blast from the Past"

DUES ARE DUE By January 1, 2002 and may be paid at anytime after **November 1, 2001.** Dues become delinquent on January 31 and must then be accompanied by a late fee of \$5.00 for reinstatement. Please mail your checks to the Treasurer of Lincoln Gem and Mineral Club at Post Office Box 5342, Lincoln, Ne 68505 or plan to pay them at the November meeting. No business will be transacted at the Christmas Meeting in the Park. Dues are \$10.00 per adult, \$2.00 per youth or \$22.00 perfamily with 2 adults and all children under the age of 16. New memberships require a \$5.00 registration fee.

2002 REGIONAL SHOW SCHEDULE

EASTERN FEDERATION

April 26-28, 2002
 Franklin, New Jersey

CALIFORNIA FEDERATION

July 12-14, 2002
 Placerville, California

SOUTH CENTRAL FEDERATION

February 9-10, 2002

Tyler, Texas

NORTHWEST FEDERATION/AFMS

July 16-21, 2002

Port Townsend, Washington

SOUTHEAST FEDERATION

To be announced

ROCKY MOUNTAIN FEDERATION

April 19-21, 2002

Enid, Oklahoma

MIDWEST FEDERATION

October 5 -6, 2002

Springfield, Illinois

2001 CHRISTMAS MEETING

Chairman and Hostess for our 2001 Christmas Meeting is Susy McMahan. She is planning a Buffet Supper at 6 PM to be catered by HY VEE and asks that club members bring Desserts. The club will provide the coffee. The calling committee will be calling everyone to determine how many persons will be in attendance and any other information that you need.

The program is to be Pat Akins on the subject of Petrified Wood.

New officers for 2002 will be introduced and installed. A gift exchange is planned. Bring a wrapped gift, value \$5.00 or thereabouts, and take home a new treasure.

* * * * *

At this time we do not plan to have the December 2001 Pick & Shovel out until after the Christmas Meeting so the Deadline for copy is Wednesday, December 5 at the Board of Directors Meeting which has been scheduled for Kinko's at 48th and Vine, 7 PM. This is a very important meeting as we wrap up the business for this year so please bring any bills which you need reimbursement for. Editor/Treasurer-Phyllis

* * * * *

1. Thou shalt not touch thy neighbor's minerals unless he places them in thy hand.
2. Thou shalt not test the strength of crystals by pinching, squeezing or biting.
3. Thou shalt not drop thy neighbor's fossil, for many do not bounce properly.
4. Thou shalt not place thy neighbor's specimen in thine own pocket.
5. Thou shalt not argue the name of that mineral too violently. Sometimes thou could be wrong.
6. Thou shalt not test thy neighbors agates for hardness by rubbing them together.
7. Thou shalt not climb above thy neighbor when on a field trip, lest thou art willing to spend the remainder of the day digging him out.
8. Thou shalt protect thine eyes, hands and feet so that thou can enjoy many more field trips.
9. Thou shalt not encroach upon thy neighbor's digging, lest his hammer be dropped upon thy toe.
10. Thou shalt not complain about, or denounce the club officers under the penalty of being elected one thyself.

From The Loup Scoop, December 1988

President's Message

Greetings,

For those not in attendance at the last meeting, the meeting night has been changed. Starting in February the Club will meet at 7:30 on the fourth Thursday of the month. This change was voted on and passed. The November meeting will still be held on the third Saturday of the month and the January 2002 Swap will be held on the fourth Saturday. Hopefully this will not create any confusion. The change was done to bring back member that did not or could not make it to the Saturday meetings and to lure new members into the club.

I want to thank everybody that was in attendance at the last meeting and voted, this is a big change. I want to wish all Club members a Happy Thanksgiving, this has been a fast year. See you at the meeting.

Jim Atkins

2002

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IT'S A GORGEOUS HUNK OF THE KEWEENAW."

So said Bob Barron, facilities manager for the Department of Geological Engineering and Sciences at Michigan Technical University, and coordinator of the recovery of a 33,000-pound copper boulder from Lake Superior.

Barron and two other divers secured foot-and-a-half wide straps around the boulder at a depth of 30 feet, and a U.S. Army Corps of Engineers barge and crane lifted the specimen from the lake bottom.

