

M.A.P.S. *Digest*

Official Publication of
Mid-America Paleontology Society

Volume 17 Number 7
October, 1994

CONULARIDA
Conularia micronema

CONULARIDA
Conularia newberryi



BRACHIOPODA
Productus sp.

PELECYPODA
Aviculopecten sp.

MARK YOUR CALENDARS

5 NOV MAPS MEETING; Fryxell Museum,
Augustana College, Rock Island,
IL.

1:00 Board & General Meeting
combined.
2:00 Program

**22 OCT 11TH ANNUAL BVFS FLORIDA FOSSIL
23 FAIR--YEAR OF THE REPTILES**

Lake Mirror Center, Lake Mirror
Drive, 800 East Main Street,
Lakeland, Florida

Sat., Oct. 22: 9-7

Sun., Oct. 23: 9-5

Contact: 813-665-3426

407-282-5676, or 813-644-2486

**4 NOV FOSSILMANIA X, OAKDALE PARK, GLEN
5 ROSE, TX
6**

Fri.--10 am to 6 pm

Sat.-- 9 am to 6 pm

Sun.-- 9 am to 2 pm

Contact: William W. Morgan, 113
Shavano Drive, San Antonio, TX
78231

**7 APR 1995 MAPS NATIONAL FOSSIL
8 EXPOSITION XVII--CRINOIDS
9**

Fri., Apr. 7: 8am - 6pm

Sat., Apr. 8: 8am - 5pm

Sun., Apr. 9: 8am - 3pm

**PLEASE NOTE: THE DATES ARE INCORRECT IN
THE 1994 DIRECTORY**

ABOUT THE COVER

by Bob Guenther, Shelby, Ohio

The "One of a Kind" Fossil Concretion is an unusual group of fossils of the Mississippian Formations. It contains both species of the Conularids that are found in the Cuyahoga Formations exposed throughout the central portions of Ohio. Also, there is a *Productus* brachiopod on top of one of the *Aviculopecten* pelecypods. This is a full size picture of this concretion. When I entered it in the Central Ohio Gem, Mineral, & Fossil Show--Single Competitive Fossil Exhibit at Columbus, Ohio--it won the First Place Blue Ribbon along with a First Place Certificate that was worth \$25 in merchandise at any dealer in the show, which was an unexpected bonus.

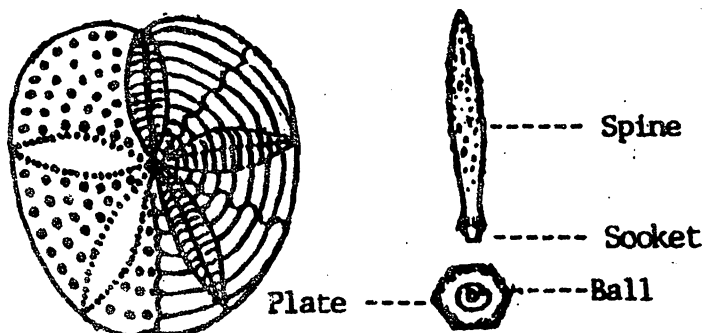
ECHINOIDS

by Loretta Hooten

from Arkansas Rockhound News

via Dinny's Doin's, Ella Fullbright, ed.

Echinoids are echinoderms which appeared in Ordovician seas, and several species are still living today. They lived in shallow seas in depths to 18,000 feet. Echinoids move slowly by tube feet and using their spines as stilts. Echinoids feed on algae, seaweed, mollusks, annelids and sponges. They have 5 pointed teeth which are strong enough to crush these organisms. Parasites such as gastropods have left borings in fossil echinoderms. Echinoids lived in shallow to deep water in schools of thousands. Some species clung to rocks while others burrowed to hide from enemies such as starfish. The spines fit on ball and socket joints which can be moved in any direction. The mouth is located at the center of the lower side. The body of the sea urchin is a ridged boxlike shell of polygonal plates arranged in many vertical columns. The small rounded nubs of these plates are the pivots for the spines. Each pair of pores bears a tube foot which serves for locomotion and gathering food.



