

# M.A.P.S. *Digest*

Official Publication of  
Mid-America Paleontology Society

Volume 18 Number 1  
January, 1995



## MARK YOUR CALENDARS

<b>FEB NO MAPS MEETING</b>	
4 MAR	MAPS MEETING, UNIVERSITY OF IOWA, IOWA CITY, (TENTATIVE LOCATION)  1:00 Board and Regular Meeting Combined 2:00 Program
25 MAR 1995 26	<b>TAMPA BAY FOSSIL CLUB SHOW</b>  This is a change. Consult MAPS Directory for further information
7 APR 1995 8 9	<b>MAPS NATIONAL FOSSIL EXPOSITION XVII—CRINOIDS</b>  Fri., Apr. 7: 8am - 6pm Sat., Apr. 8: 8am - 5pm Sun., Apr. 9: 8am - 3pm <b>PLEASE NOTE: THE DATES ARE INCORRECT IN THE 1994 DIRECTORY</b>

### \*\*\* 95/01 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--95/01 means 1995/Jan. 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 **\$20 per U.S./Canadian household** per year. Overseas members may choose the \$20 fee to receive the *Digest* by surface mail or a \$30 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

## NOVEMBER COVER--*COMURA*--CORRECTION

November's cover photo of Fred Wessman's *Comura* trilobite was taken by Tom Whiteley, Rochester, NY, a MAPS member. We regret that we did not have this information when the photo was published.

## ABOUT THE COVER

This month's cover photo was sent by Gil Norris, Rock Island, Illinois. The specimen, from his collection, is the Mississippian bryozoan *Archimedes sp.* and is from Alabama.

## DINOTOUR 1995

### TEXAS DINOSAURS - FROM BEGINNING (TRIASSIC) TO END (CRETACEOUS)

sent by Leslie Adler, Calgary, Alberta, CAN

Dr. Philip Currie, Head of Dinosaur Research at the Royal Tyrell Museum in Drumheller, Alberta, Canada, will lead Dinotour's nine day trip to museums, labs, quarries and sites throughout the State of Texas. Highlights will include:

- Triassic dinosaurs of northwestern Texas (Texas Tech U. at Lubbock with Dr. Tom Lehman)
- Cretaceous dinosaur footprints and tracksites (Glen Rose, Austin, F6 Ranch, Fort Stockton, assisted by Dr. James Farlow)
- Big Bend National Park (where the giant pterosaur, *Quetzalcoatlus*, was found, assisted by Dr. Barbara Standhardt & Dr. Tom Lehman)
- Cretaceous dinosaurs in north central Texas (Fort Worth/Glen Rose, assisted by Dr. Louis Jacobs)
- Natural science museums in, Lubbock, San Antonio, Austin, Waco & Fort Worth

The tour begins in Lubbock, Texas, on Friday, April 21, 1995, and ends in Dallas Sunday, April 30. Cost in U.S. is \$1,074 (dbl), and \$1.275 (single).

Deposit was due December 1, 1994. Contact Dinotour, c/o 12231 Lake Fraser Way S.E., Calgary, Alberta, CANADA T2J 3T2. Bill Carson (403)239-6454 or Corliss Morre (403)271-2350 (evenings) to see if there are still openings.

**MAPS NATIONAL FOSSIL EXPOSITION XVII  
CRINOIDS**

April 7, 8, and 9 are the dates for the 1995 MAPS EXPO. This month's issue of the Digest includes all the information you need for registration and hotel and travel arrangements. Tables will be limited to 2 per family/membership this year and MAPS members will be given priority until March 1. All tables were sold out last year, and we won't have an extra room this year, so Get your reservations in early!

See Page 8 for registration form.

**ADDRESS CHANGES, UPDATES, DUE FEB. 15**

If you have any changes that you want to appear in the Directory Update, you must get that information to the Editor by February 15, 1995. And please send it as soon as possible.

It was voted at the 1993 EXPO to print only an update to the Directory in 1995, and every other year thereafter, because of the expense.

**DUES HAVE RISEN**

As was voted on at the 1994 EXPO, dues are now officially \$20 per year for U.S./Canadian memberships. Overseas memberships are \$20 for surface mail or \$30 for airmail. Library/institution rates are \$25. Rising postage rates and costs of the EXPO Digest/Directory made the raise necessary.

