



# PICK & SHOVEL



Inside This Issue----Ancient Life Gallery  
Show News  
and More

Volume 32, Numbers 3, 4  
November, December, 1991

Lincoln Gem and Mineral Club, Inc.  
P. O. Box 5342  
Lincoln, Nebraska 68505

## 1991 ELECTED OFFICERS

President: <b>Fred B. Holbert</b> , 2822 S. 13th St., Lincoln, NE 68502	423-5639
1st Vice President: <b>C. David Heffelbower</b> , 1819 Washington St., Lincoln, NE 68502	475-4713
2nd Vice President: <b>Charles Wooldridge</b> , 836 S. 31st St., Lincoln, NE 68510	475-9034
Secretary: <b>Vera Lyman</b> , 420 N. 56th St., Lincoln, NE 68504	464-6089
Treasurer: <b>Phyllis Parks</b> , 2435 So. 19th St., Lincoln, NE 68502	476-6798
Board Member: <b>Francis Belohlavy</b> , 1919 "K" St., No. 4, Lincoln, NE 68510	477-4337
Board Member: <b>Roger Pabian</b> , 315 "D" St., Lincoln, NE 68502	474-2034
Board Member: <b>Billie Heffelbower</b> , 1819 Washington, Lincoln, NE 68502	475-4713
Board Member: <b>Shirley Rockel</b> , 1134 West Avon Lane, Lincoln, NE 68505	464-3059

### NOMINATIONS COMMITTEE

3 Years: Kevin Schwartman, Chair.  
Gerald Moore  
Don Phillips  
2 Years: James Null, Michael Smith  
1 Year: Ed Ridge, Roger Pabian

### LONG RANGE PLANNING AND BY-LAWS COMMITTEE

3 Years: Kevin Schwartman  
Jim Marburger  
2 Years: Bob Wright  
Linda Parks-Lundgren  
1 Year: Phyllis Parks  
Charles Wooldridge

### STANDING COMMITTEES

Membership: Shirley Rockel  
Education: Roger Pabian  
Field Trips: Francis Belohlavy  
Historian: John & Lillie Lewis  
Hospitality: Eddie "Lightning" Ridge  
Study Group Coordinator:  
Housing/Property: Jim Parks  
Junior Activities: Janet Wright  
Librarian: Jim Parks/Charles Wooldridge  
"Gem Palette" Correspondent: Sandra McNiff  
"Geology Day" Coordinator: Charles Wooldridge

Programs: Charles Wooldridge  
MWF Liaison: Vera Lyman

Scholarship: Dwight Miller  
Christmas Party: Billie Heffelbower  
1990 Rockhound/Year: Charles Wooldridge  
1991 Show: John Harrison  
1992 Show: Phyllis Parks  
1991 Swap: David Heffelbower  
1992 Swap: Roger Pabian

### AUDITING COMMITTEE, 1987-1988

David Heffelbower  
Francis Belohlavy  
Shirley Rockel

### YOUR PICK & SHOVEL STAFF

Publisher: Lincoln Gem & Mineral Club, Inc., P. O. Box 5342, Lincoln, Nebraska 68505  
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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

**NOVEMBER MEETING:** Saturday, November 23, 7:30 PM  
 Nebraska Center for Continuing Education  
 33rd and Holdrege Streets

**PROGRAM** Opal Mining in the Virgin Valley,  
Nevada, 40 minute video by Motavation  
Publishing Company.

**JUNIOR MEETING:** 7:00 P.M., Subject to be announced.

**COMING EVENTS:** SHOW, March 13-15, 1992, Greater Kansas City  
 Annual Show, Trade Mart.

**REGIONAL SHOWS:**

1992		AFMS			
HAYWARD, CA Aug. 21-23	HARRISBURG, PA SEPT 19-20	CLEVELAND, OH JULY 23-26	WICHITA, KS Apr. 24-26	ALPINE, TX Apr. 17-19	BUTTE, MT (NO DATE)

**FUTURE MEETING DATES, PLACES:**

ANNUAL CHRISTMAS PARTY, December 8, 1991,  
 Antelope Park Shelter House, 5-9 PM. More  
 details inside.

ANNUAL SWAP, January 25, 1992, Norfolk-  
 Minden Rooms, NCCE, 33rd & Holdrege,  
 Noon-5 PM. Regular meeting begins at  
 7:30 PM.

