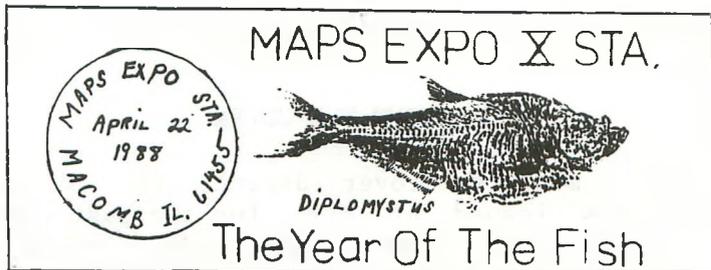


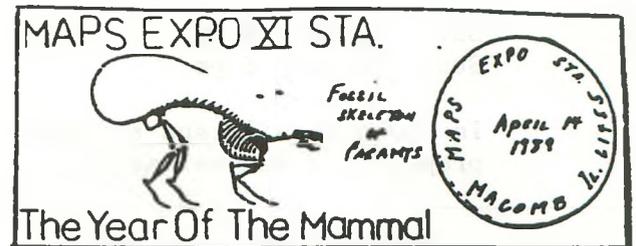
M.A.P.S. Digest

Official Publication of
Mid-America Paleontology Society

Volume 15 Number 2
February, 1992



1988
THE YEAR OF THE FISH
DIPLOMYXUS



1989
THE YEAR OF THE MAMMAL
PARAMYS



1990
THE YEAR OF THE PLANT
GINKGO LEAF



1991
LAGERSTATTEN
TULLY MONSTER

MARK YOUR CALENDARS

7 MAR MAPS MEETING. Trowbridge Hall, University of Iowa, 123 N. Capital St., Iowa City, IA. The room number will be posted.

1:00 Board & General Meeting combined.

2:00 Program: Julia Golden, from the University of Iowa will be providing the program.

28 MAR 1992 Buffalo Geological Soc. Show
29 Agriculture-Grange Building
Erie County Fairgrounds
5600 McKinley Parkway
Hamburg, New York

Sat. 10 am - 8 pm
Sun. 10 am - 6 pm

Includes fossils and a fossil preparation demonstration.

24 APR 1992 MAPS National Fossil Exposition XIV--Molluscs
25
26

Fri., Apr. 24: 8am - 6pm
(Dr. John Pojeta, Smithsonian Institute, will give the keynote address at 7:45 on "Early Molluscan Evolution as Shown by Fossils.")

Sat., Apr. 25: 8am - 5pm
(Business meeting and auction following)

Sun., Apr. 26: 8am - 3pm
(Seminar by Dr. Bruce Stinchcomb: 9 - ?)

ABOUT THE COVER

This month's cover depicts the postal cancels issued at EXPO for the past four years. MAPS member Tony Verdi, Hinckley, OH, initiated the idea and designed the cancels, which complemented the EXPO themes.

For several years Tony has been working to get the Post Office to issue a set of stamps depicting fossils. In spite of suffering a heart attack and undergoing open heart surgery since last EXPO, Tony is continuing his effort. He has also designed a cancel for this year's EXPO and recruited Jom Konecny, Prescott, AZ, to design an envelope.

***** 92/02 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--91/02 means 1992/Feb. 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. Library/Institution fee is \$25.

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

BACK ISSUES OF THE DIGEST

We occasionally get requests for back issues of the *Digest*. But we dispose of all regular back issues each year at EXPO, so none are available. We do have some back issues of the recent EXPO (April) editions. Those can be ordered from Tom Walsh. (See back of *Digest* for address.)

HAROLD TICHENOR PASSES AWAY

MAPS member Harold Tichenor passed away January 21 after having been ill since summer. He specialized in microfossils and contributed articles to the *Digest*. For several years he exhibited micros at EXPO and with his wife, Dorothy, hosted cocktail parties for EXPO workers. We extend our sympathy to Dorothy and the rest of his family.

EXPO XIV - MOLLUSCS

FROM THE PALEONTOLOGICAL SOCIETY

EXPO XIV is shaping up well and promises to be another great show. Doug DeRosear reports that table sales are ahead of last year with 120 sold already. He also has 39 feet of display space and 18 registrants for the Sunday seminar. All Union rooms are also taken. Have you made your plans yet?