*** 94/10 DUES ARE DUE ***

Are your dues due? You can tell by checking your mailing label. The top line gives the expiration date in the form of year followed by month--94/10 means 1994/Oct. Dues cover the issue of the *Digest* for the month in which they expire.

We do not send notices but will let you know if you are overdue by highlighting your mailing label on your *Digest*. We carry overdues for two months before dropping them from our mailing list.

Please include your **due date** and **name exactly as it appears on your mailing label**--or include a label.

Dues are \$15 per U.S./Canadian household per year. Overseas members may choose the \$15 fee to receive the *Digest* by surface mail or a \$25 fee to receive it by air mail. (Please send a check drawn on a United States bank in US funds, US currency, a money order, or a check drawn on an International bank in your currency.) Library/Institution fee is \$25.

Make checks payable to MAPS and mail to:
Sharon Sonnleitner, Treas.
4800 Sunset Dr. SW
Cedar Rapids, IA 52404

*** Dues are rising effective January 1.

FROM THE EDITOR

Just another reminder that the theme of this year's EXPO is crinoids, and Maggie Kahrs, the EXPO *Digest* editor, is looking for articles.

I'm also putting out a call for articles and covers (photos or drawings) for the regular *Digests*. Without the generous contributions of our members, this publication wouldn't exist.

DUES TO RISE IN JANUARY

At the 1994 MAPS EXPO, after some discussion of the budget and rising costs, the motion was passed to raise dues to \$20 per year, effective January 1, 1995. The EXPO *Digest* and *Directory* are major expenses and cost more as they get bigger and better. Also postage is expected to rise again. Those in attendance felt that MAPS provides members with a lot for the money.

ROCKS-AND-FOSSILS EMAIL LIST

New member Sharon Shea sent the following information about the email list that she administers.

The list purpose is to share experiences and information about rocks, minerals, fossils, paleontology, archeology, and prehistoric anthropology. List members exchange information on articles of interest rock and fossil collection sites, current legislation regarding specimen collection, shows and exhibits, publications, and where to find related sources of interest on the internet. Members may also publish local group meetings or arrange for rock or fossil exchanges. Members are particularly helpful to those looking for a local group or for those who would like to know about collecting possibilities in an area they plan to visit.

LIST ADD.: rocks-and-fossils@world.std.com
TO SUBSCRIBE (UNSUBSCRIBE): Send an email message to Majordomo@world.std.com

The body of the message should read: Subscribe (unsubscribe) rocks-and-fossils

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PUBLICATION AVAILABLE

The Paleontology Section of the Houston Gem & Mineral Society has available five publications written for paleontologists and amateurs alike. "Professionals will find them a useful reference and compilation of Texas fossils, and novice collectors can use them to identify specimens." The five volumes are:

*Fossils and Localities of the Claiborne Group (Eocene) of Texas--\$7.40.

*Texas Cretaceous Bivalves and Localities--\$9.25.

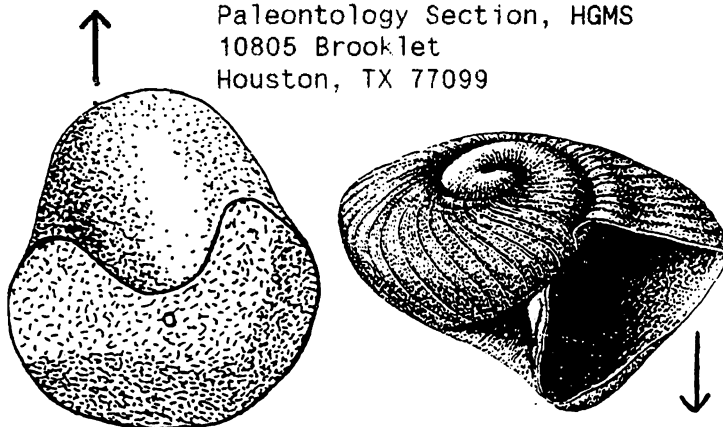
*Texas Cretaceous Echinoids (and localities)--\$9.25.