**1995 OFFICERS**

The following slate of officers was elected to serve for 1995:

- President.....Gil Norris
- 1st V. P.....Lyle Kugler
- 2nd V. P.....Allyn Adams
- Secretary.....Alberta Cray
- Treasurer.....Sharon Sonnleitner
- Director (97).....Blane Phillips

The other two Directors are:  
Tom Walsh (95).  
Roy Gustafson (96)

**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.

**WANTED TO BUY**

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**DINOSAUR SEQUENCE ISOLATED?**

by David J. Kaplan, Ph.D., Div. Chem. Toxicology, Wayne State University, Detroit, Michigan

The following report deals with information obtained from a recent scientific journal article entitled "DNA sequence from Cretaceous Period Bone Fragments (Science, vol 266, Nov. 18, 1994, pages 1229-1232; authors Scott R. Woodward, Nathan J. Weyand & Mark Bunnell)." This report also includes information from the research news section (page 1159 of the same journal) by Ann Gibbons dealing with this paper.

A brief summary of the paper indicates that Scott Woodward (Brigham Young University, Provo, UT) and co-authors have obtained 9 DNA sequences of 174 base pair length from two relatively large bone fragments (80 million years old) found in sandstone matrix from the roof of a coal mine bed in the upper Cretaceous Blackhawk formation of the Mesa Verde Group, Eastern Utah. They utilize the technique of PCR (polymerase chain reaction) to amplify the micro quantities of DNA that were in these bones to levels where they could then be sequenced and read through conventional techniques. All the sequences were obtained using an identical set of primers. (Identical sets will often amplify the same region of DNA for a number of different organisms providing that these sequences are not too evolutionary diverse.) Primers are short DNA fragments that will recognize and bind to specific DNA sequences from where the PCR reaction or polymerization can proceed to reproduce a new DNA strand. Use of two different primers for opposite strands of the DNA double helix will then allow for a reproduced copy of the double strand DNA sequence located between and including the sequence stretch of the primers. Numerous cycles of the process lead to amplification of the original DNA template. In this case they amplified and sequenced a DNA region corresponding, but not identical to, the region (base #s 15,603-15,777) of the human mitochondrial gene cytochrome b. Comparison analysis of the consensus read out of these sequences to sequences in two genetic data banks demonstrated that they vary equally 30% from both mammalian-reptile and bird DNA sequences for this region of cytochrome b; a variation puzzling to a number of scientists since they suspect dinosaur DNA

to be closely related or homologous to avian DNA. Woodward and co-authors, however, indicate that this limited region of the gene encoding cytochrome b may be too short for use in phylogenetic analysis of distantly related organisms. In other words, more regions of cytochrome b or other evolutionary conserved genes should be sequenced to determine the full degree of variance. For purposes of comparison, it should be noted that 174 bases is a relatively short stretch of DNA and represents only 0.000006% of the human genome!!!

It is important to note that no official statement in that paper is made as to whether these two bone fragments (20cm/6cm/3cm & 20 cm/2cm/1cm) are definitely dinosaur bones. It is inferred only in part to the large size of the bones obtained from the upper Cretaceous period and the fact that Scott Woodward is convinced that the DNA is very old and is "likely" to be from a dinosaur. Scott Woodward is being conservative in his paper; a policy which is consistent with the work he has done with these two bones which I feel (as a scientist myself) has been done very well. His work on this project was highly detailed, very extensive and clean and included numerous and necessary scientific controls which in my opinion has eliminated contaminating DNA sources as the source of the reported DNA sequences. Some people do feel, however, that these sequences may come from a microbe that was already present in both bones from the past and this therefore represents a contamination. While this remains a possibility, it should be noted that the PCR primer sets used in Woodward's experiments did not amplify a number of different bacterial DNAs tested and therefore eliminates at least some groups of microbes as possible culprits. Woodward and co-workers feel furthermore that some of the variations that exist between the 9 different PCR sequences are at least due in part to some degradation of the DNA that occurred over time and that the PCR enzyme misincorporates the wrong base(s) in the damages portions of the DNA helix. It is

conceivable that this may account for some of the variability seen between the consensus ("average") DNA sequences obtained from the bones and the mammalian/reptilian and avian DNA sequences they were compared to.