REGULAR MEETING, February 22, 1992.  
 Scottsbluff Room, NCCE, 33rd &  
 Holdrege, 7:30 PM.

**DISPLAY MATERIALS** Bring items that relate to Movember (Topaz,  
 Citrine) or specimens of items acquired from  
 fall shows or trips. Cases will be furnished.

**1992 DUES** Dues for 1992 are now payable and can be paid  
 until January 31, 1992, at which time membership  
 becomes inactive. Please make the treasurer's job  
 a bit easier by paying your dues promptly. Ed.

## **PRESIDENT'S MESSAGE**

### **ANNUAL ELECTION:**

Our November general meeting will include the annual election of officers. In accordance with our bylaws, additional nominations will be called for from the floor. We hope that as many members as possible will attend.

### **FALL GEM SHOWS:**

We were very pleased with the new site for the Omaha show this year. The added space gave the show a new look and more breathing room. Appreciation is extended to those from our club who demonstrated and exhibited there: Pabian, Smith, Null, & Belohlavy.

Roger Pabian and I also took in the Topeka, Kansas show. It was a fine show as usual and as always, we enjoyed the company of fellow club members, Bill and Betty White, of Independence, Missouri as well as other mutual friends from Missouri, Kansas, and Oklahoma.

Unfortunately, other commitments prevented us from attending any of the other fall shows. We were, however, thankful that we did get to attend two of the shows and visit with some our favorite dealer/friends.

### **NEW BLOOD, FRESH IDEAS, & DRIVE:**

After three years at the helm of LGMC, we gratefully pass the baton of leadership on to others who will be elected at the next meeting. Our profound thanks go out to all those who have worked so diligently as officers, board members, chairpersons, group leaders, and other volunteers during those years.

We have endeavored to husband the club's resources, the stewardship of a legacy left by those who have preceded us, in order to fulfill the dream of providing continuity for the future. Our vision has been that of promoting education (i.e. the creation of study groups), fiscal responsibility, and congenial comradery, all the while not taking ourselves so seriously (as many hobby groups tend to do).

Above all, we have tried to conduct most of the club's business affairs at the board meetings rather than the general meetings; those meetings should be enjoyable. There is no quicker way to lose the interest and subsequently the attendance of the general membership (particularly the juniors) than to bore them to death with business matters. That's why the members elected a board - to be their boredom sponge.

And lastly, we are saddened by the loss of those club members who are no longer with us. Their absence is felt by us all.

FRED B. HOLBERT



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Lincoln, NE 68588-0340  
(402) 472-2663  
FAX (402) 472-4917

October 24, 1991

Mr. F. B. Holbert  
Lincoln Gem and Mineral Club  
2822 So. 13th Street  
Lincoln, NE 68502

Dear Fred:

Just a short note to express our thanks for the donation of \$25 from the Lincoln Gem and Mineral Club. As I believe you know, Roger Pabian used this support to cover the costs of hand-outs for his course in Gemology this semester. The course is again proving very popular and is much appreciated by the students.

Very best wishes,

A handwritten signature in cursive script, appearing to read 'Eric'.

Eric Durrance, Chairman

cm

## ON TINY MEASUREMENTS

Near my wall calendar is a calendar of various colloquia and seminars that are to be held in the Physics, Mathematics, and Chemistry departments. I especially like to attend those dealing with chaos, fractals and fractal geometry, and symmetry as there is much there that deals with one of my favorite subjects, agates.

On October 24, Dr. Norman Ramsey, Higgins Professor of Physics, Harvard University, Cambridge, Massachusetts, presented a colloquium at the physics department in the symmetry area, namely: "how much does a neutron bulge at one 'pole' and shrink at the other during its electrical dipolar moment. Physicists around the world have worked on this problem a number of years and the results of their experiments show that the asymmetry amounts to about  $6.5 \times 10$  to the minus 26th power millimeters; that is, 6.5 over 10 followed by 26 zeros.

This can be better explained in a scale that we can more easily understand. If a neutron's diameter were the same as the earth's orbital diameter around the sun, the swelling (shrinking) would be about 1/1,000 of a millimeter.

That's calling it close.