*Texas Pennsylvanian Brachiopods (and localities)--\$12.50

*Texas Cretaceous Ammonites and Nautiloids (and localities)--\$18.50.

To order send check or Money Order to:

Paleontology Section, HGMS
10805 Brooklet
Houston, TX 77099



Just published overseas is the *Proceedings of the Symposium on Molluscan Palaeontology, 11th International Malacological Congress, Siena, Italy 1992*, by A.W. Janssen & R. Janssen (Eds.) The volume contains twenty-two papers dealing with a.o. Caenogastropods, planktonic Gastropods, Rissoic Gastropods, trace fossils and molluscs, fossil Scaphopoda, Planorbids of a Miocene crater lake, Jurassic Gastropods from Sicily, Bivalvia, and the like. Price: fl. 234,00 (about \$126 U.S.) + postage and handling and 6% V.A.T. for E.C. customers. Order from:

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The Netherlands.

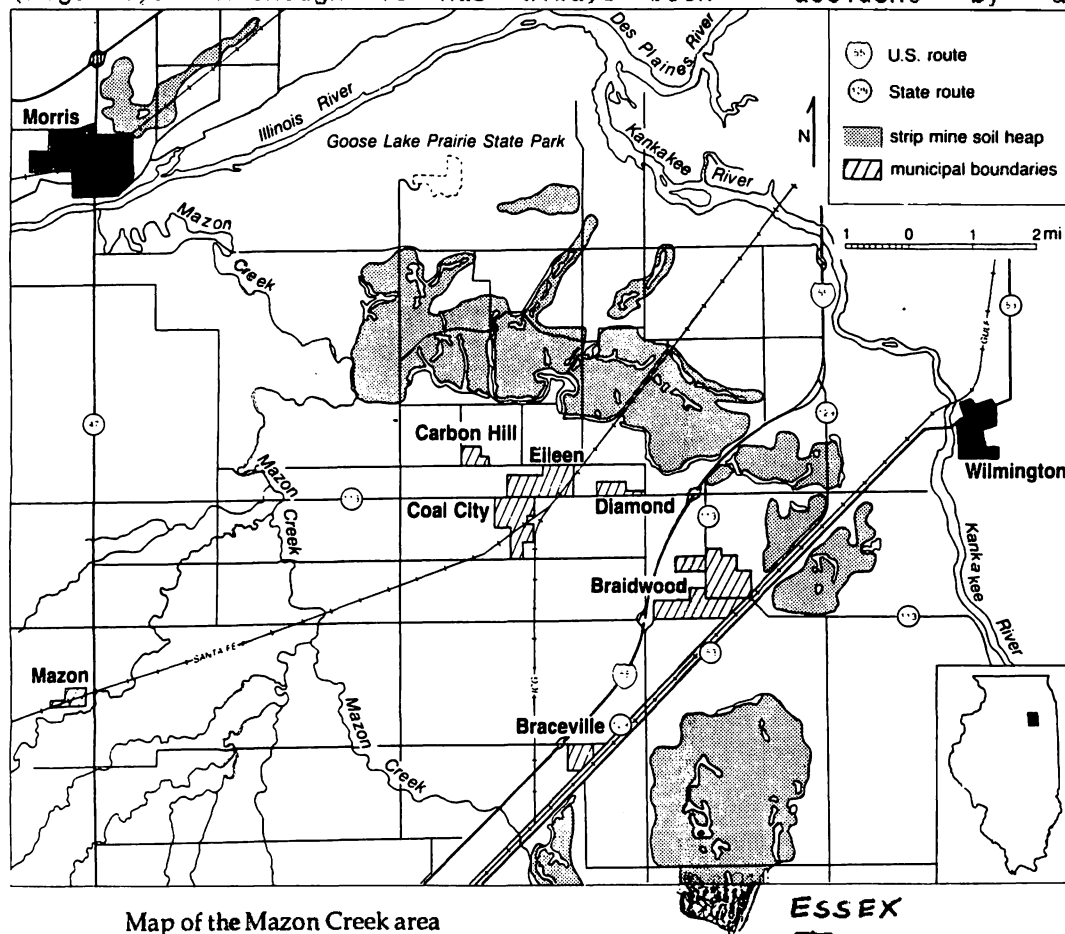
MAZON CREEK AREA OF NORTHERN ILLINOIS

by Jim Konecny, 3036 Geronimo Rd., Prescott, AZ 86301

Although much has been written about the Mazon Creek Area, its history as a producer of coal and fossils is not very well known. I will attempt to close this gap by providing historical and sociological data about this area that has produced such a wealth of fossil material and has made this area world famous. The general limits of the area fall within a triangle formed by the towns of Morris, Wilmington and Essex (Fig. 1). Although it has always been

southern part and thins out as it runs northward. The Francis Creek Shale is overlain by Pleistocene glacial deposits and outcrops naturally in the bluffs along Mazon Creek (Fig. 2).