The bottom line of Woodward and co-authors' work, which also includes my opinion as a research scientist, is this: (1) Their extensive and clean work as reported leads me to believe that there is a good possibility (i.e. and observable chance) that they do indeed have some bona fide dinosaur DNA sequence (albeit discontinuous). Eliminating the possibility of a strange anomaly or some form of incipient microbial contamination that should permeate large sections of both bones (the two bones may be from two different individuals or species of dinosaur), Woodward and group may be one of the first ones to report dinosaur sequence. (Possible T. Rex DNA has also been reported from at least two different groups previous to this. The two groups are Schweitzer & Horner and Cano & Poinar.) This of course may also require that the bones they used are definitely from dinosaurs. From their size they have a good chance of coming from a dinosaur. Nevertheless, in the possibility of acquiring further support of his work, Woodward is dividing up fragments of remaining bone to send to other labs for verification. (2) Again the variability in the PCR sequences from present day reptilian, and especially avian, sequences should not immediately lead one to conclude that these sequences are not dinosaur sequences. Again we are dealing with a comparison of a limited sequence stretch (somewhat damaged) for only one gene in a field of thousands of genes in the genomes of the compared organisms. We do not know, furthermore, how close genetically the dinosaurs are related to the birds, although we do know there is a strong general morphological relation. (3) Amber has been proven to possess good preservative properties and it has been a good source of stretches of DNA sequence for a number of ancient organisms. The search for dinosaur DNA in amber, however, has been a difficult process since it requires the indirect approach of acquiring dinosaur DNA from blood sucking insects

whose last meal might have been derived from a bird or rodent. The DNAs derived may be, if not degraded, a mix of insect and non-dinosaur DNA at best. (There is hope, however, of possible finding relatively intact Dinosaur white blood cells from where DNA can be isolated.) Although utilization of dinosaur bone would be a more direct process to acquire dinosaur DNA, this tissue is more subject to degradation during the fossilization process. DNAs would probably deteriorate during the first moments of the fossilization process, geologically speaking. Woodward's work, however, was done on internal sections of very well preserved dinosaur bones. There was no indication of replacement of the organic substances by inorganic minerals which occur during permineralization associated with fossilization. The bones used, furthermore, had a 2:1 ratio of calcium to phosphate and no detectable silicon and aluminum, a composition similar to that of contemporary bone. This seems to reveal the presence of well preserved bone.

In conclusion, it should be noted that the difficulties in Woodward's work reveal the colossal effort that would be required to sequence just a percentage of total dinosaur DNA if it were available. Even for the human genome, which is most readily available, we have sequenced roughly only 1% at best and even this has involved thousands of researchers (including myself). Hypothetically, even if we were handed a full dinosaur genomic sequence on a platter, there would be the great difficulty of overcoming the hurdles of chromosome construction, producing a viable egg, ensuring the development as well as survival of the developing embryo. The reality of Jurassic Park, therefore, remains in the arena of science fiction at this point. But because there is science, there is the possibility. At this time, however, we can only dream.

## ADVERTISING SECTION

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

Nicholas Angeli  
1715 Stenwood Way  
Fenton MO 63026-3024  
314-249-7768

Refrigeration Mech. Will trade. Early life, problematic, stromatolites, Cambrian fauna. Nothing for trade now. Member MO Soc. of Paleo. Wants better access to information.

John H. Bernard  
Shelloak  
Route 3, Box 74  
Crossville, TN 38555  
615-484-7167

Specimen sea shell dealer. Also interested in fossils.

John & Susan Brewer  
P.O. Box 821  
Lebanon OH 45036  
513-583-5230

Manager of Medical Device Manufacturing. Will trade. Major interest Ordovician fossils. Has for trade many examples of Ordovician fossils. Want to learn more about fossil collecting throughout the U.S.

Paul L. Burdeno  
515 Tamarack Court  
Lompoc Ca 93436

Gary H. Burgess  
16513 Pollack DR KPN  
Lakebay WA 98349  
206-884-3234

Jim & Cindie Connett  
Erin & Kelsey  
2027 Main St.  
Alton IL 62002  
618-465-9334

Will trade. Major interest Midwest fossils, dinosaurs. Member of Eastern MO Soc. for Paleo. Want to contribute their ideas and time to MAPS.

Carl J. Cook  
1904 Santa Fe  
St. Charles MO 63303-5122  
314-949-2614

Respiratory Therapist. Will trade. Major interest cleaning & preparing fossils for display. Will trade services of fossil preparation for fossils. Member of Eastern MO Soc. for Paleo. Wants to network, gain exposure to a greater number of fossils & collectors, and increase and broaden his knowledge of fossils.