## ...and INDEFINITE MEASUREMENTS

---and while pursuing another favorite subject, jewelry made by the various Eurasian nomadic peoples, a new indefinite measurement (to me) came to light.

When we are doing lapidary work, it is not uncommon to think the cab will be a 'bit' more symmetric if we grind off a 'scoch' from one end or a 'tad' more sanding will result in a better polish.

Better relations with the Soviet Union have resulted in a number of publications on Scythian culture and artifacts becoming available to the world. While studying some Scythian griffons as a possible lapidary subject, I ran across the word "gorytos." After reading the text, I still was unsure as to what a gorytos really is.

Not to be deterred in my pursuit, I relied on my Webster's Dictionary, where between the "gorx'es and gorz'es there were no gory's" and, hence, no gorytos.

But my search did lead me to "goupin" (pronounced goo-pun), which means about a handful but may mean two hands held together, side by side, full.

I still don't know exactly what a gorytos is but I must go now, to put another goupin of grit in the tumbler. RKP

## GRAND ISLAND SHOW

Grand Island Earth Science Society held its annual show on the weekend of October 19 and 20 at Fonner Park. As usual, the show was a pleasant and friendly place to visit. Many nice dealers and displays were available and the demonstrators were their cordial selves. I heartily recommend the Grand Island show for a relaxing event that gives you a chance to visit with many of Nebraska's rockhounds. ++

LINCOLN GEM & MINERAL CLUB, INC. - BOARD OF DIRECTORS - Oct. 7, 1991  
at Reunion 7:30 P.M.

Minutes and treasurer's report of the Sept. Meeting approved as read with on correction - Lapidary Hall of Fame should be "Rockhound Hall of Fame".

Bills were paid and presented for approval with motion by Francis Belohlavy, 2nd by Shirley Rockel. Carried.

OLD BUSINESS:

No word from NAOESCI re: liability insurance.

MWF now offering liability insurance. Motion by Charles Wooldridge, 2nd by Dave Heffelbower that President Holbert write to MWF Pres. and decline insurance. Motion carried.

SCHOLARSHIP:

Adeline Nolde scholarship Fund (at \$ 310.) Phyllis Parks to contact Adeline and find out what her wishes are regarding presentation.

ADVERTISING AT CLUB FUNCTIONS:

Art. 4 Sec 2 = soliciting only after meetings (By-Lawa)

Each Board member to think about signs, catalogs and business cards re- identification and/or solicitation.

NEW BUSINESS:

Pres. thanked all who participated in and/or attended Omaha Show.

Question of disposition of Club Assets if Club is dissolved:

As stated in By-Laws - Article 7

COMMITTEE REPORTS:

Show - 2nd Assistant = Gerald Moore Special Activities = Charles Wooldridge Show budget presented by Chairperson, Phyllis Parks. Motion by Roger Pabian to accept Show Budget. 2nd by Dave Heffelbower. Carried. Committee Meeting Tues 10-22 7:30 P.M. at Wells home.

Vera will report for Dec issue of Gem Palette

Christmas Party - 12-8 at Antelope Shelter House Club will furnish meat. Each family bring a covered dish. (veg. salead or dessert)

Gift exchange - under \$5.00. Drinks furnished.

Swap flyers are out. One month in advance, will contact radio stations, visitor center, etc.

Roger Pabian teaching a mini course in Geology Requested a donation of \$ 25. to cover hand-out at class. Motion by Phyllis Parks, 2nd by Shirley Rockel to grant request. Carried.

Mineral Study group not resumed yet.

New Member: Roger Simmons 2970 South St. (former member)

Motion to accept by Shirley Rockel, 2nd by Charles Wooldridge. Carried

Board Meetings Nov. 4 and Dec 2 at The Reunion.

Respectfully submitted,

*Vera Lyman*

Vera Lyman, Secretary

LINCOLN GEM & MINERAL CLUB, INC. - GENERAL MEETING - Sat. Oct. 26  
 7:30 P.M. at Bethany Park Shelter House

Annual Halloween Costume Party

Meeting called to order. Minutes and treasurer's report approved as printed.