Coal mining operations were started in the area shortly after the Civil War; this being the oldest coal-producing area in Illinois. It is said that the discovery of coal was by accident by a farmer who was digging a well for water.



Map of the Mazon Creek area

Fig 1

known as Mazon Creek, present-day official state maps show it as Mazon River. The fossils, which occur in ironstone concretions or nodules, are found in the Francis Creek Shale Member of the Carbondale Formation (Middle Pennsylvanian Age). This shale lies directly above the coal seam, referred to as the Colchester #2. In some areas it is as much as 50 or 60 feet thick; however, in the strip mining area it is only 25 feet thick or less. To be more precise, the thickest is in the

The first mines were shaft mines, whose spoil heaps still dot the landscape like tiny volcanoes (Fig. 3). Every time I passed this mound I had an uncontrollable urge to climb to the top with a bundle of oil-soaked rags and light it just to see how long it would take for someone to report a volcano belching smoke and fire. These underground mines were designated by names such as Diamond, Eureka and Eileen. Quite naturally the communities that sprung up around these mines were named after them. The opening of these mines brought an influx of European immigrants to the area, starting with the Scotch, Welsh, English, Italian and finally Bohemians from the Silesian coal districts in

what is now the Czech Republic. The Bohemians probably composed the largest ethnic group as evidenced by the Bohemian National Cemetery on the eastern outskirts of Braidwood. The Italians were the second largest ethnic colony; the Rossi Spaghetti Factory in Braidwood was a remnant of that era.