For the second year, MAPS has sent a \$500 contribution to the Paleontological Society's scholarship fund. The following is in response to that donation:

Now for a few notes and corrections:

Lobby tables for overflow, if necessary will be \$15 per table (rather than \$15/table/day). The show opens at 8:00 am Friday and sales, trades, etc., start as soon as people are set up. Although the show runs through 3:00 pm Sunday, most people leave by noon because of travel time, etc.

Thank you very much for sending the \$500 contribution from MAPS to the Paleontological Society. By funding research of graduate students in this way, MAPS sends the very important message that paleontological research really matters to people outside academia. That is a message that our graduate students sometimes don't get. In these times of shrinking university budgets, the funds and the message they convey are especially important and appreciated more than ever before.

EXPO POSTAL CANCEL

EXPO XIV will be the fifth show to have a postal station issuing a commemorative cancel, designed by Tony Verdi, Hinckley, OH. Added to this year's "mollusc" cancel will be a special commemorative envelope designed by Jim Konecny, Prescott, AZ. So plan to have your letters and postcards sent from the show.

I am sure that I speak for all the PS members in thanking you and the members of MAPS for this important recognition of the value of the research of graduate students.

Sincerely yours,
Roger L. Kaesler
President

A letter of thanks was also sent by Dr. Donald L. Wolberg, Secretary of the Paleo Society; and Larry Wiedman, Chairman of the North-Central Section of the PS, thanked us in person at the February MAPS meeting, which he hosted at Monmouth College, Monmouth, IL.

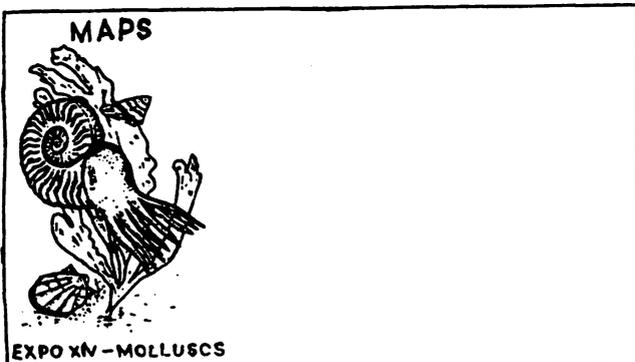
The scholarship money comes from the EXPO auction proceeds, so we encourage you to be generous with your donations to the auction.



OPENINGS FOR DINOTOUR 1992

DINOTOUR 1992 has one or two vacancies. Contact Bill Carson at (408) 239-6454, or write 12231 Lake Fraser Way S.E., Calgary, Alberta, CANADA T2J-3T2.

June 4-13, 1992. Salt Lake City-Dinosaur National Monument-Grand Junction, CO,-Durango-Moab-Provo-Salt Lake City. About \$800 U.S. (sharing accom.) Salt Lake City to Salt Lake City. About \$900 U.S. single. Led by Dr. Phil Curie, Director of Dinosaur Research, Tyrrell Museum of Palaeontology, Alberta. Supported by Lesley Nichols, archaeologist, Grand Junction Geological Society and others. Includes one-day field trip. Applications currently being accepted from the general public. Space for 45 participants, fills rapidly. Visits museums, quarries, tracks, scenery, archaeology. Includes transportation, accommodations, one meal daily.



BECOMING ACQUAINTED WITH STROMATOPOROIDS BY WAY OF THEIR SYSTEMATICS

by John M. Kelley, Milwaukee, WI

PART I OF TWO PARTS

To someone unfamiliar with a stromatoporoid, it may appear to be a finely laminated cobble. Thinking such, you might surmise a nonbiological origin, as if perhaps a series of thin layers of some calcareous substance were deposited by natural processes over a long period of time. But the invertebrate paleontologist will recognize that this rock either represents an organism or the remains of the life activities of an organism.

To a large extent, the paleontologist's understanding of the nature of this fossil will depend on how well acquainted he or she is with the state of the art in stromatoporoid systematics.