Janet Wright presented Certificates of Award for each of 4 Juniors in attendance. Presented each with a magnifying "Loop". Emily received award for "Best of Costume"

Other costumes: Moonstone - Janet Wright      Silver Sheen obsidian - Kevin Sch<sup>h</sup>wartman  
 Turquoise - Shirley Rockel      Spiderweb Turquoise - adeline Nolde  
 Orangite - Dave Heffelbower      Twin Quartz inclusion - Francis Bleohlavy  
 Ryolite - Charles Wooldridge      Lava - Pam Killian

Hospitality reported 27 members present. Shirley Rockel's mother and Kathy Pavish, Kevin's friend were guests.

Adeline Nolde Retirement Scholarship is now at \$ 310 plus

Approval of Show Budget: Motion by Irl Everett to accept, 2nd by Roger Pabian. Carried.

Roger Pabian announced awards of Pick & Shovel and individual articles written by Russ McNiff and Roger Pabian at MWF and National levels. Bill White received several awards and National Trophy for Cabachons. Certificates of participation to Dave Heffelbower and Charles Wooldridge.

Show and Swap flyers are available.

Feb 16, 1992 1-4 P.M. Geology Day at Nature Center.  
 Next Show Committee Meeting sometime in Jan.

CHRISTMAS PARTY: Dec. 8 Supper at 6:30 P.M. Antelope Park Shelter  
 Ham, Turkey, Dressing and "POT LUCK" Gift exchange.  
 Everyone wear a Bola Tie.

Material for Pick & Shovel due Nov. 4 Board Meeting Nov. 4 and Dec. 2.  
 PROGRAM: "Rancho LaBrea Tar Pits" presented by Charles Wooldridge.  
 Janet Wright awarded certificates to everyone in costume.

Respectfully submitted,

*Vera Lyman*

Vera Lyman, Secretary

LGMC Treasurer's Report October 1991

NBC Checking 9-30-91      \$ 816.32

Receipts:

'92 Show Dlr. Payments	625.00	
1992 Membership Dues	10.00	
Special Scholarship Funds-Nolde	30.00	
Donation	<u>1.00</u>	666.00

Payments:

Donation UNL Geology Dept.	25.00	
Misc.Treas.& P & S Expense	26.06	
Storage bin for electrics	10.56	
Lincoln Postmaster P & S stamps	68.00	
1992 Show Dealer Expense	11.18	
October Program MWF	5.00	
October Junior Awards	<u>53.52</u>	199.32

NBC Checking Balance October 31,1991      \$1283.00

## 1992 SHOW NEWS - 34th Annual

Not very many things to report this month -just keep on planning your displays and activities for March 20, 21, and 22. Your show needs you and will be as good as we all make it.

We held a show meeting at Marie Wells home on October 22 with just a few committee persons on hand. Several members called with work conflicts or illness.

Program Chairman Dave Heffelbower has a good lineup of lectures and slide shows to fill both days of the show. Dealer Chairman Jim Parks has contracts out to 14 dealers, several of which are signed, paid and returned.

Recognitions Chair Marie Wells would appreciate knowledge of your ribbon needs as soon as convenient so they can be ordered an ready well ahead of show time.

We have added one Chairperson-Pam Killion as Youth Displays and Activities Coordinator - with advice and help from Jan Wright. Thanks Pam. We'll appreciate you.

Show Publicity Chairman reports lots of flyers dispersed throughout the state and at shows as far away as the recent National in Florida.

We plan to hold our next joint show committee meeting in January, after the Holidays are celebrated, calls or cards to be used when date and place are decided.

Phyll Parks, 92 Show Chairman

## 1991 CLUB CHRISTMAS PARTY

Mark Sunday, December 8, 1991, from 5:00 P.M. to 9:00 P.M. on your calendars and plan to attend LG & MC's annual Christmas Party at the Shelter House at Antelope Park, just east of Auld Pavilion, and next to the Viet Nam War Memorial.

Shirley Rockel and Billie Heffelbower have forged ahead with some exciting plans that includes a pot luck supper. Now, the club is going to furnish the turkey, dressing, and ham, and members may bring a covered dish of their choice---either salad, vegetable, casserole, or dessert. The club will also furnish coffee, tea, and soft drinks.

There will be separate gift exchanges for adults and juniors with a \$5.00 maximum value on each enxhange.

Ed Pedersen will present a program on minerals from his collection and it should be a dandy, judging from things we saw in study group.

