



# PICK & SHOVEL

OFF TO  
THE FIELD



Volume 29, No. 9  
May, 1989

Lincoln Gem and Mineral Club, Inc.

P. O. Box 5342

Lincoln, Nebraska 68505

## 1989 ELECTED OFFICERS

President: Fred B. Holbert, 2822 S. 13th St., Lincoln, NE 68502	423-5639
1st Vice President: Gerald Moore, 2305 S. 35th St., Lincoln, NE 68506	489-4184
2nd Vice President: C. David Heffelbower, 1819 Washington St., Lincoln, NE 68502	475-4713
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: Francis Belohlavy, 1919 "K" St., No. 4, Lincoln, NE 68510	477-4337
Board Member: Roger Pabian, 315 "D" St., Lincoln, NE 68502	474-2034
Board Member: Donald Phillips, 5901 Spruce St., Lincoln, NE 68516	489-7637
Board Member: Shirley Rockel, 1134 West Avon Lane, Lincoln, NE 68505	464-3059

### NOMINATIONS COMMITTEE

3 Years: Kevin Schwartzman, Chair.  
Roger Pabian  
Eddie Ridge,  
2 Years: Phyllis Parks, Janet Wright  
1 Year: C. David Heffelbower,  
Bill Rockel

### LONG RANGE PLANNING AND BY-LAWS COMMITTEE

3 Years: Kevin Schwartzman,  
Jim Marburger  
2 Years: Bob Wright, Linda Parks  
1 Year: Claude Scott,  
Phyllis Parks

### STANDING COMMITTEES

Calling: Shirley Rockel  
Education: Roger Pabian  
Field Trips:  
Historian: John & Lillie Lewis  
Hospitality: Wilma (Billie) Heffelbower  
Membership: Gerald Moore  
Housing/Property: Jim Parks  
Junior Activities: Janet Wright  
Librarian: Jim Parks  
Membership: Gerald Moore

MWF Liaison: Vera Lyman  
Programs: Francis Belohlavy  
Scholarship: Marie Taylor  
Christmas Party: Billie  
Heffelbower  
1989 Rockhound/Year:  
Roger Pabian  
1989 Show: John Harrison  
1990 Show: Roger Pabian

### AUDITING COMMITTEE, 1987-1988

Shirley Rockel  
Don Phillips  
Francis Belohlavy

### YOUR PICK & SHOVEL STAFF

Publisher: Lincoln Gem & Mineral Club, Inc., P. O. Box 5342, Lincoln,  
Nebraska 68505  
Editor: Roger Pabian  
Business Reporter: Vera Lyman  
Financial Reporter: Phyllis Parks  
Circulation: C. David and Wilma Heffelbower

The Pick & Shovel is the official publication of the Lincoln Gem and Mineral Club, Lincoln, NE. Articles and items appearing within may be reproduced in other club bulletins provided that proper credit is given to the Pick and Shovel and the author, and that a reprint of the bulletin is sent to the editor of the Pick & Shovel.

**CALENDAR OF EVENTS**

- MAY MEETING:** Saturday, May 20, 7:30 PM  
Shelter House, Bethany Park  
North Cotner & Vine Streets
- SPECIAL EVENT:** Annual Dessert Supper. Bring desserts to share. Club will furnish coffee, tea, punch, etc.
- PROGRAM:** Slide presentation. From the Midwest Federation Slide Program Library: Colorado Alabaster. After the slides, there will be sapphire digging again. There is still a chance to find a sapphire in the leftover concentrate from the show. Bring pie plates, lights, and small bottles for your finds.
- DISPLAY MATERIAL:** Bring examples of field collected materials. Cases will be furnished.
- JUNIOR MEETING:** 7:00 PM. Program:
- COMING EVENTS:** May 27-29, Chicagoland Gem & Mineral Show  
DuPage Co. Fairgrounds, Wheaton, IL
- July 14-16, Rocky Mountain Federation Show  
Payne County Fairgrounds, Stillwater, OK
- July 15-16, South Dakota State Gem, Mineral Show  
Rushmore Plaza, Rapid City, SD
- July 15-16, Agate Days in Moose Lake  
Show and Swap, Moose Lake, MN
- August 12-13 Corn Palace Rock Club Show  
Holiday Inn, Mitchell, SD
- October 7-8, Topeka Gem & Mineral Society Show  
Ag Hall, Expocentre, Topeka, KS
- CORRECTION:** The address of new members, John and Barb Mapes is: 8600 Mojave Drive, Lincoln, NE 68516, not 3600.
- WELCOME:** The following new members should be added to your Who's Who. We welcome them to the club.
- Stephen E. Sim, 400 So. 33rd, Apt. 5, 68510 477-0824  
Jonathan Quinn, 400 So. 33rdm Apt. 5, 68510, Junior  
Andy Staehr, 6117 NW 4th St., 68521, Junior, 476-2896  
Ryan Shanesy, 517 W. Beal St., 68521, Junior, 435-6779  
Kevin Osberg, 2312 Bradfield Dr., 68502, Junior, 435-0388  
Shawn McKillip, 6128 NW 10th, 68521, Junior, 476-9989

**COVER PICTURE:** Late 19th Century, Great Britain, artist unknown.

PRESIDENT'S MESSAGE

At the April general meeting eleven club members indicated interest in a field trip to Minnesota this summer. Of those members, most seemed to want to hunt for rocks with some lesser interests in other activities. Most respondents indicated that a long weekend would be desirable while those wanting a longer stay would continue on their own after our departure. A mid-July date seemed to fit most peoples schedules, however there is a fly in the ointment. During that time of July there are likely to be no motel rooms available. Carlton is hosting an international white water slalom on the St. Louis River draws contestants from ten nations. In addition, Mooselake is holding it's annual Agate Days. This event fills the motels thirty miles away in Carlton and Cloquet one year in advance. Because of our personal schedule, it looks like the weekend before July 4 may be the only time available.

