A LOVE OF FOSSILS BRINGS US TOGETHER
### MARK YOUR CALENDARS

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 OCT</td>
<td>MAPS MEETING. Trowbridge Hall, University of Iowa, 123 N. Capital St., Iowa City, IA. Main Lecture Room, #125.</td>
<td>123 N. Capital St., Iowa City, IA. Main Lecture Room, #125.</td>
<td>1:00 Board &amp; General Meeting combined. 2:00 Program:</td>
</tr>
<tr>
<td>11 NOV</td>
<td>MAPS MEETING. Trowbridge Hall, University of Iowa, 123 N. Capital St., Iowa City, IA. Main Lecture Room, #125.</td>
<td>123 N. Capital St., Iowa City, IA. Main Lecture Room, #125.</td>
<td>1:00 Board &amp; General Meeting combined. 2:00 Program:</td>
</tr>
<tr>
<td>27 OCT</td>
<td>FOSSILMANIA XIII, SOMERVELL COUNTY EXPO CENTER, Highway 67 in Glen Rose, TX</td>
<td>Highway 67 in Glen Rose, TX</td>
<td>Fri &amp; Sat: 9-6 Sun: 9-2 Saturday Night Fossil Auction For further information, contact: Bill Morgan: 210-492-9163</td>
</tr>
<tr>
<td>1 NOV</td>
<td>55TH ANNUAL MEETING OF THE SOCIETY OF VERTEBRATE PALEONTOLOGY. Sheraton Station Square on the South Side of Pittsburgh.</td>
<td>Sheraton Station Square on the South Side of Pittsburgh.</td>
<td>For information, contact the Greater Pittsburgh Convention and Visitors Bureau at Four Gateway Center, Pittsburgh, PA 15222-1259. Phone: 800-366-0093</td>
</tr>
<tr>
<td>6 NOV</td>
<td>GEOLOGICAL SOCIETY OF AMERICA, NATIONAL MEETING. New Orleans, LA.</td>
<td>New Orleans, LA.</td>
<td>Contact: GSA Meetings Dept., P.O. Box 9140, Boulder, CO 80301. Tel: (800) 472-1988. (Paleontological Society Symposium: &quot;Radiations following extinctions&quot;).</td>
</tr>
</tbody>
</table>

### ABOUT THE COVER

This month’s cover photo was sent by Bob Levin. The specimen of *Cretaoxyrhina* shark vertebrae, from his collection, is from the Cretaceous Period, Smith County, Kansas. The specimen is 3” across.

---
MAPS MONTHLY MEETINGS MOVE TO IOWA CITY

Beginning with the October meeting, MAPS is moving its "monthly" meetings from Rock Island to Iowa City. The change is taking place because of the number of members who come from the Cedar Rapids area and in an effort to draw other members to participate in the steering of MAPS. "Monthly" meetings have been cut to four: October, November, January and March. An additional meeting is held at EXPO in April and a summer picnic includes a business meeting. The University of Iowa will be our host for the meetings.

1996 EXPO THEME

The theme for the 1996 MAPS EXPO is Brachiopods. Maggie Kahrs is the editor of the EXPO issue of the Digest. Please contact her if you can contribute an article to that issue.

MAPS NAME BADGES NOW AVAILABLE AGAIN

We have been searching for a new source for our MAPS name badges since before EXPO and have finally located a business that we think will produce them in a timely fashion. To order your badge:

--Request a MAPS name badge
--Print your name exactly as you want it to appear
--Include your city and state.
--Send the above information along with a check in the amount of $6.36 to:

Designer Awards
207 Western Avenue
Davenport, IA 52801-1012
Ph. (319) 326-2222

--Be sure to include your return address.

The price includes postage, handling and tax. MAPS is not directly involved in the sale of the badges; however, please let us know if you have any problems.

ADOPT-A-DRAWER

from American Paleontologist
Paleontological Research Institute, NY, pub

Have you ever wanted to help curate a major museum fossil collection? Now you can! The installation in early 1995 of nearly 2000 new compactorized drawers in the Paleontological Research Institute (PRI) collections ranges offers PRI members and friends a special opportunity to become personally involved with the ground-up renovation of one of the nation's largest collections of invertebrate fossils and shells. PRI collections staff are now engaged in the process of rehousing much of the Institution's collections in the new drawers, and they need your help, and involvement.