"It's all in one piece—no stress, no strains," said project coordinator Bob Barron, who discovered the boulder a decade ago, and has worked since then to retrieve it. "It's a gorgeous hunk of the Keweenaw". The boulder, which lay nearly a mile off shore in 30 feet of water, was lifted onto the barge that had a built in scale. The estimated weight of the slab is 34,000 pounds.

It measures more than 18 feet long, 8 feet wide and 15 inches thick. It is the largest mineral specimen ever taken from Lake Superior. The boulder is part of one of the richest deposits of copper on Earth, in Michigan's Keweenaw Peninsula.

"Everything went just perfectly," Barron said. "We got it to the surface, cleaned it off a bit with a fire hose, and you could see the colors come out. It is predominantly light green, with some brown and even some blue areas". Barron and his team used a 20-ton jack to lift the boulder and slip heavy-duty nylon straps underneath. On Thursday, he attached the straps to the crane, which easily brought the boulder to the surface. The boulder was later transferred to a flat bed truck.

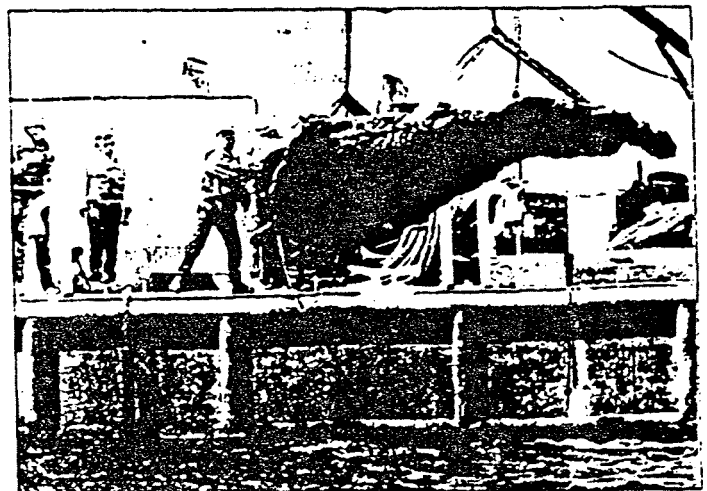
"I think it will be a real shot in the arm for the area," he said. "It will be a big tourist draw."

The final destination, the Quincy Mine, is the site of the world's largest hoist, which was used to send miners hundreds of feet into the earth, and to haul copper back to the surface.

The boulder will form the centerpiece of the new home for the Seaman Mineral Museum, which is also the official mineral museum for the state of Michigan. Officials have raised \$2 million of the \$8 million needed for the museum's new home at the site of one of the most productive copper mines ever operated. The mine, the Quincy Mine in Hancock was called "OLD RELIABLE", because it paid dividends over a longer period of time, than any other mine in the copper country.

(Editor's note by John Jaszczak... "This exciting project is funded by a FY2001 Institute of Museum and Library Services government-directed award, provided to the museum through the assistance of U. S. Congressman Bart Stupak (D-Mich.) and U.S. Senator Carl Levin (D-Mich.).

Gleaned from the Seaman Mineral Society News/Kalamazoo Gazette 8/01.



MICHELE JOVINEN / ASSOCIATED PRESS

Members of the U.S. Army Corps of Engineers guide a block of copper, with an estimated weight of 34,000 pounds, retrieved Thursday, from Lake Superior near Eagle Harbor, onto the H.J. Schwartz, a Corps of Engineers barge based in Duluth, Minn.

LINCOLN GEM & MINERAL CLUB, INC. - GENERAL MEETING - Oct. 27, 2001
7:30 P.M. @ Antelope Park Shelter House

Annual Halloween/Dessert Meeting

The Meeting was opened with the Pledge of Allegiance.

There were 20 Adult and 5 Junior members present.

Guests were Nathan Christensen, Mrs Aulden Stewart, Mrs. Grant Bennett

Minutes were approved as printed with motion by Bill Rockel, 2nd by Pat Akins, Motion carried.

Treasurer's report approved as printed with motion by Grant Bennett, 2nd by Dave Heffelbower. Motion carried.

OLD BUSINESS: Roger Pabian & Jim Atkins delivered the \$1000. Club donation to the Red Cross.

NEW BUSINESS: Discussion to change General Meeting night.

Motion to change the General Meeting night to the 4th Thursday of the month from the present 4th Saturday. 2nd by Pat Akins. Motion carried by a vote of: 12 FOR, 6 Against, 1 Blank.