It's helpful to have a clear mental picture of the meanings associated with four closely related terms. Systematics is the classification and study of organisms (recent or extinct) with regard to their presumed natural relationships. Taxonomy refers to distinguishing one kind of organism from another, to hierarchically ordering organisms according to scientific rules, and to naming them. Phylogenetics and cladistics are differing practices within systematics by which a person would order an organism according to its supposed genetic, evolutionary relationships.

If you'll think back to the last time you looked at an exhibition of fossils in a museum, you'll probably recall that each and every specimen on display was carefully and precisely labelled. No doubt the label gave the generic and specific names of the organism and may well have told you information such as its class and order or family.

There is a tendency to think that the names which have been assigned to a particular organism are as static, permanent, and timeless as the nature of the fossil itself is unchanging. After all, most fossils are made of stone, and a name like *Phacops rana* might seem as immutable attached to the trilobite of that name as *Canis familiaris*

is to one of our best friends. But, in systematics, this is not at all the case. Names, classifications, and conceptualizations are constantly changing and becoming more refined. This happens at every level, from kingdom to subspecies. You may occasionally read a book on fossils which lists all of the names which have previously been used to describe an organism and be amazed at the length of the list, indicating as it does just how many changes have occurred.

This paper is primarily about systematics as it is applied to one specific type of organism, the stromatoporoid. I learned from my collection of these fossils that I could distinguish them from one another, work toward an understanding of their place in the evolutionary tree, conceptualize the biological nature of the organism, and name them (at least provisionally) by way of focusing on what systematists can tell us about them. This is true in spite of the fact that systematists sharply differ among themselves.

One of the joys of living in Milwaukee is its proximity to the Lake Michigan shoreline. Wide, relatively undeveloped stretches of beach extend for many miles, particularly in Ozaukee county and northward. I often hike along the beach with my spouse and our two Afghan hounds, who love to play in the waves and get their coats as much in need of grooming as possible.

It's amazing how different one stretch of beach can be from the next. Each stretch bears its own personality. One expanse may be predominantly very fine sand, occasionally punctuated by a winding creek or stream emptying into Lake Michigan. Just around a point of land, another stretch may greet you with a strong, chill wind, even on the warmest of days. My favorite expanses are those with rocks. These occur in such profusion as to delight the avid rockhound.

The stretches with the rocks are also different from one another. Some are paved with a myriad of pebbles. Others feature cobbles strewn here and there. Our favorites tend to be those which tempt us by revealing, here and there, a Lake Superior agate, a Petoskey stone, a fragment of wave-worn dinnerware from some shipwreck, a chert fragment with tiny fossil remains (mostly pentamerids), or (if we search long) a deep blue chip of an old Noxzema jar--known as a bottle agate.

During the course of a hike on the beach, I search for fossils and often find them. Nothing as spectacular as the petrified skeleton of a vertebrate. But I do find colorful chunks of agatized and/or silicified corals, such as *Hexagonaria*, *Favosites*, and *Halysites*. These make attractive displays and conversation pieces.

Because the pieces we find have been displaced, perhaps transported to the beach by wave action or glacial movement during the Pleistocene, they challenge my imagination. If I find Petoskey stone, I suspect that it came from the eastern shore of the lake, over toward northern Michigan. Prehnite must have originated in weathered outcroppings on the Keweenaw Peninsula where it occurs *in situ*. Lake Superior agates had probably been transported to the Ozaukee beach by glacial movement. The corals probably came from a submerged reef east of Door county. Quarries in the Door peninsula regularly yield similar, though usually larger, pieces.

Some collectors devalue specimens which have not been found *in situ*. They tend to think that fossils from a known formation are more interesting because they can provide us with more information. That's all well and good, when it's possible. However, there's a challenge in collecting specimens which natural processes have transported away from the environment where they formed. In a way, such pieces are wanderers. Once you get over the disappointment of not having information about the environment of formation, you can focus on solving the mysteries of identifying and characterizing the wanderer.