The Adopt-a-Drawer program allows you to sponsor one new drawer of fossils or Recent shells. For a contribution of $100 a year, you will receive a photograph and full description of the drawer and its contents, and annual bulletins about the state of curation of your drawer and the entire collection. You can correspond with collections staff and learn as much as you want about your adopted specimens. It's a great educational gift for an aspiring biology or geology student. Your contribution will support the costs of staff and supplies as we continue to reorganize, conserve, and curate the PRI collections of more than 1.6 million specimens.

Drawers available: trilobites, eurypterids, brachiopods, corals, gastropods, bivalves, cephalopods, echinoderms, vertebrates, plants, trace fossils, Recent mollusks, other.

For more information contact:
Adopt-a-drawer
Paleontological Research Institute
1259 Trumansburg Road
Ithaca, NY 14850

DINOSAUR INTERNATIONAL

from Priscum, the Paleo. Soc. Newsletter
September 1995
Wm. I. Ausich & Loren E. Babcock, Co-Eds.

Dinosaur International is scheduled to be held April 8-April 21, 1996, on the campus of Arizona State University. More than 150,000 ft. sq. of fossils and exhibits are planned and will include fossils from every continent. A three-day symposium, April 18-21, is planned with more than 60 invited speakers. In addition, a banquet will be held the evening of April 19. The event is intended to convey the enthusiasm for dinosaurs and paleontology to anyone interested. There will also be a public forum discussing science and science education policy. There will be an organized broadcast to all the regional public schools with interactive participation between students and a panel of paleontologists; this broadcast will be international in scope. An art and sculpture exhibit as a film festival will highlight the great and not so great "paleo oldies" and newer films. A series of regional field trips combining geology, paleontology, and culture history is also planned. Contact Don Wolberg (202)720-7178 or Ed Stump (805)985-5081.
FOSSIL SCYPHOZOA FROM MID-PENNSYLVANIAN DEPOSITS OF ILLINOIS
by Jim Kostohryz, Des Plaines, Illinois

There are few places in the entire world where soft-bodied creatures can be found as fossils. One of the most famous is the world renowned Mazon Creek area about 60 miles south of Chicago, Illinois.

Around 275 million years ago, conditions were just right for favorable preservation of soft-bodied marine creatures whose existence science would never have known except for this, and a few scattered smaller outcroppings in other states.

Fossils from the Mazon area are preserved in nodules or concretions of siderite and occur in the Francis Creek Shale layers directly overlying the #2 Colchester Coal. The area was extensively strip-mined from 1945 to sometime in the 1960’s. Large spoil heaps dotted the landscape, and many of these mounds contain the concretions which are still sought after by professional and amateur fossil collectors.

The Mazon Creek biota is divisible into three different groups, which are:

1.) The Essex Fauna, consisting of near-shore salt water creatures, possibly a mud flat or deltaic condition.
2.) The Braidwood Fauna, which comprises non-marine fresh- to brackish-water animals that inhabited the shoreline coal swamps.
3.) The Braidwood Flora, whose plant fossils existed in a terrestrial lowland.

The fossils discussed in this article belong to the Marine Essex Fauna, which is mid-Pennsylvanian age.

The phylum Coelenterate (Cnidaria) includes aquatic animals whose bodies are composed of two layers of tissue enclosing a central cavity, the coelenteron, and are equipped with a mouth around which are tentacles which assist in capture, killing, and feeding of the organism. The phylum is divided into three classes: Scyphozoa (true jellyfish), Hydrozoa (sea anemones) and Anthozoa (corals).

One of the most common fossils and, yet, one of the most amazing of the Essex fauna members is the Scyphozoa (true jellyfish) remains.

At one time, not even recognized as fossils, jellyfish remains were called "Blobs" or "Ghosts," which referred to their indistinct outlines and pale coloring compared to the surrounding rock. Jellyfish fossils compose about 50% of the population of the Essex fauna, with one species, Essexella Asherae, totaling 40% more itself.

True jellyfish are described as translucent, umbrella-shaped, symmetrical, aquatic, non-colonial animals. The umbrella, or bell, can be disc-shaped or high-crowned and is usually divided into eight lobes by means of indentation. The jellylike tissue has an almost cartilagelike consistency. The mouths of Scyphozoans are quadripartite ("x" shaped), and the edges (manubrium) drawn down in a fringed or divided pattern termed as tentacles or oral lobes. They swim by gas bladders and by contracting the bell. Most species prefer warm water close to shore. Percentages vary, but the water content ranges around 94%. These free-swimming jellyfish are the mature stage beyond the immature sessile polyp (Scyphopolyp). Jellyfish are hermaphroditic, and reproduction depends on water temperature and many other factors.