Alma Damrow  
1014 W. Hwy C  
Mosinee WI 54455  
715-457-6634

Carolyn Dohme  
1418 Westbury Drive  
Hoffmann Estates IL 60195  
708-358-4160

Cecilia E. Duluk  
6700 Amboy  
Dearborn Heights MI 48127-3966  
313-278-9109

Legal Assistant/Typist--Home Office. Will trade. Major interest Echinoderms (Crinoids); Invertebrates; Educational Materials and books on fossils; phylogeny and evolution of life. Member of Paleo. Soc. Wants to get back into sharing info on fossils and attending MAPS EXPO.

Elsie Gualco  
1427 Central Av  
Kemmerer WY 83101

Wife of J.J. Abello.

Mike Harrell  
P.O. Box 661  
Spring TX 77383

John Kopchik  
1418 Westbury Drive  
Hoffman Estates IL 60195  
708-358-4160

Greg Kuss  
356 Highgate Ave.  
Worthington OH 43085  
614-885-3051

Jeff Lane  
6-2814 Bloor St. West  
Toronto, Ontario  
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416-239-3467

Steve LoDuca  
5868 Willowbridge Rd.  
Ypsilanti MI 48197  
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Steven Makara  
5192 Sparrow Dr.  
Huntington Beach CA 92649  
714-894-5224

Allen Marquette  
924 10TH ST  
IDAHO FALLS ID 83404  
208-524-9161

Craig Neitzel  
1529 Alima Terrace  
LaGrange Park IL 60525  
708-354-2334

Greg Wilson  
2350 Foster Ave.  
Grand Rapids MI 49505  
616-364-6966

Shunxin Zhang  
Dept. of Geology & Mineral Res  
China University of Geoscience 2  
9 Xuwyuan Road  
BEIJING, CHINA 100083

Publisher. Will not trade now. Major interest dinosaurs, shark teeth, trilobites, amber, plants, insects, and fish. Just getting started (94). Wants to further knowledge and meet collectors for possible field collecting.

Has own Business. Will trade. Nothing for trade at present. Member of Dry Dredgers. Wants to gain access to more locations for finding fossils and meet the people associated with that.

Graphic designer. Interested in collecting all types of fossils. Planning to open a store specializing in the retail sale of fossils in Spring, 1995.

Paleontology Professor at Eastern Mich. Univ. May trade. Major interest trilobites, graptolites, noncalcified algae. Wants to share his interest and knowledge of fossils with others.

Postal Clerk. Major interest Trilobites & other Paleozoic arthropods. Interested in MAPS Digest.

Paleontology. Will trade. Major interest insects, plants, all types of fossil collecting, preparation, and study. Has for trade fossil leaves, cones, flowers, insects, fish (museum quality). Wants to share knowledge, information and collecting of fossils worldwide.

Painter. Will not trade yet. Major interest Pleistocene mammals, trilobites and any or all extinct reptiles. Makes a chocolate candy "fossil" product called TRILO-BITEStm. Loves fossils and wants to know about places to go to collect and buy them.

Geology Instructor--Grand Valley State Univ. Will trade. A geomorphologist who is renewing an old interest in fossils. Department curator at GVSU.

PLEASE NOTE THE FOLLOWING CHANGES OF ADDRESS OR CORRECTIONS:

James Brubaker  
3705 9th St. Apt. 215  
Rock Island IL 61201  
309-786-3034

CONTINUED ON PAGE 8

**NATIONAL FOSSIL EXPOSITION XVII - 1995**

**LOCATION AND TIME** EXPO will be held at the Student Union, in the Grand Ballroom, on the campus of Western Illinois University, Macomb, Illinois. The simplest way to the site is to turn off IL 67 west on University Drive, then go south to the Union. (Follow the signs.) Set-up is permitted on Friday, April 7, at 8:00 a.m.

EXPO HOURS: Friday, April 7 - 8:00 a.m. - 6:00 p.m.  
 Saturday, April 8 - 8:00 a.m. - 5:00 p.m.  
 Sunday, April 9 - 8:00 a.m. - 3:00 p.m.  
 (Many people leave early Sunday)

**TRANSPORTATION** There are 2 highways leading into Macomb - IL 136, an east-west route, and IL 67, a north-south route. There is no plane service to Macomb at this time, but we will help to arrange transportation from Moline, IL, airport if you will make **ADVANCE** arrangements with Mrs. Gerry Norris, 2623 34th Ave. Ct., Rock Island, IL 61201 (309-786-6505). Or you can fly into St. Louis, MO, or Peoria, IL, and rent a car and drive to Macomb.