The following is the TENTATIVE schedule of events. Roger Pabian and I will use Friday, June 30, as a travel day. Since there are two gem, mineral, & jewelry shows being held in Minneapolis/St. Paul, we will probably stop there en route. We would then drive to the Carlton/Cloquet area motel which is about 2 1/2 hour drive North of Minneapolis. Since we would be arriving late at the motel and Roger will need to get his beauty rest, we would meet the meet club group at a prearranged location about noon on Saturday, July 1. At that time, Roger would give the group a pre-expedition shake down and orientation. This short training session would include the locating and identification of the wild Lake Superior Agate. He also will stress safety measures to be practiced in the North woods such as: map reading (how to tell where you are), orienteering (how to get from where you are to where you want to be), water purification (filtered water treated with Halazone makes for better agate identification), marksmanship (the frenzied charge of a wild agate can be easily stopped by a crippling shot to the shoulder), and protection against the Minnesota state bird (the mosquito).

Once everyone has signed a pledge that all agate hunting will be conducted according the Marquis of Queensbury rules, we will proceed to the roads, pits, and rivers of the area. After we have had our fill of finding agates and eating walleye dinners, Roger and I will make our return trip on Tuesday, July 4. For those staying longer, we will assist you with any information that you might require for the remainder of your trip. The option of the fossil dig & rock hunt at Hill Annex mine near Calumet is apparently gone as the mine has been turned into a state park.

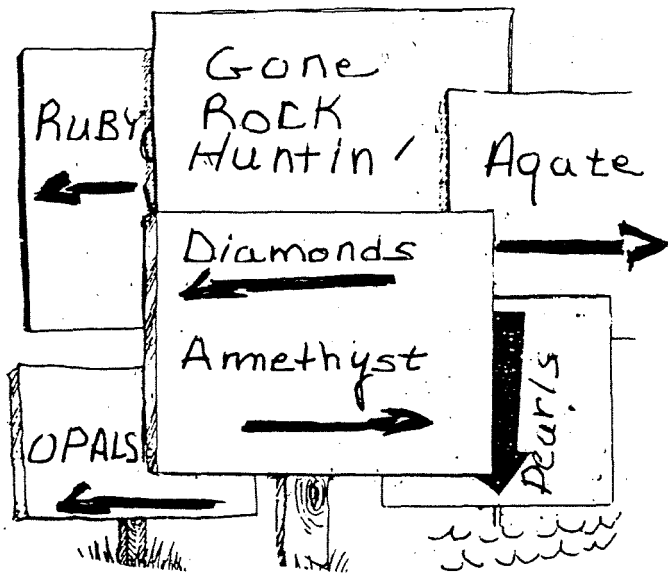
Local club members will be contacted by the calling committee to record the names of those interested in the trip. All of those people will be contacted with further information as the plans become finalized. An itinerary will be presented at the May general meeting and information given about lodging and camping facilities. In the mean time, consult the April and May issues of the "Lapidary Journal" for descriptions of the areas of Minnesota to which we will be traveling and the materials which we will be seeking.

Fred B. Holbert

an unhappy surprise  
 was John Lewis showing  
 up sick at the April  
 meeting. Lillie has been  
 ill but is feeling  
 better also missing  
 was Vera Symon  
 due to family illness  
 Dave Hoffelbrow  
 has been very sick  
 also on the way to  
 being well again



30 members  
 were at the  
 April meeting.  
 Three new juniors  
 paid their dues.  
 Wright on Jand  
 juniors -



I wish you all  
 good health & good  
 hunting - bring  
 home that bag of  
 rock - Happy days  
 of joy & what more  
 and the rain we  
 all pray for

Best Wishes  
 Bessie Sunbeam

## NEBRASKA ACADEMY OF SCIENCES --- 99th Annual Meeting

The 99th annual meeting of the Nebraska Academy of Sciences was held at Olin Hall, Nebraska Wesleyan University, Lincoln, Nebraska, on April 14 and 15, 1989. A number of papers were presented on geology and paleontology of Nebraska. Two papers that pertain to some of our favorite localities were presented; their abstracts are reprinted here. The first locality deals with the roadcut at Fairbury and the second with the "Haynies" Limestone Bed at Weeping Water

### FOSSIL ELASMOBRANCHES FROM THE MID-CRETACEOUS (MIDDLE CENOMANIAN-MIDDLE TURONIAN) GREENHORN CYCLOTHEM OF EASTERN NEBRASKA

James I. Kirkland, Department of Geology, 328 Bessey Hall, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0340

Although of low diversity, fossil shark teeth are common in surface collections from pelagic sediments of the mid-Cretaceous Greenhorn Cyclothem of eastern Nebraska and include: *Cretoxyrhina mantelli*, *Squalicorax falcatus*, *Ptychodus anomymus*, and *P. decurrens*. Processing shallow-marine, sediment bypass horizons near the top and bottom of the cyclothem for micro-vertebrates has resulted in the recovery of large numbers of new species. Two horizons from near the base of the cyclothem from a road cut south of Fairbury have been examined. The lowest, a sandy horizon with phosphate pebbles and fecal pellets, is from the middle Cenomanian near the base of the Graneros Shale. Poor preservation resulting from the composition of diagenetic pyrite results in a bias toward large teeth, which include: *Cretodus semiplicatus*, *Cretoxyrhina mantelli*, *Squalicorax falcatus*, and *Odontaspis*. The next level is from the basal upper Cenomanian Graneros Shale just above the X-bentonite in fine calcareous sandstone containing diverse, well preserved small teeth including: *Odontaspis* sp. A, cf. *Jaekelotodus*, *Scyliorhinus*, *Chiloscyllium greeni*, cf. *Dretorectolobus*, *Rhinobatus incertus*, *R. sp.*, *Protoplatyrhina*?, *Ischyrrhiza avonicola*, *Ptychotrygon*? sp. and *Hybodus*. Near the top of the cyclothem, along the Missouri River west of Ponca State Park in the middle Turonian Blue Hill Member of the Carlile Shale, a rather thick phosphate-pebble gravel preserves commonly abraded and broken, but abundant and diverse teeth including: *Cretodus semiplicatus*, *Cretolamna appendiculata*, *Squalicorax falcatus*, *Scapanorhynchus raphiodon*, *Odontaspis* sp. *Chiloscyllium greeni*, *Cantioscyllium decipiens*, *Rhinobatis* sp. *Pseudohypolophus menultyi*, *Ischyrrhiza avonicola*, *Sclerorhynchus*, *Ptychotrygon triangularis*, *Lisodus*, *Ptychodus anomymus*, and *P. whipplei*. These new elasmobranch faunas from eastern Nebraska are consistent with shallow marine elasmobranch assemblages documented from the Gulf Coast Cretaceous.