Motion to destroy the ballots by Shirley Rockel, 2nd by John Harrison. Motion carried.

Motion by Roger Pabian that the January Meeting will follow the Annual Swap which is on the 4th Saturday of January. 2nd by John Harrison. Motion carried.

CHRISTMAS PARTY - Susan McMahan, Chair.

Details will be in the November Pick & Shovel.

SHOW COMMITTEE - Roger Pabian

He is getting his Committee lined up and plans a Meeting soon. Committee thus far:

Charles Wooldridge - Dealers

John Harrison - Floor; with Pat Akins as assistant

Susan McMaha - Demonstrators; selling & non-selling

Judy Reilly - Ribbons & Recognition

Grant Bennett - Club Table

Kaye Jurgens - Juniors

- Programs

Ed Ridge - Displays

JANUARY SWAP: Roger Pabian

Flyers will be out. Also for Gem Palette. Roger would like many to participate. Items which are rock-related; i.e. Gems, Minerals, Jewelry. (Do not desire unrelated items)

Board Meeting: Nov 1 - 7:00 P.M. @ Kinkos

General Meeting: Nov. 17 - 7:30 P.M. @ NCCE

Respectfully submitted,

Vera Lyman
Vera Lyman, Secretary

Air Abrasive or Air Abusive

Some notes on fossil preparation

Sometime around 1950, a new era in painless dentistry was announced to the world. Now, nobody would have to undergo the pain of having his or her teeth drilled with a carbide steel bit and no water coolant. An air-abrading unit called the "Air Dent TM" had been introduced to the dental profession. We were promised a new era of painless dentistry---much of the work could be done even without the use of an anesthetic. Few "breakthroughs" ever lead up to their potential. Go to the library and look at the science sections in magazines such as Time, Newsweek, and others. Only about 20 years ago, global cooling and another ice age was the fodder for the popular press.

It seems that the air-abusive (oops!) the air-abrasive unit went the same direction and found a place in limbo---not full citizenship, but at least residency until---well, until some paleontologists and fossil collectors re-discovered them.

Now, there was a quick way for the impatient to remove unwanted matrix from their nice finds. You can quickly remove silt and clay and you can remove encrusting epiflora and epifauna such as algae, worm tubes, bryozoans, juvenile brachiopods and clams, edrioasteroids, and any other organism that set up housekeeping on your nice find. With a single swoop of your air abrasive, you too can wipe out an entire micropaleoecosystem.

I've been guilty of the above sins. With my first tries at the air-abrasive unit, I really thought that I had done a neat job of preparing fossils for research purposes. Over the years, I've come to realize that more patience and

less desire to have a neat fossil has added a great deal to my knowledge of paleontology.

Paleontology as a science has changed greatly in the past 50 years. While looking through the collections of fossils in various museums, it seems that in the past paleontology simply came to little more than collecting a fossil, cleaning it up, putting a coating of shellac or acetate on it, giving it a generic and specific name, and gluing it to a board. From there, it went to a display case or into a research collection.

Over the years, paleontology has become a much more subjective science. Not only does the fossil get a generic and specific name, but it is expected to provide data about the conditions under which it both lived and died, and what happened to it when it was living and after it died.

Many of the invertebrate fossils with which I work come in from the field in pretty grubby condition. There's a lot of silt and clay on them and there are clumps of algae, worm tubes, juvenile brachiopods, and all kinds of other things covering the fossils.

How do you go about preparing these specimens. The first step can be to simply rinse the specimens off with water. You might add a little bit of sodium bicarbonate (NaHCO_3) or baking soda as it is commonly called. That breaks up the adhesion of clay particles.

Then with a bit of magnification, 5 power or thereabouts, you can look at the fossil. Determine what is dirt and what is epiflora and epifauna. Most of the time, you can pretty much complete the preparation of the fossil by simply scrubbing it down with soda water or clear water and an old tooth brush. You have a micropaleoecosystem intact.

These little ecosystems can tell you a lot about the life habits of the animal on which they formed. Some of the questions you might ask is do certain kinds of organisms prefer certain kinds of hosts. For example, is one kind of worm found only on a certain family or species of crinoid or brachiopod. I have, to be sure, observed several host specific relationships on fossils I have studied.