The following gives a description of four scyphozoans found in the Essex concretions. Restorations are based on fossil specimens and comparisons to similar extant species.
FOSSIL SCYPHOZOA FOSSIL EVIDENCE FOUND IN SIDERITE NODULES

fig 1. OCTOMEDUSA PIECKORUM
PHYLUM COELENTRATA
CLASS SCYPHOZOA, ORDER CORONATA
A very small jellyfish that has a maximum size of 3/4 inch, but most are 1/4 inch to 1/2 inch with a round bell, with some specimens exhibiting a marginal groove. Beyond the groove are located the lobes from which eight tentacles emerge. In some specimens the mouth, which is quadripartite, can be seen in the center of the bell. Often seen as a light-colored stain on the surface of the concretion, Octomedusa is often found in multiples.

fig 2. ANTHRACOMEDUSA TURNBULLI
PHYLUM COELENTRATA
CLASS SCYPHOZOA, ORDER CUBOMEDUSAE
Unlike most jellyfish, the ones belonging to the order Cubomedusa tend to be strong swimmers. Modern day descendants of Anthracomedusa such as the feared “Sea Wasp” (Chiropsalmus Quadrigatus) have built-in protection in the form of stinging nematocysts. Human contact with the stinging cells can cause blisters and swelling which can leave permanent scars and even cause death. (My father was nearly killed by one of these jellyfish while swimming off the beach of Australia.) It is interesting to note that all members of this order are tropical and prefer dirty water environments, such as harbors and river mouths. This may shed some light on conditions of the Essex environment. Their favorite foods are bottom dwelling shrimps, and there are many fossil shrimp found in the Essex deposits.

The bell of Anthracomedusa is cube-shaped with a bundle of tentacles at the four bottom corners. The underside would have been very concave, and the bell was capable of rapid contraction, giving it speed and agility in the water. There is very little difference between the fossil Cubomedusa and its living relatives.

fig 3. ESSEXELLA ASHERAE
PHYLUM COELENTRATA
CLASS SCYPHOZOA, ORDER RHIZOSTOMAE
The modern members of the order Rhizostomae are characterized by an absence of fringing tentacles as well as a high-arched bell. It is into this order that the most common of the fossil jellyfish, Essexella Asherae, fits. Known as “Blobs” to collectors, specimens represent the jellyfish lying on its side and can represent degrees of preservation from a light-colored stain on the surface of the split nodule to a very three-dimensional individual. A typical Essexella is oval in outline with a small roundish bell at the top, termed the accessory lobe. Usually this portion is more outstanding and raised from the surface of the rock. A membranous skirt extends from the bell or lobe and covers the oral lobes, most of the tentacles, and the manubrium. Because of the covering of the skirt, it is difficult to determine the structure of the organism beneath. Only in well-preserved individuals do we see a hint of the inner structure.
This small jellyfish is not common; however, there are some characteristics shown from the existing specimens. It is round with a visible absence of tentacles. A raised inner circular structure most likely represents gastrovascular system since this area, on some specimens, exhibits a quadripartite mouth. A network pattern gives the genus its name while the outer bell appears divided into lobes at the edges. Fossil specimens can appear quite circular without much definition or have pronounced lobes and a raised central area.

Although most collectors do not consider them the most exciting find, I, nevertheless, always find myself a bit in awe that such delicate creatures, millions of years old, should have left any sort of trace whatever.

**FOSSIL SCYPHOZOA DIAGRAMMATIC RESTORATIONS**

**fig 1a. OCTOMEDUSA PIECKORUM**
Greatly enlarged, normally 1/4 to 1/2 inch. Note dome-shaped bell and marginal lobes from which appear eight tentacles.

**fig 2a. ANTHRACOMEDUSA TURNBULLI**
About 1/2 natural size. Note four groups of tentacles and cube-like shape.

**fig 3a. ESSEXELLA ASHERAE**
About natural size. Note membranous skirt extending from bell and covering oral lobes and tentacles.