Mark your calendars now. Reservations will be required and should be made with Shirley or Billie as soon as possible, with a deadline of

## DAVID G. and LORI L. TOREN GALLERY OF ANCIENT LIFE

By Roger K. Pabian

On Friday, November 15, 1991, 5:30 P.M., the David G. and Lori L. Toren Gallery of Ancient Life at the University of Nebraska State Museum in Morrill Hall, 14th & U Streets, Lincoln, Nebraska, will be dedicated, and it will be open to the public the following day.

The gallery has been built with a bequest from the late Dr. David G. Toren, a graduate of the University of Nebraska Medical School, and will be an early step in bringing the many exhibits at Morrill Hall up to date with current museum technology. This is the first of seven new galleries, devoted to the history of life in Nebraska, which are scheduled for development in the next decade.

I have spent much of my time in the past year selecting many of the fossil specimens that will be displayed in the new gallery and there are some genuine masterpieces, several of which have not yet been viewed by the public though they have been in the museum's collections for many years. One of the masterpieces is a slab of the Ordovician trilobite, Homotelus bromidensis (Esker) from Oklahoma that contains about 100 complete individuals. Another is a slab of Mississippian sea urchins with about a dozen, complete, baseball-sized individuals. There is a polished section of an Ordovician nautiloid that will be a touchable item. Several other masterpieces are available for your pleasure and education.

There are dioramas showing life forms from every geologic time unit from Precambrian through the Permian. Beneath the dioramas are selections of fossils from each of these time units and these are complemented by fossil bearing deep-well cores from various sites in Nebraska that document the past existence of these animals in the state.

Large wall cases have been developed with several themes in mind including Phylogeny, the origins and ancestries of various life forms, based on cephalopods; Diversity, showing the radiation of the many kinds of arthropods from few common ancestors; Nebraska Sharks, showing the remains of both carnivorous and herbivorous sharks that once swam the shallow seas covering the state; Rise of Trees, showing the development of trees from land plants that were common to Nebraska in the late Paleozoic; and a Cartoon Case showing the movement of animals and plants from the seas to the land.

Some of the drawers will contain systematic collections of fossils that can be compared to things associated with the dioramas. There will also be examples of fossil assemblages from rocks of various geologic ages to help introduce the novice to the subject of paleoecology.

Living examples of ancient organisms such as cnidarians and sharks will be in a salt-water aquarium and a terrarium will contain examples of ancient kinds of plants.

Gallery, continued from page 6.

The entrance to the gallery will have a Precambrian landscape showing the time that life on earth originated. This display will be quite striking and will introduce the visitor to the parade of life to follow.

A small diorama of a Precambrian seascape will be followed by some back-lit panels that show highlights of paleontology and introduce the visitor to what more to expect in the tour of the gallery. Dioramas are arranged chronologically according to the geologic time column and the best one by far, the Pennsylvanian coal swamp, is at the opposite end of the gallery.

The gallery's last diorama is a Permian reef-scape that might have been seen in west Texas just prior to the great Permian extinction event. That diorama has been in the museum for several years but it will be shown somewhat different. Come see it all! +++

Others write, continued from page 8.

A number of years ago, during one of my many conversations with Dr. Eugene S. Richardson, Jr., (Curator of Fossil Invertebrates at the Field Museum, Chicago,) I presented my idea that these organisms are some sort of cocoon or chrysalis. I pointed out that they are found in terrestrial environments, the general shape resembles a pupal body, plus the fact that some of them are found with the pointed end attached to some form of plant material; also, that there are some modern beetles that take leaves and roll them up in a fashion that produces an end result that resembles the Palaeoxyris. See Figure 4. I believe that these factors give some credence to the idea that this is an insect-manufactured product. He replied, "Your idea is as good as anyone else's." He paused for a moment and added, "You know, I like that idea. I just might work on that someday." Alas, he never got to do it.