Now that we've spent a bit of time talking about what you might take off of your fossils, lets spend a few paragraphs talking about what you might put on/in them.

Another trick of earlier paleontologists was to fill up the holes and gashes in their fossils to make a pretty display specimen. The question should really be: "How did that hole or gash get into the fossil." That crinoid wasn't simply meant to become a curio in a display case. In its' lifetime, it probably had a greater role in the ecosystem---that of being nautiloid or fish food, or the sustenance on another critter. Life subsists on other living forms---it's that way today and it was that way back in the dawn of life. There was algae producing carbohydrates and proteins and there were tiny consumers that lived off of these algae. Bigger consumers ate the littler ones and on it went up to the top carnivore.

Throughout geologic time, the rules of the sea haven't changed. There are still the producers (algae) and the consumers (up to the top carnivore). The producer's roster hasn't changed much (algae are still the big producers) but the consumer's roster has changed considerably (the top carnivore list includes sharks and people too).

Many of the fossils contain severe gashes that indicate something came along and took a bit out of it.

Many times these cuts or gashes proved fatal but many times the victim survived the attack. I've observed many crinoids, brachiopods and trilobites that have large areas of scar tissue that has healed.

Parasites are another thing that can be blown away or covered over. Many fossils have borings in the and some kind of animal lived within the boring. Many of the borings still have the remains of the bore inside them. Some of these boring organisms, with the exception of leaving some scars on the host, seem to have had no effect on the longevity of the host. The boring organisms also may have been much more host specific than the encrusting organisms.

Another thing we can determine from the scars found on a fossil is whether the scar was made when the creature was still living or if it was scavenged after its death.

Some of the trails that are left on the shells of our marine invertebrates suggest that they were grazed on by scavenging snails after death and some of the scars and borings suggest others were attacked while they were still living.

Paleontology has come a long way and along a much different route than I would have guessed. It has gone from a descriptive to a subjective science, and a much more interesting science.

The epifauna and scars on these fossils can tell some exciting stories of life back in the Paleo- or Mesozoic---who dined on what, and who set up housekeeping on what, and a lot more. What I'm trying to point out is that we shouldn't over-prepare our fossils. Let's try to keep the story intact.

Roger K. Pabian

2001 ELECTED OFFICERS

President	Jim Atkins,	3028 So.35th St.	Lincoln, NE 68506	483-1610
1st Vice Pres.	Grant Bennett,	721 No. 58 th St.	Lincoln, NE 68505	466-5377
2nd Vice Pres.	Susy McMahan	5636 Greenwood St.	Lincoln, NE 68507	464-0065
Secretary:	Vera Lyman,	420 N. 56th St.	Lincoln, NE 68504	464-6089
Treasurer:	Phyllis Parks,	2435 So. 19th St.	Lincoln, NE 68502	476-6798
Board Member.	Charlene Bingell	925 El Avado Avenue	Lincoln, NE 68504	466-4877
Board Member	David Heffelbower,	1819 Washington St.	Lincoln, NE 68502(cell)	499-2970
Board Member	Brett Jurgens,	14421 Danvers St.	Waverly, NE 68462	786-2756
Board Member	James Marburger	330 Locust	Hickman, NE 68372	792-2348

Nominating Committee

3 years	David Bingell
	Billie Heffelbower
2 years	Jim Parks
	Charlene Bingell
1 year	Jerry Moore
	Kevin Schwartzman

Chairman-Immediate Past President Edward Ridge

Long Range Planning & By-Laws Committee

3 years	Vera M. Lyman
	Roger K. Pabian
2 years:	Charles Wooldridge
	Kevin Schwartzman
1 year:	David Heffelbower
	Jim Parks

Standing Committees

Membership:	Shirley Rockel	Programs:	David Heffelbower
Education:	Roger Pabian	MWF Liaison:	Vera Lyman
Field Trips:	? Coordinator	Scholarship:	Susan Taylor
Historian:	Susy McMahan	Christmas Party	Susy McMahan ?
Hospitality:	Charlene Bingell		
Study Coordinator:?		2001 Show:	Jim Marburger
Housing/Property:	Jim Parks	2002 Show:	Roger K. Pabian
Youth Activities:	Kay Jurgens	2001 Swap	Charlene & David Bingell
Librarian:	Roger Pabian	2002 Swap:	Roger K. Pabian

Auditing Committee:? Jerry Moore, Mike Jurgens, Francis Belholovy

Gem Palette Correspondent: Grant Bennett ?