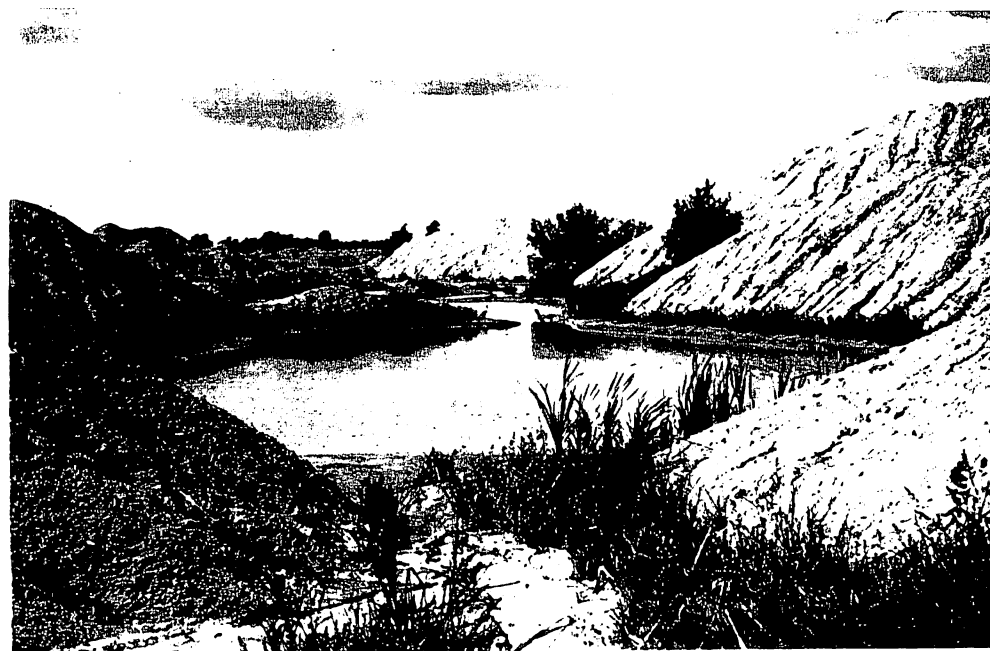
Underground mining has had (and still has) disasters caused by cave-ins, and this area was not spared such a disaster. On Feb. 16, 1883, a cave-in caused the Diamond Mine to



Fig 2



Fig 3



be flooded; the number of known victims was 74, but only 28 bodies were recovered. On the north side of IL Rte. 113, in the town of Diamond, there stands a monument erected to commemorate this disaster.

With the advent of larger machinery, it was found that a new method, strip mining, was more economical than underground mining when a coal seam was not over 100 feet in depth. This method involves using a large shovel or drag line to strip the overburden over a large area down to the coal seam. In later years a machine was developed, commonly called "the wheel," which removed the overburden at a faster rate over a larger area. This process created a large pit surrounded by the dumps of overburden. Smaller shovels and bulldozers then remove the coal and load it onto trucks that hold over 100 tons which are driven directly into the pit (Fig. 4 A-D). The trucks then dump the coal into a tipple, located on the premises, where the coal is washed and sorted. This stripping in the area began in 1927. Unlike the shaft mines which were designated by names, the strip mines were designated by pit numbers such as Pit 1, Pit 2, Pit 3, etc. While the mining was in progress, it was necessary to employ water pumps to keep underground water from flooding the pit. When the operation was moved to a new location water filled the pit creating a "lake: (Fig. 5).