If a fossil wandered to the area where it was found, and if it is exceptional in some respect, then professionals will show interest in the organism. They will be attentive to that which can be determined about it and will hedge their conclusions because some information can't be ascertained. This is often done by way of recourse to probability theory. For example, the skeleton Lucy, the famous young female australopithecine, was found near the surface of the soil in the Afar region of Ethiopia. Lucy had been transported to the spot where she was excavated. Thus, while the stromatopoids from the beach have wandered there, nevertheless they can provide a lot of information to the careful observer.

A stromatopoid from the glacial drift of the beaches of Ozaukee county isn't a fancy fossil, in the sense that *Hydnoceras*, a Hexactinellid sponge, is a fancy fossil. To first glance, a stromatopoid looks like a peculiar rock and the crazy lines and patterns it exhibits excite the curiosity. In their exotic nature is their beauty.

To tell the stromatopoid story would require a book. The book would be filled with wonder, admiration, and questions just partially answered.

Specimen A represents the first stromatopoid I found. I sawed it in half and polished the inside surfaces. Specimens B and C look very much like they might be stromatopoids, although I haven't yet positively identified them. (Please see attached illustrations.)

Looking at a geological map of Wisconsin, you see a strip of Silurian aged formations running up the eastern margin of the state. I take this as a hint that these stromatopoids are Silurian, probably Racine formation (middle Silurian). In the middle Silurian, a sea covered eastern Wisconsin. The water was relatively shallow, clear and warm. Stromatopoids formed reefs, growing up from the sea bottom.

I wanted to understand stromatopoids well enough to be able to interpret the features of the specimens in my collection. There are about a half dozen textbooks with good,

up to date information. The particular approach of each author to stromatoporoids depends largely on their perspective as to its systematics. So an interest in these fossils leads naturally to an interest in the science of classification.

There are at least four different routes for identifying a fossil. The identifications will frequently differ, depending on the route you followed. First, you can ask authorities. Of course, authorities often disagree among themselves. Authorities may not be impressed by your specimen and its state of preservation. As a result, they may not seem very interested in your fossil and may give you only the most cursory identification.

Secondly, if you know the formation that the fossil comes from, you can work from that data. You can go through the literature which deals with that formation, note which fossil types are said to be found in that formation, and decide that your specimen is one of the types based on resemblances. For example, I purchased a fossil fish in a concretion with only the information that it came from the Santana formation of Brazil. So I read books and articles about this Cretaceous formation which listed the types of fish fossils found within it. Then I could identify my fossil by process of elimination. One author listed seven species of fossil fish. I knew my specimen wasn't any of the first six, so it had to be *Aspidorhynchus*, a gar.

The third method is to compare and contrast your specimen with catalogs of specimens. For example, for a fossil fish, you might want to consult Louis Agassiz's *Recherches sur les poissons fossiles*. For a coral, you would probably use Shimer and Shrock's *Index Fossils of North America*. For a trilobite, perhaps you would match it with an illustration and thus be able to assign it a name such as *Greenops boothi*.

The fourth method, using systematics, suits me best, but it is not the easiest method. Systematics means learning in some detail the methods scientists use to classify and distinguish fossils, based on their characteristics and supposed descent. I

personally find the systematics method, learning from the literature what you can about a specimen, well worth the extra effort.

One of the first things you need to know about publications in the field of systematics is that they can be grouped into two types of subject matter. The first group deals predominantly with living organisms and the second with extinct organisms. Being a student of fossils, you would probably want to follow the second type of literature, becoming aware of what is available in your area of interest. But you might find that the first type is helpful, particularly if your fossil has living relatives, such as corals do. Sometimes, as in botany and paleobotany, systematists working with living organisms produce classifications which sharply differ from those produced by scientists working with extinct organisms of the same type. A fossil plant collector would want to stick with paleobotanical systematics.

You might want to follow one of the first three methods when identifying the easier fossils in your collection and to follow the fourth method for more exotic specimens. Working with systematics books and articles and a great deal of patience, you will probably be able to name some of the stranger items in your collection.

You'll need patience, first, because you'll find that the "experts" often don't agree with each other. You may not be able to find agreement on much more than an organism's subkingdom or phylum. In the case of the stromatoporoids, experts are even divided on the question of the proper kingdom, some arguing for *Monera* and others for *Animalia*. Furthermore, systematists have their own ideas as to the total number of kingdoms, this number varying from 3 to 17!