Reprinted from: Proceedings, Nebraska Academy of Sciences, 99th Annual Meeting, May 14, 15, 1989, Lincoln, NE. p. 52

### BIOSTRATINOMY, PALEOECOLOGY, AND STORM WAVE DISTURBANCE IN THE PENNSYLVANIAN-AGED "HAYNIES LIMESTONE" BED (DEER CREEK FM.) OF CASS COUNTY, NEBRASKA

H.E. LaGarry and C.E. Rudnick, Division of Vertebrate Paleontology, University of Nebraska State Museum, Lincoln, Nebraska 68588-0514 and J.I. Kirkland, Department of Geology, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0340

Examination of polished slabs and acetate peels of the Pennsylvanian-aged Haynies limestone bed (Ervine Creek Mbr., Deer Creek Fm.) outcropping in Cass Co., Nebraska, suggests that the deposition and biotas of this bed were strongly influenced by repeated storm wave disturbance of the sediment surface. The Haynies limestone lies above and adjacent to the core shale of the Deer Creek Cyclothem (Northern Shoreward Facies Belt) and represents a localized regressive maximum during which deposition occurred within the photic zone. The lower part of the Haynies bed contains a layered sequence of washed-out tiers of *Thalassinoides* infilled with fossil invertebrate breccia indicating repeated scouring of the substrate by storm waves dominated deposition at this time. The infilling fauna is dominated by disarticulated brachiopods and crinoids. The upper part of the bed contains repeated sequences of calcisiltites containing patchily distributed faunas preserved *in situ* overlain by thin shales, suggesting repeated recolonization of the substrate following storm generated disturbances. These faunas are dominated by sponges, bryozoans, and corals. Macro- and ichnofossil distribution, diversity, and abundance within the bed suggest increasing water depth and decreasing severity of disturbance as deposition progressed. This data supports previous paleoenvironmental interpretations based on conodont distributions. This report is the first recognition of storm disturbance dominated deposition and faunas in the Deer Creek Cyclothem of southeastern Nebraska.

Reprinted from: Proceedings, Nebraska Academy of Sciences, 99th Annual Meeting, April 14, 15, 1989, Lincoln, NE. pp. 52, 53

LINCOLN GEM & MINERAL CLUB, INC. - BOARD OF DIRECTORS - April 3, 1989

Nebraska Hall - Room 115 7:30 P.M.

Seven members present - Francis Belohlavy and Don Phillips absent.

President Holbert called the meeting to order. Minutes of the March Meeting were read with motion for approval by Dave Heffelbower and 2nd by Gerald Moore. Carried. Treasurer's report was read with motion for approval by Dave Heffelbower and 2nd by Gerald Moore. Carried.

BILLS: Club bills were presented by treasurer with motion for approval by Gerald Moore, 2nd by Roger Pabian. Carried.

Show bills presented by treasurer with motion for approval by Gerald Moore and 2nd by Dave Heffelbower. Carried.

OLD BUSINESS:

Membership re-instatement: Grant & Goldie Quinn  
John Abel family  
Ollie Wittmann  
Aaron Hames - Jr. Member  
J. Rock Johnson  
Robert Fixter

Motion for approval by Gerald Moore, 2nd by Roger Pabian. Carried.

New members: Thomas K. Wright John & Barb Mapes

Motion for approval by Roger Pabian, 2nd by Dave Heffelbower. Carried.

Scholarship Fund: Harry Stewart, Security Officer at our Show, donated \$ 5.00 to Club Scholarship Fund.

NEW BUSINESS:

Glenna McGinnis requested permission to put flyer in P&S for sale of George McGinnis rocks, etc.

Billie Heffelbower volunteered for Christmas Party Chairperson.

Show Committee recommendations discussed.

April Meeting - Show of hands and date set for "special group meetings".

Special Pick & Shovel themes for each month announced by Roger. (See listing on inside back cover of April '89 issue.)

President's "pipe dreams" : Own home for Club - Possible increase in dues.

April General Meeting - Request volunteer for MWF Show representative.

Appoint 4 delegates for NAOESCI Meeting (at Grand Island) State Show

Respectfully submitted,

*Vera Lyman*  
Vera Lyman, Secretary

LINCOLN GEM & MINERAL CLUB, INC. - GENERAL MEETING - April 22, 1989

Nebraska Center - 7:30 P.M.

The meeting was called to order by President Fred Holbert.

Minutes of the March Meeting were approved as printed with motion for approval by Irl Everett, 2nd by Gerald Moore.

Treasurer's report read by Phyllis Parks; motion to approve by Dave Heffelbower, 2nd by Kevin Schwartzman.

Hospitality Chairperson Billie Heffelbower announced that 30 members and 4 juniors were present.

President Holbert called for old business.

He gave brief overlook of percentage breakdown of interests; lapidary, the highest at 72% - more detailed discussion to be held at Board Meeting.

President Holbert called for new business:

Future use of Club funds - annual Shows - retaining vitality of Club as a whole in future years.

-continued on page 4b

GENERAL MEETING - April 22, 1989 - continued from page 4a

Phyllis Parks presented Show Committee Report - \$ 2,400. net from March Show. She stated no written financial report would be offered until after Jan. 1990 for the good of the Club.

President Holbert told about trip to Walthill for rock auction attended by himself and Gerald Moore. Also told about treasures at Field Museum on recent trip to Chicago, Ill.

President called for other announcements.

Phyllis Parks called attention to display of Show fliers and pictures taken by Linda Parks-Lundgren at Show.

President asked for show of hands of those wanting to go to Minn. on Field Trip. Asked these persons to meet for a few minutes while program was set up.

Place of Board Meeting to be announced.

PROGRAM: Slide Shows - presented by Roger Pabian: Washington County Barites narrated by Billie Heffelbower; Along The Missouri In South Dakota narrated by Roger Pabian.