After a time these abandoned pits were leased and later sold to sportsmen's



Fig 4b

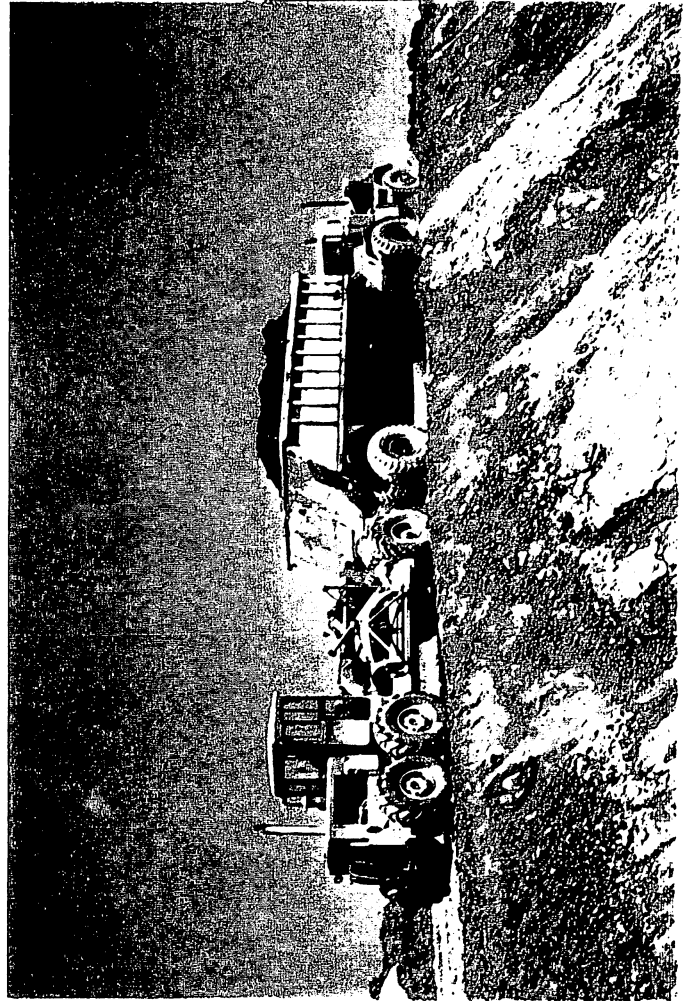


Fig 4d

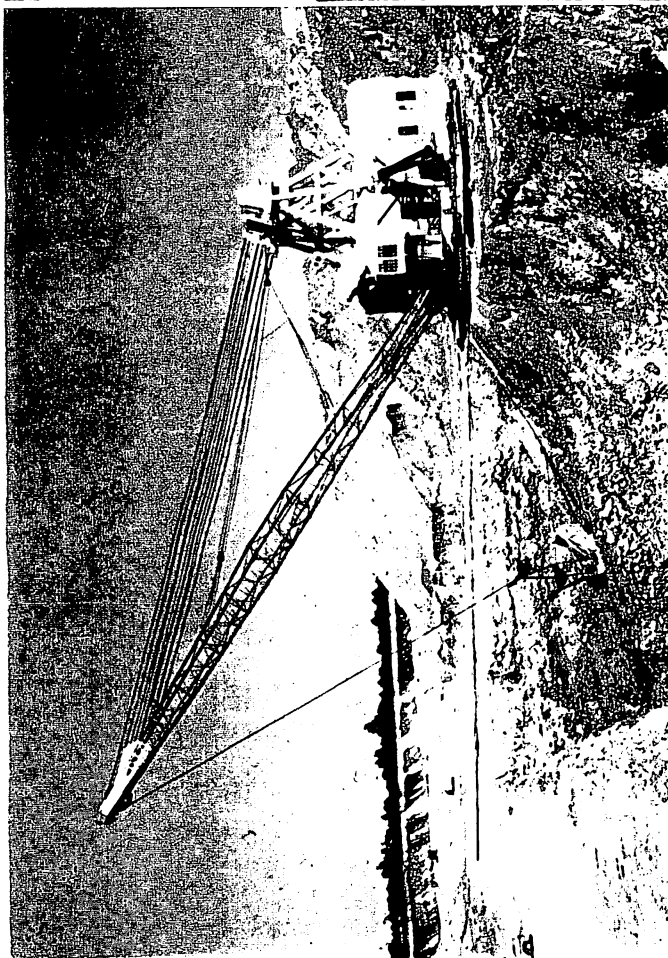


Fig 4a



Fig 4c

clubs. These clubs developed their areas for fishing and associated recreation. One of the pits was sold to an earth-moving school, which taught the operation of various earth-moving machines by working and reworking the dump piles.

It is reported that the first collecting of fossils was done in Mazon Creek in 1857. Although it is not unreasonable to assume that some unrecorded collecting was done prior to this date. As previously mentioned, the fossils are enclosed in nodules or concretions and are found in the shale. The nodules are spheroidal-shaped bodies which were formed by iron compounds being deposited within the shale surrounding an organism, namely a plant or animal. Theoretically this organism creates a plane of weakness within the nodule. When the nodule is placed on edge and struck a sharp blow with a hammer, it should split open along this plane and reveal the plant or animal within. Since any organic substance creates the chemical action needed to produce a nodule, most of the nodules contain either fragments or indistinguishable matter. Obviously, to obtain one good specimen, many nodules must be cracked. A good average is one in ten. When the shaft mining was begun, it was discovered that the shale above the coal contained the same nodules as those found in the bluffs along Mazon Creek and quite naturally were also found in the overburden from the strip mines. These strip mine dumps created a much larger collecting area than the Mazon Creek exposures and the shaft mine dumps, thereby producing a greater number and variety of fossils.