**fig 4a. RETICULOMEDUSA GREENEI**
Slightly larger than actual size. May have been divided into distinct lobes. No evidence of tentacles found on fossil specimens.
"SILICA NOT"
by Scott Vergiels, South Branch, Michigan

I have noted many references to fossils from the Silica formation (middle Devonian, S.E. side of the Michigan basin) being silicified. Without checking all the back issues, I can't say whether this has occurred in any MAPS Digest articles, but to set the record straight, at least for Digest readers, here's the story.

Early in the century small quarries were operated southwest of the town of Sylvania, Ohio, for glass-making sand. These pits were in the Sylvania Sandstone, a relatively pure formation ideal for this purpose. The small village that grew up half a mile west of these quarries was called Silica for the local glass-sand industry.

When quarries for cement-making material were begun in the 1920's just northwest of this village, a new sequence of rocks was exposed, and in 1927 Grace Stewart described the initial fauna and named part of the new section the "Silica shale" after the nearby village. Despite its misleading name, the Silica is composed of normal claystones and carbonates, and its fossils are mostly preserved in calcite and pyrite in various forms and combinations.

The overlying Ten Mile Creek Dolomite does contain abundant silicified fossils, but few visitors to the old Medusa quarries paid much attention to the T.M.C.

The village of Silica is now an almost unnoticeable group of small buildings along Centennial Rd., among the light industries and quarry plants that now clutter the neighborhood, and the old sandstone quarries are long since filled in and built over. Note: the Silica formation lies nearly 200 feet up-section from the formation (the Sylvania Sandstone) ultimately responsible for its name.

CONODONTS AS VERTEBRATES
from Paleo Research Institute's American Paleontologist, 8/95

Conodonts are tiny tooth-or comb-shaped fossils found in rocks of Cambrian to Triassic age. They are among the most useful fossils for dating rocks during this long time interval, but their biological affinities have remained obscure. In 1932 a fossil bearing articulated conodonts was described, but what exactly this "conodont animal" was has been controversial. Two new studies describe exceptionally well-preserved conodont material and report features that would appear to solidify claims that conodonts were actually vertebrates, closely related to primitive Paleozoic fishes. S.E. Gabbott, of Leicester University in England, and colleagues present evidence (Nature 374:800, 1995) from Ordovician fossils from South Africa that conodonts had a pair of large eyeballs, associated with eye muscles. Mark Purnell, also from Leicester, demonstrates (Nature 374:798, 1995) the presence of wear facets on the tips of conodont cusps, and argues that this is evidence for a biting function.
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.

Make Your Collection Shine!
Marc Behrendt Fossil Preparation
421 S. Columbus St., Somerset, Ohio 43783
614-743-2818 Specialize in invertebrates
Discount pricing for collections and multiple specimens

Reprint of a classic: GEOLOGY AND PALAEONTOLOGY OF EIGHTEEN MILE CREEK BY Amadeus W. Grabau, 1898 two volume edition; $29.95 + $3.00 S&H + NYS 8% tax to Hamburg Natural History Society, P.O. Box 772, Hamburg, New York 14075

Better than museum quality reproductions.
Excellent hands on material for students.
Made with durable plastic resins.
We have available many fossils, petroglyphe and real minerals.

Satisfaction guaranteed!
Catalogue $3.00
Send check or money order, purchase orders accepted from accredited Institutions, 30 day net.
Natural History Supply House
12419 Comet Dr.
Sun City West, Arizona 85375
Mere. Plue «1-520-263-6872

SPECIAL PUBLICATIONS OF THE PALEO SOCIETY
SHORT COURSES IN PALEONTOLOGY
--Taphonomic Approaches to Time Resolution in Fossil Assemblages (S.M. Kidwell and A.D. Behrensmeyer), 1993, 302 p., $15.00.

ED ROGERS
RARE & OUT OF PRINT GEO SCIENCE LITERATURE

Catalogs on paleontology, paleobotany, stratigraphy, mineralogy, early state surveys & old & new world explorations.

We also buy book collections!

PO Box 455 • Poncha Springs, CO 81242 USA
(719) 539-4113 • Fax 539-4542

FOSSILS • POSTERS • REPRODUCTIONS

* 28 different paleo posters (dinosaurs, trilobites, mammals, reptiles, etc.)
* REAL fossils * Museum quality reproduction fossils
* Send $3 for complete photo catalog

PaleoSearch, Inc.
P.O. Box G3, Hays, KS 67601 U.S.A.