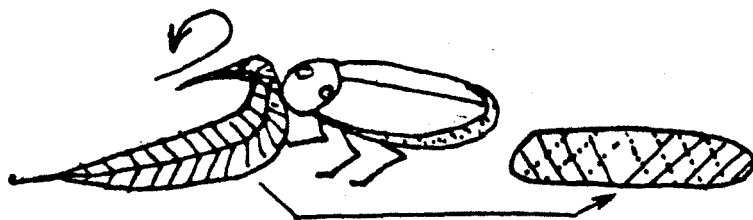


Figure 4

One other thought comes to mind. The remains of the horseshoe crab Euproops danae are common in the Braidwood Fauna. In our collection they are the most abundant form of animal life in that faunal group. Again, I am sure that this is not due to any kind of collecting bias on our part. Comparative examination of other collections show similar results. Since there is evidence of ter-

restrial activity by Euproops, could there be some sort of relationship between Palaeoxyris and Euproops? Perhaps in a future concerted study of the Mazon Creek organisms by professionals, this dilemma will be solved.

References:

Andrews, Henry N., 1970, Index of Generic Names of Fossil Plants, 1820-1865: U.S.G.S.  
 Eldridge, Niles, 1987, Life Pulse: Episodes from the Story of the Fossil Record: Facts on File Publications.  
 Fisher, Daniel C., 1979, Evidence for Subaerial Activity of Euproops danae: Mazon Creek Fossils, Matthew H. Nitecki, Editor, Academic Press.  
 Johnson, Ralph Gordon & Eugene S. Richardson, Jr., 1966, A Remarkable Pennsylvanian Fauna from the Mazon Creek Area, Illinois: The Journal of Geology Vol. 74, No. 5, Sept. 1966.  
 Langford, George, 1958, the Wilmington Coal Flora from a Pennsylvanian Deposit in Will Co., Illinois, ESCONI Associates: Downers Grove, Illinois.  
 --from MAPS DIGEST Summer 1991, Mrs. Sharon Sonnleitner, Editor

(Note: Mr. Jim Konecny is a member of MAPS and a past member of Fossils For Fun. We always enjoy reading and reprinting his articles for the members of Fossils For Fun to enjoy. Many will remember Jim and his wife, we are sure. Ef)

**OTHERS WRITE**

Reprinted from Dinny's Doins, August-September, 1991.

**PALAEOXYRIS - A FOSSIL ENIGMA**

By Jim Konecny, 2026 Geronimo Rd., Prescott, AZ 86301

The fossils record is filled with countless examples of various plants and animals. Most of them assignable to one of the numerous phyla that we have today. Occasionally an organism is found that cannot with certainty be placed in one of the phyla that we have constructed for our existing plants and animals. Many of these have been banded around from one phylum to another--almost always with some doubt. A classic example of one of these is the Palaeoxyris. In fact, the kingdom (plant or animal) to which this organism belongs has not been established with certitude. Let us examine this enigma more closely.

Various authors have described this organism under numerous genera--Palaeoxyris Brogniart (1828), Carpolithus Morris (1840), Palaeobromilia Ettlinghausen (1852), Sporlederia Stiehler (1860) and Spirangium Schimper (1870). All of the above authors considered it to be in the plant kingdom. It was thought to be a seed or seed pod. The currently accepted placement is in the genus Palaeoxyris. The geologic range is Pennsylvanian to Cretaceous. Specimens are fairly common in certain locations of the world-famous Mazon Creek Area of northern Illinois. This area is of middle Pennsylvanian Age, being in the Francis Creek Shale Member of the Carbondale Formation. Further discussion here is based on specimens found in these locations.

The general outline is that of a willow leaf with one end quite pointed and the other end with a long stem or tail. They range in size from 1-inch to 6-inches long. The length to width ratio is variable, with some specimens being long and thin while others are short and stout. See Figure 1. This figure also shows the most common ornamentation. Others less common types of ornamentation are shown in Figure 2. Notice that the ornamentation generally gives a knurled effect. In some specimens the knurling is barely visible, while in others it is deeply incised. The least common form is shown in Figure 3. Note that this form lacks the pointed end and the long stem-like end. The two ends have been referred to as head and tail in some literature. Some specimens exhibit a small, round nodular impression in the center of the body. Thus far, fine detail of this feature has not been observed, consequently its true nature has not been established. It has been characterized as a seed, an egg and a larva. Presently the Palaeoxyris is described as a shark egg case. I disagree with this designation--at least as far as the Mazon Creek specimens are concerned.