Respectfully submitted by  
Billie Heffelbower, Acting Secretary

P.S. My THANKS o Billie for filling in during my absence. *Vera Lyman, Sec.*

LGMC Treasurer's Report for April 1989

		NBC Checking 4-1-89	\$1802.03
Receipts:			
1989 Membership Dues & Registrations	17.00		
Donation to Club Scholarship	5.00		
Suspense for Member Buffet-Show	8.00		30.00
Payments:			
'89 Show Expenses	671.51		
Member Survey Cards	4.21		
Repair Club Typewriter	49.00		
Non-Profit Registration Fee 88/89	20.00		
March Meeting-rent, coffee, program	101.76		
April Pick & Shovel Printing	118.16		
New Treasurer's Receipt Book	7.91		972.55
		Nat'l. Bank Commerce Checking 4-30-89	\$859.48

**ELLENSBURG BLUE AGATES, A collector's memoirs**

**By Charles Woolridge**

During the summer of 1988, I had the opportunity to travel to the Northwest corner of the conterminous United States several times. As a family therapist, I was involved in re-uniting a young man with his family in Washington State. This process required trips to Moses Lake, Washington for five days each in the months of May, June, and July. As a rockhound and collector, I immediately went to the **Lincoln Gem and Mineral Club Library** and researched the area. I knew I would have some free time there and would be driving to Kellogg, Idaho, each trip.

Moses Lake is centrally isolated between mountains about 100 to 200 miles in any direction. It appears to be a desert with fine, white sand and arid land plants. Upon closer inspection, however, I discovered that the white sand is volcanic ash from Mount Saint Helens, and that the sand is actually dark gray to black. Up to three inches of ash cover the area today. Originally, the ash was 6 to 8 inches thick. The streets had to be plowed of the ash and it destroyed gasoline engines and cars. People from the east loaded up semi-trucks with the ash to use as fertilizer or to make Mount Saint Helens' emeralds. The people of Moses Lake are some of the finest and friendliest people I have ever encountered. I learned a lot about Grant County agates, petrified wood, and Indian artifacts, but I was more attracted to the gems and minerals to the east and west of Moses Lake.

Before I left for Washington, I called Mr. and Mrs. Fowler who operate Fowler's Rock Shop in East Wenatchee, Washington, and made arrangements for them to show me their shop during my first evening I was there. It required a 70 mile drive after a seemingly endless flight, but it was well worth the effort. The Fowlers are definitely seniors when it comes to rockhounding and I learned a great deal about the area from them. Their rock shop includes: a workshop, store, a museum, and some classrooms. They had some incredible displays. Mr. Fowler has thousands of artifacts, including possessions of the great Chief Joseph. The Wanapum Indians of the Columbian Basin area made beautiful stone tools with **Saddle Mountain** agatized wood; many were on display. Mr. Fowler's ring attracted my attention. He explained that it was **Ellensburg Blue** agate, a very rare and beautiful gem. He showed me several pounds of choice blue and then gave me a forty carat piece, saying he has never sold any and that I wouldn't find any for sale except as finished jewelry. Ellensburg Blue agate is exceptional in that it maintains its soft, blue color in strong light and in thin slices. It has been found only in a small area north of Ellensburg, Washington, and near the Teanaway Ridge. At a gem shop in Liberty, Washington, a few miles from the blue agate areas, Ellensburg Blue was being sold in finished jewelry as Mr. Fowler had said. It was selling for up to \$100 per carat. The gentleman running the shop would not sell any rough material and reiterated what Mr. Fowler had said: "You can't buy it anywhere." He said that in 1976, the Smithsonian Institute had determined Ellensburg Blue to be one of the rarest gemstones in the world. I became bound and determined to find some.

By my second trip to Washington in the middle of June, I had done some more research and decided I was going to the top of Red Top Mountain and find some blue. Following directions in the **Northwest Gem Trails** by

H. C. Dake, I followed a winding, somewhat treacherous road off of Highway 97 to the top of Red Top. I then hiked the 1.5 miles to the agate digging area. The mountains were beautiful in the damp, cold air, but the collecting area looked like a disaster! With over 20 years of agate digging, the area looked like a mine field with large pits and piles of dirt and rock everywhere. I had about 1 hour to look around before it began to snow so hard that I could no longer see. There were broken fragments of agates all around. Some were pieces of hollow, quartz-lined geodes and others were pieces of solid agate ranging in color from clear to white to pale blue. It was so exciting but I did not have the proper equipment to dig so I had to settle on picking over others' tailings.

By my third trip, over the 4th of July weekend, I was prepared. The young man I was returning to Washington was being placed in a temporary Foster Home. The Foster Parents were both rockhounds and were very excited about traveling to Red Top with me to mine blue agate. We spent Independence Day digging agates. The area where we had the best luck was over the ridge, about 200 yards to the north of the main agate beds. Nodules of both solid and hollow agates were plentiful about six feet below the red, sandy soil. Short-handled, army surplus picks were most useful in digging the overburden and decomposing basalt that held the agates.

I returned home with about 70 pounds of agate. Most were pale blue that would fade to cloudy grey when cut thin or viewed in strong light. There were several good examples of orange-red carnelian agates and a few true Ellensburg Blues with their distinct color.

Carol King, from Yakima, Washington owns and operates a shop called "Singing the Blues" that specializes in Ellensburg Blue Jewelry. She keeps examples of rough material in the shop to help people beat the odds of finding a true blue agate. Retail prices for stones in her shop range from \$45 (en cabochon) to \$100 per carat, (faceted). Carol is well-known in the area and buys much of the good rough that is for sale. Fine blues are so rare that it is not unusual for up to \$1,500 to be offered for pieces the diameter of a half dollar.

Anyone interested in looking for Ellensburg Blue Agate should check out the **Western Gem Hunters Atlas** compiled and published by Cy Johnson & Son, and **Northwest Gem Trails** by H. C. Dake. Both books are in our club library. Northwest Gem Trails has a map showing how to get to the agate beds on Red Top. A stop by Carol's "Singing the Blues," 1 West Yakima Ave., Space 2, Yakima, WA 98902 would also be helpful, as the rough she has shows you what to look for.

The Gingko Petrified Forest State Park Heritage area (Museum) also has several fine specimens of Ellensburg Blue on display.

In future articles, I would like to share my experiences searching for agatized wood in the Saddle Mountains, and looking for star garnets in the Emerald Creek area in Idaho.

(To be continued.)