The first reported collector at the Mazon Creek beds was Joseph Even. Ironically, all of his specimens left the country, having been sent to Berlin, Germany. However, they did create international interest in this locality. Some of the other early collectors were J.C. Carr, L.E. Daniels, P.A. Armstrong, F.T. Bliss, John Bronson and Ralph Lacoe. The latter, a wealthy business man from Pennsylvania, hired collectors and also bought specimens from casual collectors. His entire collection was donated to the U.S. National Museum and quite possibly created the greatest impact in making the Mazon Creek

localities famous. It was from this collection that numerous monographs were published.

About the time that the nodules from Mazon Creek and the shaft mines were becoming scarce, the strip mining operations began nearby. This spawned a new generation of collectors. Noteworthy among these were John & Lucy McLuckie, Peter Enrietta, Jerry Herdina and the George Langfords, Sr. & Jr. John McLuckie was a machine operator in the strip mines and collected the bulk of his specimens after hours in the operating mines. The McLuckie & Herdina collections had been extensively studied by professors from numerous institutions. The McLuckie collection has been donated to the Smithsonian Institution; the Enrietta collection was donated to various colleges in Minnesota; the Herdina collection went to the Field Museum of Natural History, Chicago. Probably the best known of this latter group of collectors is George Langford. He, along with his son George, Jr., spent countless hours in the field between 1937 and 1941. In a letter written to Thorne Deuel, Chief, Illinois State Museum he said, "George, Jr., and I spent 140 days (morning and afternoon) in the field... and much more time in washing, mending, sorting, marking and developing the material. Altogether I devoted...3400 hours to all this, and George, Jr., 2000...." An estimated 250,000 nodules were split open by them. The Illinois State Museum, in Springfield, and the Field Museum of Natural History were beneficiaries of the Langford labors. After his many years as an amateur collector, George Langford became Curator of Fossil Plants at the Field Museum. His two published volumes, though uncritical, are probably the most comprehensive works written on Mazon Creek fossils. I have been fortunate to have met all of this latter group. I gained much knowledge in hearing about their varied adventures and experiences in my conversations with them. The late 1950's brought another generation of collectors created by the numerous rockhound clubs of the Chicagoland area. With such a large area available to the collectors, each of them had their own favorite locations. Pet names were coined for many of these locations, such as

Goldblatt's, Chowder Flats, Serli Gulch and Piano Hill. The naming of Piano Hill is an interesting story. One day in 1959 a piano suddenly appeared on the top of a hill on the southwest corner of Coal City Rd. and IL 129. Imagine dragging a piano to the top of one of these hills. How could this have been accomplished and why was it done? No doubt this was a gag or possibly done on a dare. As suddenly as it appeared, sometime in 1960 it vanished. The how and why behind this venture remains a mystery except to those who were involved.

All of the collectors mentioned so far were amateurs. This does in no way imply that professionals were absent from this area. However, most of those who reported on the fossils spent a minimal amount of time in the field; the bulk of their studies was done on collections that were donated and/or lent to the various institutions. Leo Lesquereaux, A.C. Noe, Raymond Janssen, W.C. Darrah and Eugene S. Richardson, Jr., are but a few of this group.

Time has taken its toll on this area. All but one location are privately owned and permission to collect on these lands is extremely difficult to obtain. Even then the areas are overgrown with vegetation. A mobile home park now occupies what had been my favorite collecting area and an atomic power plant sits astride a part of another. The one location which is not on private land is state land and requires a special permit to collect. This location is still producing some significant finds although not in the quantity as in years past.