**LODGING** Persons traveling in self-contained camping units may park on the parking lot. See Public Safety located in the Union. **IDENTIFY WITH MAPS.**  
**Macomb area code - 309** **Macomb zip code - 61455**

(prices subject to change)

<b>Starr Motel</b> - Hwy 67 S and 136 E		<b>Time Out Motel</b> - Hwy 67 North	
837-4817	1507 E. Jackson Rd.	837-4838	311 University Dr.
	Single \$25.00		Single \$26.00
(per night)	2(one bed) 25.00	(per night)	2(one bed) 29.00
(plus tax)	2(two beds) 35.00	(plus tax)	2(two beds) 32.00
	3(two beds) 35.00		3(two beds) 35.00
			4(two beds) 38.00

**Holiday Inn** - 1400 N. Lafayette - 833-5511 or 1-800-HOLIDAY  
 Single \$47.00 Each additional up to 6: \$6.00.  
 King 47.00 (plus tax)

<b>Travel Inn</b> - Hwy 136 W.		<b>Super 8</b> - 313 University Drive:	
833-4521	1414 West Jackson	836-8888	<b>(Price includes tax)</b>
	Single \$26.00		Single \$40.93
(per night)	2(one bed) 30.00		2(one bed) 45.37
(plus tax)	2(two beds) 35.00		2(two beds) 50.92
	3(two beds) 38.00		3 53.14
	4(two beds) 38.00		4 56.47

If you plan to stay at a motel, we urge you to make your reservation early. Local motels are generally filled during the weekends.

**Union** - Contact **Allyn Adams**, 612 West 51st St., Davenport, IA 52806 (319-391-5443) to see if rooms are available. If rooms are available, send payment, payable to MAPS to **Allyn Adams**.

**DO NOT CONTACT** Western Illinois University. These rooms must be rented for both Friday and Saturday. You must request rooms early and pay for them before March 15, 1995. You may wish to be on standby.

Single	\$65.50 (weekend)	3 people	\$ 101.02 (weekend)
Double	91.02 (weekend)	4 people	111.00 (weekend)
		Children 10 or Under	\$1.50/night

**DON'T FORGET - In all cases identify with MAPS.**



**PARKING** For those living in the Union, parking will be east of the Union with room permits. For others, get visitor permits from Public Safety. Parking in specified lots. After 5:00 p.m. Friday ample parking. Before 5:00 p.m. - patience needed.

**MEALS** Meals are available in the Union: fast food in the lower level and a deli in the basement. Ice cream is also available! There are many restaurants in town and a deli bar in a nearby grocery store.

**EXPO REGULATIONS** Everyone is requested to make advance registration by March 30, 1994. Mark your calendars now so you don't forget! Registration forms are found on page 8 in the *Digest* for your requests for tables, display space, etc. Send these forms and your check made payable to MAPS to: Karl Stuekerjuergen, 1503 265th Ave., West Point, IA 52656. Please send **dues to Treasurer** before EXPO--it is a lot of extra work for us to accept them at EXPO.

**ALL TABLES WILL BE ASSIGNED.** Cost of the tables is \$15.00 each for a 6' table in the Ballroom for the weekend; \$15/table in the Lobby. (Lobby tables will be used only for overflow.) **MAXIMUM of 2 tables per family/membership initially.** Over 2 tables wanted? You may request extra tables, and if they are available you will be notified after March 15th (pay for these at EXPO). Requests for extra tables will be filled in rotation--one table per person per round until all space is gone. Also, those with special needs for more than 2 tables may apply to the Board by March 1 for an exception. All decisions will be made as soon as possible, with all decisions made by March 7. **MAPS memberships will have first chance at all tables requested before March 1.**

The Committee insists that all materials be fossil or fossil related. Mountings, gemstones, minerals, Indian relics, etc., are not permitted! Aisles must be kept clear at all times.

**DISPLAYS.** EXPO is special because of displays. They are a gift. They give us all a look at the ancient epochs of the world. Display tables are provided at no cost - 8 ft. limit. Bring your own lights, if you need lighting.

**ALL RESERVATIONS WILL BE ACKNOWLEDGED**

**OTHER ACTIVITIES.** CRINOIDS will be this year's theme. **Keynote Speaker** will be Dr. Thomas Guensburg, Rockford, Illinois. His Friday night speech is entitled "Early Crinoids." A **live auction** will follow a short business meeting and awards presentation on Saturday evening. Proceeds go to a geology scholarship. Everyone is asked to provide a quality specimen, with full data and the name of the fossil donor. Specimens can be left at the information desk until 3:00 p.m. Saturday. If you wish to mail a specimen, send it with pertinent information to Paul Rechten, 7405 Shields, Harvard, IL 60035. Paul will send a postal acknowledgment on receipt of specimen.