## REGIONAL SHOWS

Del Mar, CA	Hickory, NC	Kalamazoo, MI	Portland, OR	Stillwater, OK	Arlington, TX
May 12-14	Apr. 28-30	June 22-25	June 8-11	July 14-15	June

**BOOK REVIEW**

**GARNET**, John D. Rouse, Butterworth's Gem Books, 1986, \$29.95.

Butterworth's Gem Books have proved to be veritable treasure troves of information for both the serious student of gems as well as for the novice. Garnet is no exception. It is a lively little volume that quickly piques the reader's interest.

The book begins with a history of garnet and the etymologies of various words that have been used to refer to garnets through the ages. Thus, the reader can be certain of terms that Pliny, the Bible, and other ancient references used to refer to garnets. The historic portion covers a time span from ancient times until about 1900, when garnet classification had become reasonably well stabilized. That the ancients had difficulties in understanding garnets is well-connected to their lack of knowledge in chemistry.

One area that is covered well is the differences between geological and gemological garnet classifications. The former is related to garnet chemistry, whereas the latter is simply based on pigeon holes that are defined by refractive index and specific gravity. I will use this explanation in future gemstone classes at the university.

In the early part of the book, the reader might develop some concern that Rouse is simply publishing another cumbersome classification, but such is not the case, and the many varieties of garnet are utilized to reach some logical conclusions about the relationships of end members of this complex solid solution chemical series. The miscibility diagrams are very good and help to understand the compositions of various garnets. Numerous tables are also very helpful in this respect.

The organization of the book is somewhat confusing. For instance, the section dealing with pyrope contains the absorption spectra, whereas they are relegated to the appendix for most of the other garnet varieties.

There are some excellent color plates that show color variations in garnets and many of the kinds of inclusions that are utilized to distinguish the gem-trade garnet varieties. Unfortunately, none of these are keyed to the text and their value is considerably diminished. It would have been helpful to have had the absorption spectra in color too.

The ancient garnet jewelry is all photographed in black and white, and this section is simply appended at the end of the book. This could have been much more meaningful if it had appeared in or close to the historic section early in the book.

There is little, if any, information on synthetic garnets such as YAG or GGG, and no mention of garnet-glass doublets and how to detect them.

In spite of the above shortfalls, the book would be a valuable addition to the library of the serious student of gems, but of less value to the casual reader. It is in our club library and is good reading for almost anybody.

A bibliography is at the end of each chapter, and the papers cited show Rouse's rather complete research.

Roger K. Pabian

**SAFETY FIRST---ALWAYS**

By Jim Null

It was just another day of rock hunting in late summer, 1988. I was hunting the Nemaha River several miles outside Falls City, Nebraska. I was all by myself, which is something I rarely do. After walking several miles upstream I spied a real nice gravel bed I had never hunted before. Usually there are places that I can find to descend down to the gravel beds. This one was different, however. I could see an easier place to get down about a quarter of a mile from where I wanted to go. But, to save time and a bit of walking, I chose to try and lower myself down the bank which was at least 25 to 30 feet straight down. I looked over the edge and saw a ledge about 10 to 15 feet half way down. The ledge was about 5 feet wide and looked sturdy enough to support my weight and the drop of about 10 feet I would have to make to reach the ledge. Slowly I lowered myself as far as I could and dropped down to the ledge. I landed harder than I had planned and was a bit off balance. I felt myself slipping backwards and grabbed for anything that I could get my hands on in front of me. The only thing that I saw was a small root sticking out of the bank. It broke as soon as I pulled on it, and I went straight down backwards 15 feet to the gravel bar below. I landed in the worst possible position--upside down on my shoulders and head. The Impact whipped my knees just missing my face. I laid there several minutes waiting for some sort of pain to start after the shock subsided. Luckily, all I felt was relief because nothing was broken or sprained. I know now it would have been easy to have broken my back from such a fall. There is no way I could have gotten help from anyone due to the fact that I was by myself and several miles from anywhere. Obviously someone was looking out over me because I was still alive and could walk away from the worst fall I had ever taken.

There are several things I learned from this experience. First, don't go on field trips alone. If you do, tell someone where you plan to go. Second, go out of your way to get to your destination if you have to. Don't take chances. Third, think things through clearly. Don't let the thrill of exploring new areas cloud your common sense. By all means, have a good time, but remember--safety first, rocks second. The agate hasn't been created that could take the place of my life or the loss of my getting out and enjoying nature. Have a safe and rewarding summer. I hope you all find what you are searching for on your rock trips.+++

**NEW GUIDE BOOK**

**PLIO-PLEISTOCENE GLACIAL DEPOSITS IN NORTHEASTERN NEBRASKA: NEW EXPOSURES AND INTERPRETATIONS.** By M. R. Voorhies and R. G. Goodwin. Published by HWS Technologies, Inc., Lincoln, NE.

The authors utilize the most up-to-date technologies of Oxygen isotopes and dated volcanic ashes, and compare these findings to fossil data recovered from the stops on the field trip sponsored by Nebraska Geological Society, May 6, 7, 1989, in Knox and Cedar Counties, Nebraska.

There are excellent outcrop descriptions and interpretations based on paleomagnetic data. In addition to rock descriptions, there are also floral and faunal lists of the numerous fossils recovered there.

Although the volume is somewhat technical, it is probably not above the heads of the serious student.

**FROM ADELINE NOLDE-----**

On April 24, 1989 to celebrate the 50th Anniversary of their particular chapter, the Sutton, Nebraska High School FFA (formerly called Future Farmers of America) invited two guests of honor to their annual banquet. The two guests were Governor Kay Orr and Adeline E. Nolde, both were speakers.

Since Sutton was the birthplace of Adeline and she and her mother moved away from there when she was 8, she had to identify herself with Sutton and being the designer of the FFA emblem, she had to tell how the emblem came into being.

Although the organization goes by FFA and not "Future Farmers of America," and the words on the emblem were changed from "Vocational Agriculture" to Vocational Education recently because so many FFA members have gone into positions related to farming or agribusiness, the emblem design remains the same otherwise. It has been worn by 400,000 members on their jackets, and it has been a satisfaction to know the design has been so lasting.

Both Governor Orr and Adeline were made Honorary FFA Chapter Farmers of the Sutton Chapter for which they received plaques and both received certificates for their contributions to the FFA.