MISSING-LINK AMPHIBIAN FOUND

source: Chicago Tribune, July 29, 1994,
sec 1, p 4

sent by: James Gabriel, Chicago

The fossilized remains of the first known species of amphibian has been found in Pennsylvania. University of Pennsylvania paleontologists dug the 365-million-year-old bones from Devonian rock in cliffsides exposed by road construction. According to research team leader Neil Shubin, "It is

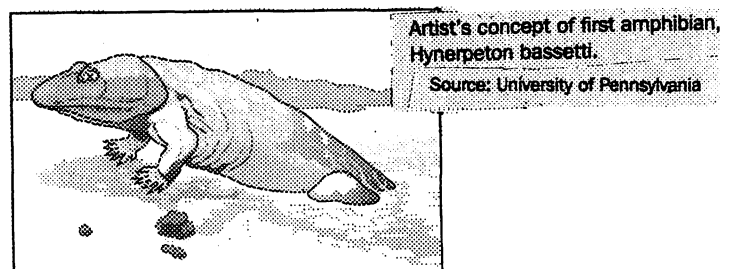
related to the common ancestor of dinosaurs, birds, reptiles, and mammals--even humans."

While only parts of the skeleton were found, they were enough to indicate the creature looked like a cross between a fish and a miniature crocodile. Measuring about 2 feet long it had a flat skull, breathed with lungs instead of gills, and had forelegs that moved much like a lizard's. Its legs were able to both support the creature on land and be used for paddling in water. It was named *Hynerpeton basseti* after the nearby town of Hyner and the Greek word for a creeping animal.

Ted Daeschler, a graduate student, made the key discovery while sifting through fish bones he and Shubin had collected from a hole they dug in a roadside cliff. He found a fist-sized shoulder bone unlike any he had ever found before. Based on the struts and ridges in the bone, Shubin, an expert in limb development in animals, was able to determine that it came from an amphibian. They returned to the site and recovered enough bones to reconstruct the front half of the animal.

The site was once an equatorial continent that shifted to create North America, Greenland, Scandinavia, the Baltic States and British Isles. The amphibian lived in a swampy area that was bordered on the east by mountains and the west by a seaway. The two men had spent two years searching for likely sites in a large area surrounding the find.

While other fossil amphibians have been discovered in Scotland, Russia, Brazil and Greenland, *Hynerpeton* is older than any of them and its forelimbs are more advanced. Shubin and Daeschler believe it "is the earliest creature to invade land--the link between fish and all other backboned animals."



Artist's concept of first amphibian,
Hynerpeton basseti.
Source: University of Pennsylvania

ADVERTISING SECTION

Ads are \$5.00 per inch (6 lines x 1 column--43 spaces). Send information and checks payable to MAPS to: Mrs. Gerry Norris, 2623 34th Avenue Ct., Rock Island, IL 61201. Phone: (309) 786-6505.

This space is a \$5.00 size.

To extend currently running ads, please send request and remittance to **Editor** by the 15th of the month. We do not bill. Ads do not run in the EXPO issue (April). Ads up to 8 lines by 54 spaces can be printed in smaller type to fit a 1" space.

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The **Mid-America Paleontology Society** (MAPS) was formed to promote popular interest in the subject of paleontology; to encourage the proper collecting, study, preparation, and display of fossil material; and to assist other individuals, groups, and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Membership fee: One year from month of payment is \$15.00 per household. Institution or Library fee is \$25.00. Overseas fee is \$15.00 with Surface Mailing of DIGESTS OR \$25.00 with Air Mailing of DIGESTS. (Payments other than those stated will be pro-rated.)

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). October & May meetings are scheduled field trips. The June meeting is in conjunction with the Bloomington, IN, Gem, Mineral, Fossil Show & Swap. A picnic is held the fourth weekend in July. November through April meetings are scheduled for 1 p.m. in the Science Building, Augustana College, Rock Island, Illinois. One annual International Fossil Exposition is held in the Spring.

MAPS official publication, MAPS DIGEST, is published 9 months of the year--October through April, May/June, July/August/September.

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