Show Chairman...Gilbert Norris, 2623 34th Avenue Ct., Rock Island, IL 61201...(309) 786-6505  
Co-Chairman...Allyn Adams, 612 W. 51st Street, Davenport, IA 52806.....(319) 391-5443  
Table Reservations..Karl Stuekerjuergen, 1503 265th Ave, West Point, IA 52656.(319) 837-6690  
Auction...H. Paul Rechten, 7405 Shields, Harvard, IL 60035.....(315) 943-4178  
Publicity...Tom Witherspoon, Sr., 6611 Miller Road, Dearborn, MI 48126.....(313) 582-3139  
EXPO DIGEST editor...Maggie Kahrs, 9145W U.S. Hwy 50 East, Seymour, IN 47274..(812) 522-6093

John & Gloria Cornish  
40 CEDAR GLEN LN  
PORT ANGELES WA 98362  
360-457-7630

Luis De Los Santos  
P.O. Box 4147  
Ontario CA 91761  
909-355-9860 H  
909-355-9860 W

Walter Drabek  
201 Tiffany Lane  
Lancaster NY 14086  
-685-0438

Mark B. DuBois  
116 Burton Street  
Washington IL 61571-2509  
309-444-2999

Entomologist specializing in ants (systematics and biology.) Interested in fossil ants and other fossil insects. Will trade.

Gary Eichhorn  
3517 S. Cook  
Spokane WA 99223  
509-533-0754

Eugene F. Hartstein  
9 Verbena Dr  
Newark DE 19711-6207  
302-234-4488

Mrs. Margaret Kahrs  
9145W US HWY 50 EAST  
SEYMOUR IN 47274  
812-522-6093

Steven Marhut & Tina Marhut  
34 N. Albert St.  
Mt. Prospect IL 60056-2551  
708-577-5376

L.G. Milton Jr.  
4129 Trevor Circle  
Durham NC 27705

Director of Animal Care. Membership chair NC Fossil Club. Will trade. Interested in all types of fossils. Interested in other sites and info from members. 919-471-6361

Michael & Teri Reagin  
3494 Antisdaile Avenue  
Cleveland OH 44148

Dan Rokosz  
4832 S.E. Ogden St.  
Portland OR 97206-8352  
503-774-5763

Photographer. Has for trade Cenozoic fossils of OR and WA from many localities. Active field collector. Wants to correspond with other fossil folks. Always learning things about fossils.

C. Douglas Rorex  
1117 Keiffer Drive  
Olney IL 62450  
618-375-9271

Robert J. Smith  
8316 11th Ave NW  
Seattle WA 98117-3339  
206-296-5505

**NATIONAL FOSSIL EXPO XVII-- REGISTRATION FORM  
APRIL 7-8-9, 1995**

Please complete the form below, enclose a check payable to MAPS, and mail to Karl Stuekerjergren, 1503 285th Ave, West Point, IA 52656, before March 15, 1995.

NAME: \_\_\_\_\_ PHONE NO.:(\_\_\_\_\_) \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

\_\_\_\_ I request 1 or 2 (circle) 6 ft. tables for selling and swapping. Cost is \$15.00 per table. 2 tables per family/membership maximum.

Check enclosed: \$\_\_\_\_\_(Only send payment for up to two tables per person; any extras assigned through request will be paid for at time of notification or at EXPO.) MAPS members will have first chance at all tables requested before March 1.

\_\_\_\_ Number of chairs I will need.

\_\_\_\_ Will you help run EXPO?

Front desk--Fri \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.  
Sat \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.  
Sun \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.

Elevator--Friday: 8-9, 9-10, 10-11, 11-12, 12-1, 1-2, 2-3,  
Sunday: 11-12, 12-1, 1-2, 2-3

**NO ONE EXCEPT THE GUARD IS ALLOWED ON THE FLOOR FOR ANY REASON AFTER HOURS!**

The **M**id-**A**merica **P**aleontology **S**ociety (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 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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FIRST CLASS MAIL

## CYATHOCRINITES

MID-AMERICA PALEONTOLOGY SOCIETY

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Dated Material - Meeting Notice