After both signed many autographs and had a number of pictures taken, all of the people went outside to watch Governor Orr take off in the helicopter. Normally, she travels by car but had to work late and travelled by helicopter which took one-half hour to get to Sutton.



June 8, 9, 10, 11, 1989

AFMS and NFMS hosted by

*Oregon Agate & Mineral Society*

"DAYS OF GEMS AND ROSES"  
A ROSE FESTIVAL EVENT

The 1989 AFMS/NFMS show, "Days of Gems and Roses", has been chosen as a sanctioned event of the Portland Rose Festival. We are honored to be associated with the Rose Festival, which has been a part of Portland's history for many years, and happy that our show dates, June 8-11, will encourage people visiting the "City of Roses" to enjoy both the show and the Festival. Sanctioning means that notices about our show will bear the official Rose Festival logo and that we will cooperate with the Rose Festival Association in publicizing both celebrations.

Our show will begin on Thursday, June 8 with dignitaries and a ribbon-cutting ceremony at 9:45 a.m. The Royal Rosarians have tentatively accepted our invitation to take part. On Saturday the show will open at noon, after the Grand Floral Parade.

Oregon Agate and Mineral Society, the show host, is offering a trophy for the single piece or display using natural mineral materials which best carries out the show theme "Days of Gems and Roses".

# NEWSLETTER



Published monthly  
Except  
June, July, August

APRIL 1989 - Issue 287

Judith Washburn, Ed.  
107 Deer Creek Road  
Rochester, IL 62562

## President's Message...

### Greetings:

Early this month, the Spring Meeting of the MMF meets in Southern Illinois in conjunction with the local club who has their show in Carterville. Details have already been published. More appropos for these comments is to wonder how many actually get to know that there is a Spring Meeting and where it is held. My wonder is based on the perusal of many of the bulletins sent to me in which I find little or no news about the MMF. I find myself further wondering how information is transmitted from the MMF Newsletter to members of the local clubs. As you may note, some clubs do not have a newsletter and some officers fail to make available the information sent to them to the members. I suspect that there will never be a communication utopia, but we should all try to improve lines of communication. One suggestion could be that each club have a large sandwich board type display listing three or four or five items of happenings in nearby clubs or at the Midwest level.

While for a decade or more the collector has been seeing more and more sites closed or turned commercial, other things have appeared on the horizon to challenge the interests of the hobbyist. There is certainly great justification for the protection of a geological heritage when endangered sites appear to exist. Namely such things as the petrified forest. The anthropologist and archaeologist are facing a period where sites are going to be non-existent except to government authorized groups. In state legislatures across the country, proposed regulations indicate such extremes as a violation for picking up an arrowhead in the furrow of your own farm field, or picking up a fossil in a new road-cut being torn apart for a four-laner with the rubble being used for ditch-fill, or for picking up a penny dated earlier than 1939 along some street.

We, as an organization, have no authority to complain, lobby, or in any way try to insert our interests. Only you as individuals can be aware of the laws in your own state that are being proposed and express your own opinions on your behalf. From what some bills propose, it is quite apparent that many of the legislators don't know what their bills imply. In a recent issue of the National Geographic is an excellent story of the Slack Farm in Kentucky that is well worth reading.

Ben Moulton, President  
Midwest Federation



### SAFETY ALERT

Lyme disease has reached the suburbs of Chicago and other large Midwest cities. If you should experience a sudden itching spot which spreads out into a "bull's-eye" appearing rash, see your doctor. You may have contacted Lyme disease. Early treatment with antibiotics usually cures the disease quickly, but delay may mean extensive treatment and long, slow recovery from its many and varied afflictions.

-Lloyd Brown, Chairperson  
Safety & Field Trip Committee



### REMINDER:

The next issue of the Newsletter will be the last until September. If you have any items concerning summer activities, or items that can't wait until fall, be sure to get them in for this issue.



April	1989						
	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						

President  
Dr. Benjamin Moulton  
R.R. #21, Box 103  
Orre Haute, IN 47802  
812-234-3870

First Vice President  
Mr. Glen R. Hanning  
Rte. 1  
Muntsville, IL 62344  
217-667-2285

Second Vice President  
Mrs. Margaret Heinek  
Rt. 3, Box 370E  
New Carlisle, IN 46552  
219-654-3673

Secretary  
Miss Jean Reynolds  
107 Tuttle Ave.  
Clarendon Hills, IL 60314  
312-323-1682

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

## Editor's Note



Show packets are out! You should have received yours by now. If you haven't, contact Kitty Starbuck right away. Two envelopes were sent to every club. Please - don't set these somewhere where they'll get buried under the bills and myriad of advertisements! Your fellow club members need to see this material and hear about the show.

Editors, seriously consider including the cover-sheet in your club bulletins. Presidents, the "Fun Things" page would make a neat poster to take to your meeting. Be sure to make extra copies of the exhibitor's forms, competitive and non-competitive, to pass out to those club members who might be considering putting together a display for the show.

Impossible as it may seem, there are those who have told us they've never seen a show packet before. This may be due to lack of observation on their part - or, it may be that local club leaders take these for granted and assume no one else would be interested.

Local leaders, make a concerted effort this time. Get word of the show spread out to your members. Let's make a difference and see what a difference it makes!

Tips for Editors - From Rock Talk  
Richfield Mineral Club  
Richfield, MN

Editors Chuck and Sky Moates did their homework. They researched all the club shows that are going to be held throughout their state for the remainder of the year. They used a separate page in their newsletter to list all of these. This serves as a handy guide for their members. A simple idea, but very appropriate since most of us do the majority of our travelling about right in our own home state. Good idea, Chuck and Sky!

### PALEONTOLOGY NEW RELEASE

The discovery of a dinosaur - Packyrhinosaurus - north of the Arctic Circle has led to an expedition to the Coal Hill River bank for further searching for evidence of reptiles, says Dr. Hutchison, scientist from Berkeley, CA. Mark Goodwin, of the Berkeley Museum staff, says that more evidence is needed to determine the extent of the existence of the reptiles some 35,000,000 years ago in the sub-freezing temperatures. This cold spot has become a "hot" prospecting ground for paleontologists.