Free Fossil Catalog. Largest selection in S.E. For the beginner to advanced collector. Vertebrates, invertebrates, & books. Send large S.A.S.E. with two $.32 stamps to Burglens 214 Sylva Hwy. Franklin, NC 28734

SPECIAL PUBLICATIONS
--Taphonomic Approaches to Time Resolution in Fossil Assemblages (S.M. Kidwell and A.D. Behrensmeyer), 1993, 302 p., $15.00.

Order from: Carnegie Museum of Natural History, Attn: Paleontological Society Special Publications, 4400 Forbes Ave., Pittsburgh, PA 15213 USA. Payment or institutional purchase order should accompany order. Payment must be made in U.S. $ payable to The Paleontological Society. Books will be sent fourth class; overseas surface mail--add $2.00 U.S. for each copy.

-7-
Please ADD the Following NEW OR REJOINING MEMBERS to Your Directory:

Paul M. Adams  
126 S. Halberta Ave. #2  
Redondo Beach CA 90277-3448  
310-336-6927  
paul_Adams@qma12.aero.org

Chemist. Will not trade. Major interest trilobites.  
Rejoining.

Scott & Rachael Arney  
301 8th Street  
Warrensburg MO 64093  
816-747-8507

Lab Technician—microbiology. Will trade. Major interest Paleozoic and Mesozoic marine faunal deposits, insect fossils, as well as any other fossils. Have for trade Pennsylvanian age fern fossils, Ordovician graptolites, many typical Penn. marine invertebrates. Member of East. Mo. Soc. for Paleo. Like to be with others with interest in paleo.

Jenny Barnes  
3138 Braeburn Circle  
Ann Arbor MI 48108  
313-972-1237

Nurse. Major interest ammonites, vertebrates. Member of Friends of the Univ. of Mich. Mus. of Paleo.

Joseph A. Lipovsky  
1213 W. Stratford Dr.  
Peoria IL 61614  
309-681-4613

Medical Research/Biology, Anatomy & Physiology Prof.  
Will not trade now (95). Wm. likes to find fossils to use in teaching. Have a variety of fossils.

Mrs. Alice R. McCammon  
16570 Garden Lane  
Los Gatos CA 95030  
408-356-1951

Rejoining.

James Miller  
7225 Lakeland Ct.  
Las Vegas NV 89128-6010

Phillip J. Zimmerman  
3 S. 266 Briarwood Dr.  
Warrenville IL 60555-2623  
708-393-2854


PLEASE NOTE THE FOLLOWING CHANGES OF ADDRESS OR CORRECTIONS:

Janise Blong  
Ithiel Matteson  
1431 78th St. Trail  
Belle Plaine IA 52208-8835

Jill Cohen  
Justina Cotter  
jill: jcohen@med.unc.edu  
Justina: jtc@admiss.duke.edu

Yale R. Goldman  
68 Silo Way  
Bloomfield CT 06002  
860-243-9630  
wk: 860-724-6008
Add: Will trade. Have for trade mostly Florida vertebrate and invertebrate fossils. Interested in all types of fossils.
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 $20 per household. Institution or Library fee is $25.00. Overseas fee is $20.00 with Surface Mailing of DIGESTS OR $30.00 with Air Mailing of DIGESTS. (Payments other than those stated will be pro-rated.)

MAPS meetings are held on the 2nd Saturday of October, November, January, and March and at EXPO in April. A picnic is held during the summer. October through March meetings are scheduled for 1 p.m. in Trowbridge Hall, University of Iowa, Iowa City, Iowa. One annual International Fossil Exposition is held in April.

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

President: Gilbert Norris, 2623 34th Avenue Ct., Rock Island, IL 61201
1st Vice President: Lyle Kugler, 612 E. 3rd St., Aledo, IL 61231
2nd Vice President: Allyn Adams, 612 W. 51st Street, Davenport, IA 52806
Secretary: Alberta Cray, 1125 J Avenue NW, Cedar Rapids, IA 52405
Treasurer: Sharon Sonnleitner, 4800 Sunset Dr. SW, Cedar Rapids, IA 52404
Membership: Dale Stout, 2237 Meadowbrook Dr. S.W., Cedar Rapids, IA 52403