Geology Day Coordinator: 2nd Vice President

L. G. M. C. Web Page Address :

<http://nesen.unl.edu/lgmc/lgmc.html>

Your PICK & SHOVEL Staff

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The purpose of this corporation shall be to study, promote an interest in, and disseminate knowledge of lapidary and various Earth Sciences including but not necessarily limited to geology, paleontology and mineralogy. It shall be a particular purpose of the corporation to provide education in these fields to its members and the general public, particularly youth and student groups.

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44th Annual Show
at

PERSHING MUNICIPAL AUDITORIUM

March 23 - 24, 2002

'BLAST FROM THE PAST'

Show Chairman - Roger K. Pabian

Read your bulletin for new materials or specials from the above advertisers.

Advertising by rock-hobby business or interest is permitted with the approval of the Board. The rate now set at \$15.00 per full page; \$7.50 per 1/2 page; \$4.00 per 1/3 page; and \$3.75 per 1/4 page(min) per issue, paid in advance. These ads will be placed through the bulletin as space permits.

Subscription to the Pick & Shovel is \$10.00 per year mailed.

Dues to Lincoln Gem & Mineral Club are as follows:

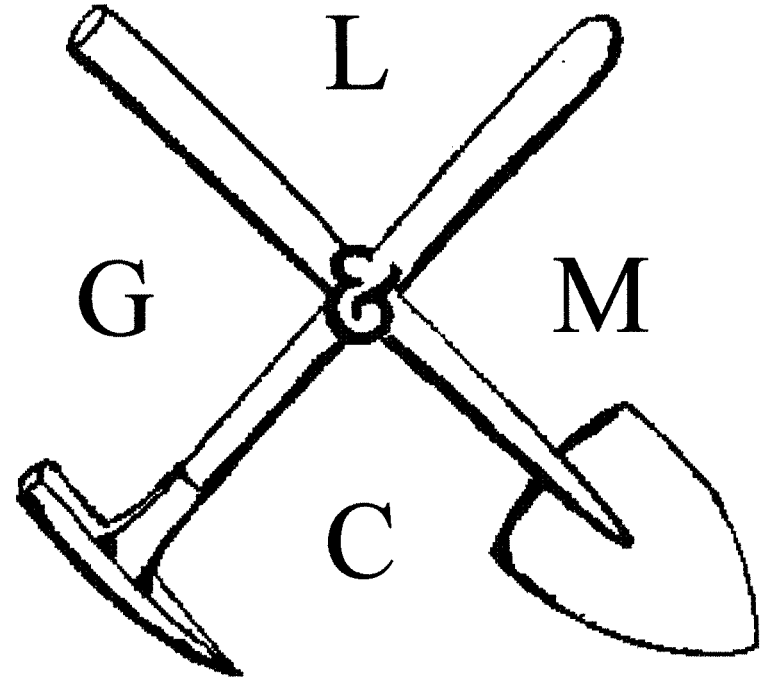
Adult(ages 16 and over) \$10.00 per year
Junior(ages 12 to 16) \$ 2.00 per year

Family Membership (Husband,wife,resident children under age 16) \$22.00 per year

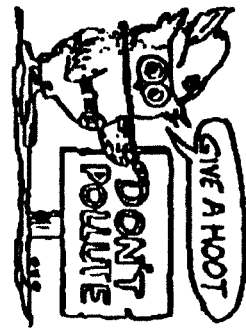
New memberships must be approved by the Board, after the applicant attends at least one meeting of the club and pays the above dues plus a \$5.00 registration fee.

THE PICK & SHOVEL

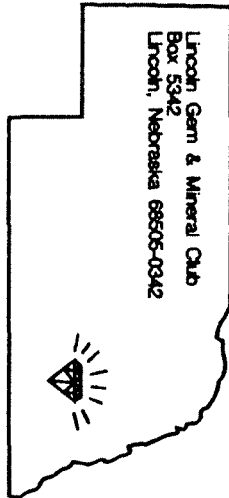
November 2001



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LINCOLN, NEBRASKA

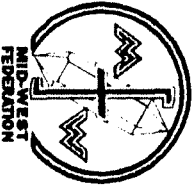


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