Charles Crawford, C&N Reporter  
Science & Technology Week  
- Mary Boland, Chairperson  
Paleontology Committee

## Program News -



CAROUSEL FUND

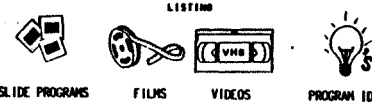


The Carousel Fund is still short of the goal to have one copy of each Program in its own Carousel. UNTIL THAT GOAL IS REACHED ONLY CLUBS WHO HAVE MADE A DONATION TO THE FUND WILL BE ASSURED THAT PROGRAMS THEY ORDER WILL BE SENT TO THEM IN A CAROUSEL.

Donations - (Carousels or check (payable to Midwest Federation)) should be sent to: MMF Library, c/o 3490 S. Hannan Rd., Canton, MI 48188.

Each Carousel will have a label with the Donors name and all Donors will be published once the goal is achieved.

## PROGRAM PLANNER'S MANUAL

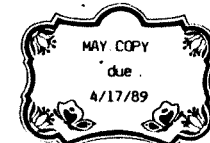


SLIDE PROGRAMS    FILMS    VIDEOS    PROGRAM IDEAS

The new 20-page "Program Planner's Manual" lists '50 Program Ideas' and 'Sources for Films and Videos' along with information about the Midwest Program Library. It is on schedule for distribution in April.

A copy will be mailed to each Club. Wherever possible it is addressed to the Program Committee Chairperson. If that address is not known it will be sent to another Officer. We expect it will be forwarded to the appropriate individual/Committee within the Club.

Additional copies will be available from the Director of Supply at a yet to be determined (but very reasonable) cost. (Postage will be the greatest expense.) Contact Gordon Boone for details. (180 Brook Lane Ave., Holland, MI 49423. Phone: [616]396-7885)



**1989 AFMS SCHOLARSHIP FOUNDATION HONORARY AWARD WINNERS**

Each of the six Regional Federations of the AFMS has selected their Honorary Award Winner for 1989, selecting a person who has made outstanding contributions to the Earth Sciences and to our hobby. Each Honoree will assist in the selection of two students who are pursuing their advanced degrees in the Earth Science field. The Foundation will then provide a grant of \$2,000.00 per year for each student for the school years of 1989-90 and 1990-91.

The first Honorary Award was made in 1965 to Dr. Richard M. Pearl, who selected one student to receive a grant of \$300.00 per year for two years. A total of 118 individuals have received this Honorary Award from the AFMS Scholarship Foundation. They have selected a total of 234 students to receive the scholarship grants from the Foundation.

The 1989 Honorary Award Winners are:

Midwest Federation:

Dr. Richard H. Lefebvre, Professor of Geology  
Grand Valley State  
University, Allendale,  
Michigan



Dr. Lefebvre, a native of Detroit, Michigan, received his B.S. at the University of Michigan; his M.S. at the University of Kansas, Lawrence; and his Ph.D. at Northwestern University. He has been associated with Grand Valley State University for over 20 years, where he is Chairman of the Department of Geology. Dr. Lefebvre is a member of several professional organizations, including the Geological Society of America and the National Association of Geology Teachers. He has been named an Outstanding Educator of America. The author of numerous publications,

he also finds time to present programs to the gem and mineral societies in the area and has invited their members to go on field trips with the students at the University.

*American Federation  
of  
Mineralogical Societies*

**URGENT - IMPORTANT**

**ATTENTION ALL MINERAL EXHIBITORS AND COLLECTORS  
AND JUDGES**

A new revised and up-dated Mineral Classification List is now available, and dated February 1989.

Copies can be ordered through your Regional Federation Supplies Chairperson.

Do not throw away your old copies as they will still be good for lapidary names.

The new Mineral List will be used at the National Show in Portland, so if you intent to compete in minerals it might be a good idea to get one of these new lists to avoid possible mistakes in nomenclature.

AFMS CENTRAL OFFICE  
Dan McLennan, Administrator

**ARCH FACTS....**



Your Chairperson would rather write about the upbeat side of archaeology, such as the excitement of the recovery of artifacts or the knowledge gained from them. But I would be derelict in my duty if I didn't share with you a few words about the "dark side" of the force.

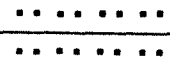
The first instance of the "dark side" was evidenced by the manner in which the historical American Indian burial sites at the Slack Farm site in Kentucky were disturbed. The details of this incident were reported in a feature article in the March 1989 issue of *National Geographic*. Suffice it to say that those involved claim to have been within their rights to dig on private property with the sole intent of collecting artifacts. What they seem to fail to understand is that in the process, they have destroyed a large measure of the knowledge that could have been recovered if the excavations had been done with professional archaeological methods.

Due to this incident, Kentucky has now passed a law to protect historical burials. Since the "diggers" are now concentrating their efforts on Southern Indiana and Illinois, both of these states are actively drafting similar legislation to that of Kentucky.

The second instance of the "dark side" is the demand by certain persons of the native American populations for the reburial of all native American skeletons and artifacts housed in universities and museums. Although this view has been evident for some time and reburial of these materials is already required in a few states, the Slack Farm incident has reignited the situation. The rekindling of the demand for "reburial" has now entered the province of the private collector. Although many private collections consist of artifacts rescued from the plow or the bulldozer and do not contain skeletal materials, they too, are considered inappropriate by some.

I would hope that reason will prevail and that those who preserve the artifacts, as well as the record, will be allowed to continue in some ethical manner. If you count yourself as one who preserves, "may the force be with you."

- John Washburn, Chairperson  
Archaeology Committee



**FOUR NEW FIELD TRIP GUIDE BOOKS AVAILABLE**

Midwest Gem Trails has been completely rewritten and is now published as two separate books: Midwest Gem, Fossil, and Mineral Trails - Great Lakes States, and Midwest Gem, Fossil, and Mineral Trails - Prairie States. Authored by June Culp Zeltner, they are published by Gem Guides Book Company, 3677 San Gabriel Parkway, Pico Rivera, CA, 90660.

The Great Lakes States book is \$5.95 and is a well-written, up-to-date guide which identifies collecting sites with either general, localized, or exact point information. The book also provides helpful information about collecting such as sources of additional information, safety guides, and steps to take in planning a successful field trip. This is the best guide book for collecting I have seen in the Great Lakes area and I would expect that the

Prairie States book would be of the same quality. I am looking forward to purchasing it as my first opportunity. I consider the two books a "must" for my library.