Figure 1

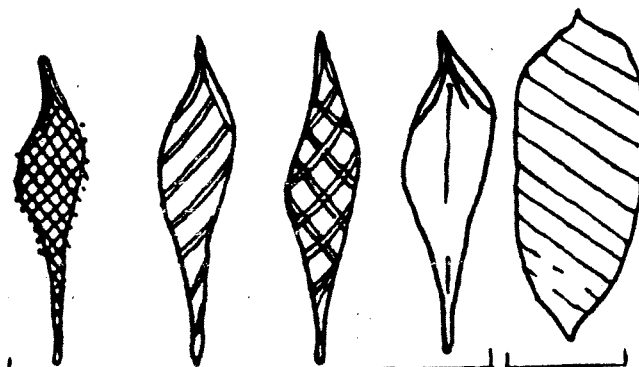


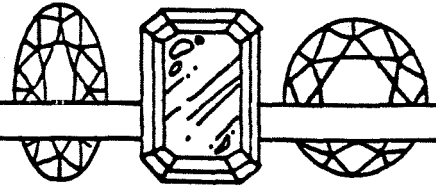
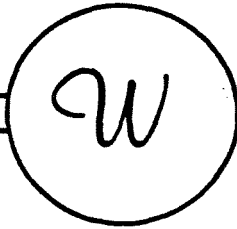
Figure 2

Figure 3

In the 1979 publication Mazon Creek Fossils one of the authors, Daniel C. Fisher, contends that the horseshoe crab Euproops danae engaged in sub-aerial activities. One basis for this contention is the fact that most of the of the Euproops specimens are found in areas that are considered to have been terrestrial environments rather than in areas that are considered to have been marine environments. Johnson and Richardson divided the Mazon Creek Area into two distinct environments--the terrestrial Braidwood Fauna and the marine

Essex Fauna. Naturally, the terrestrial environments are dominated by plant remains, whereas the marine environments are dominated by animal remains. Although Fisher cites other evidence, the compelling factor is their location in the terrestrial environment. Daniel C. Fisher is considered by some to be the foremost authority on horseshoe crabs--both modern and fossil. I therefore assume he knows whereof he speaks. His form of reasoning is why I contend that the Palaeoxyris is not a shark egg case.

In over 13 years of collecting in the Mazon Creek Area my wife and I have found 67 specimens of Palaeoxyris. Of these, only 4 were found in the marine environment, while 63 were found in the terrestrial environment. We also have 3 specimens from a middle Pennsylvanian location in east central Illinois. This location is also in the Carbondale Formation and is considered to have been a terrestrial environment. This adds up to a 66 to 4 ratio of terrestrial vs. marine specimens. Hence my contention that these organisms are not shark egg cases. If I am wrong, and these truly are shark egg cases, what is the explanation for the majority of them being found in terrestrial rather than marine environments? I am sure that this is not the product of some sort of collecting bias on our part. Incidentally, shark remains are rare in both the Braidwood and Essex faunas. I have not had the opportunity to examine specimens from any location other than the Mazon Creek Area. Could the resemblance between the Mazon Creek specimens and specimens from the other locations merely be superficial? Could it be that the Mazon Creek critters are not the same as those from other locations? Perhaps we are talking about two different organisms.



# Wooly's Custom Lapidary

Precious/Semi-Precious Gems

Rough Material

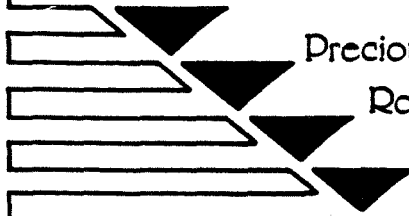
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Advertising by a rock-hobby business or interest is permitted with the approval of the Board, at a rate now set at \$15.00 per full page per insertion, paid in advance.

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 \$10.00 per year mailed.

Dues to LINCOLN GEM & MINERAL CLUB are as follows:

Adult membership fee \$10.00 (age 16 and over)

Junior membership fee \$2.00 (age 12-16)

Family membership fee \$22.00 (husband, wife, and all children under 16---permanent residents of household).

New memberships must be approved by the Board, after applicant attends at least one (1) regular meeting of the club, and pays the above dues plus \$5.00 registration fee.



**H.E.L.P.**

**HELP ELIMINATE LITTER PLEASE!**

**MAIL ALL EXCHANGE BULLETINS TO:**

Lincoln Gem & Mineral Club  
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