Two new field guide books featuring log tours in parts of Wisconsin and northern Michigan are available. The books were written by Dr. Richard A. Paull and Dr. Rachel K. Paull, both members of the Geosciences Department of the University of Wisconsin, Milwaukee. The books explain the geology of each area as you travel along the route with stops indicated in the log, some of which are suitable for collecting. Because of the low volume of books expected to be sold, the Paulls have attempted to hold costs down by dropping author royalties and handling book sales directly. The books are: Devil's Lake Region, Door County, Kettle Moraine Country, and Zinc-Lead District of Wisconsin, and Lake Superior Iron and Copper Country - Upper Peninsula of Michigan and Northern Wisconsin. They can be obtained by writing the Paulls at Department of Geosciences, University of Wisconsin, Milwaukee, PO Box 413, Milwaukee, WI, 53201. The Wisconsin book is \$10 and the Northern Wisconsin-Michigan Upper Peninsula book is \$9. Add \$1 per book for postage and handling.

-Lloyd Brown, Chairperson  
Safety & Field Trip Committee

## OTHERS WRITE

MEXICAN VOLCANOS  
(A VISIT TO FOUR OF THEM)by  
LYN SANNY

In 1974, on a plant collecting trip in Mexico I photographed "Citlaltepetl" (Mountain of the Star) in the state of Veracruz. Mexico's highest mountain and largest glacier. And I imagined hiking up its slope. In November, 1988, my guide on Popocatepetl and Ixtaccihuatl in 1987 wrote: "Tu piolet esta esperandote para subir nuevas cumbres en Mexico. Tus cuates estan esperandote ansiosamente." (Roughly "your iceaxe - I gave it to Guillermo in 1987 - is awaiting you to climb new peaks in Mexico. Your "buddies" are anxiously awaiting you." And so I photographed the volcanic "belt" that exists in an east-west direction in south-central Mexico. The four volcanoes I visited were: Paricutin (Purepecha Tarascan "that which lies in front") in the state of Michoacan. Nevado de Toluca (Nahuatl Language of the Aztecs and other tribes. Xinantecatli (Naked Man) in the state of Mexico. La Malinche (La Malintzin) Famous Indian wife of Hernan Cortez in the state of Puebla. And last Pico Orizaba (Nahuatl Citlaltepetl Mountain of the Star in the state of Veracruz. Mexico's highest mountain and largest glacier.

In early November, 1988 Marcos Rubio, son of Victor of Victor's Restaurant in Tijuana (Baja California, Mexico), called and said, "Lyn, in January I am going with my group of climbers from Washington state to climb Orizaba."

When he told me he was going to Orizaba, I said to myself, "I'd better go first. Ten days later I left.

When I returned and told him I had climbed Orizaba, he said, "You beat me to it!!!"

So it was a combination of "dreams" imploring friends; machismo; "road check the body time"; etc. that brought me to Mexico and the volcanos.

I photographed my friend, Senorita Michoacan and the approaches and summits of Paricutin (8,500 feet); Nevado de Toluca (15,000 feet plus); La Malinche (14,636 feet); and Citlaltepetl (Orizaba, 18,700 feet). The trip also included art, artists, museums, personalities, archeology, etc.

The trick was to go from sea level to 18,700 feet in 19 days with zero prior physical conditioning.

YOU will take the trip with me via slides. Do join me Friday, March 3, at the Lapidary Meeting. I hope you will enjoy revisiting these awesome volcanos with me.

Ed. Note: Lyn also mentioned in his note that he had collected examples from the state of Puebla of beadwork by the Otom Indians; some obsidian specimens, and "primitive" paintings of volcanos done only with the fingers by a 75 years old active alpinist (five months ago he climbed Ixtaccihuatl, 17,300 feet plus, without gloves and painted on top)

Reprinted from *The Pegmatite*, San Diego Mineral & Gem Society, Inc. March, 1989, pp. 7, 52.

## HOW DO YOU?

When grinding and polishing the face of a cut geode (agate) or septaria (dolomite or calcite) on a flat lap, either by hand or using a vibro, how do you protect the crystals and pockets from loading up with the grinding or polishing compounds or how do you clean the crystals after each operation? I have tried jet water streams, soft soap, and my best tooth brush to no avail.

I DO!

Cast iron lap grinding - when grinding a flat surface on a cut section using silicon carbide grit and water, the heat generated dries the grit rapidly and the still usable grit flies off the lap and is wasted.

I watched a friend grind a 4" agate one night using 600 grit on a cast iron lap turning about 850 r.p.m. He first wet the lap with water and applied about a teaspoon full of grit that was already wet in a small plastic container. He smoothed the grit around and began his grinding. I expected him to add more water or to see the grit fly, but it didn't. The grit was breaking down and the surface on his agate was beautiful. Finally I told him my trouble - he laughed - and showed me a container of "Guar Gum" a food processing thickening agent that he added to the grit and water before putting it on the lap. It acts something like a gelatin to retain the moisture holding the grit to the lap. The gum has no effect on the material being ground and may be rinsed off with clear water. It works.—

I DO!

I have a 13" horizontal leather disc on which I use Linde "A" for a final polish. I found it a bit difficult and time consuming to dampen the leather evenly before using. The dry leather shuns water like a ducks back!

The same friend mentioned above was soon ready to polish his stone using a vertical leather wheel on the end of his poly arbor. He snapped on the switch, grabbed his poly bottle of Linde "A" and water, shook it up and squirted it onto the polish wheel. I ducked as I was in front of the grinder and did not care to get covered with water and Linde "A", but it went right into the wheel, none flew off. I asked how come and he showed me a small container of Aerosol OT, a very powerful wetting agent, - one drop in a pint of water with your polishing powder is all you need - it works on a felt pad also.

- Lou Anderson

Reprinted from *The Conglomerate*, Michigan Mineralogical Society, June, 1981, p. 12.

HAVE A SAFE SUMMER

DRIVE CAREFULLY

GOOD COLLECTING

**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 Harburger

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.



**h.e.l.p.**

**HELP ELIMINATE LITTER PLEASE!**

**MAIL ALL EXCHANGE BULLETINS TO:**

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



Edward Ridge

2507 A st.

Lincoln NE 68502