You may not want to content yourself with such tentative or controversial information. You may want very much to assign a generic and/or specific name to your fossil. When we browse through a museum's carefully labelled collection, we

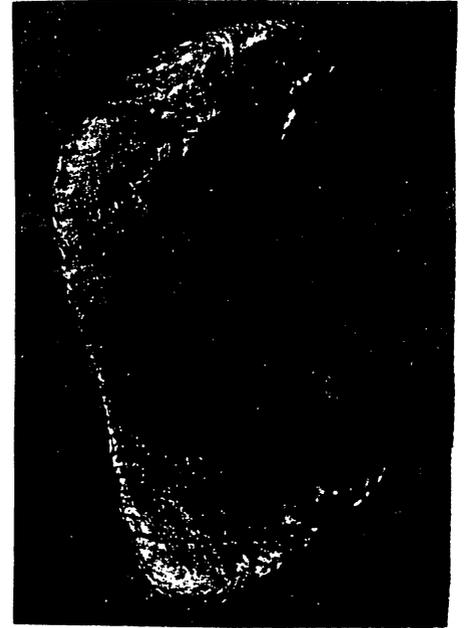
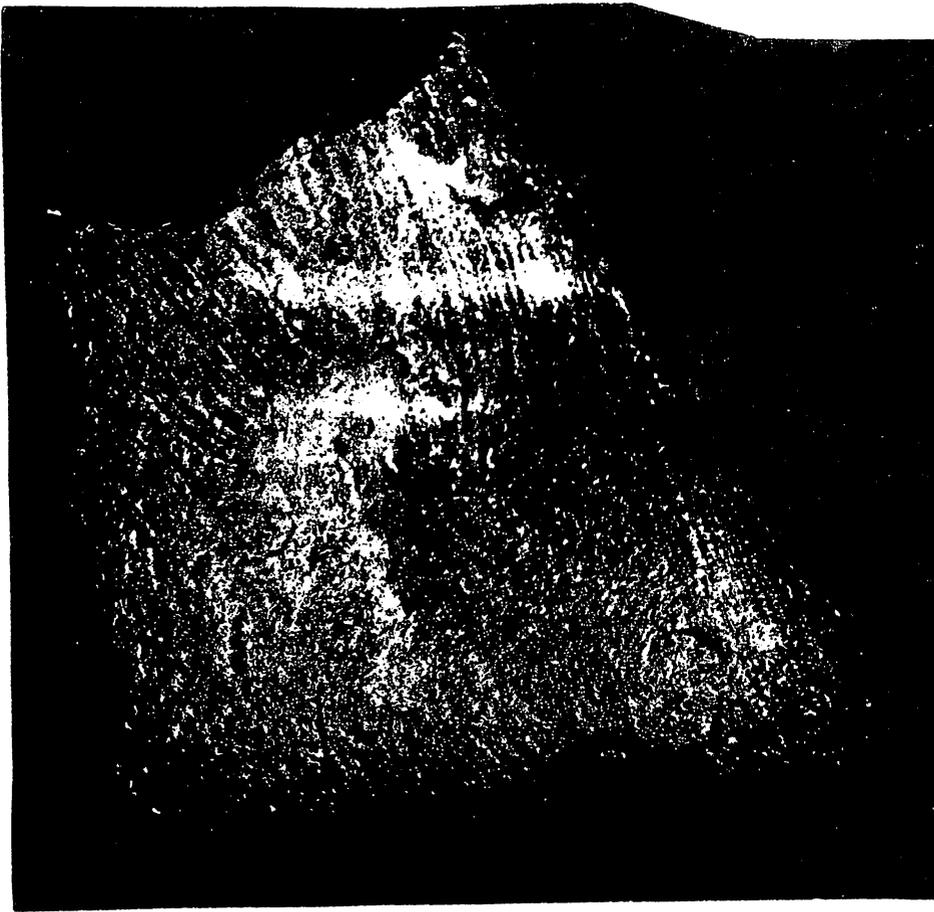
SEE PAGE 9: SYSTEMATICS



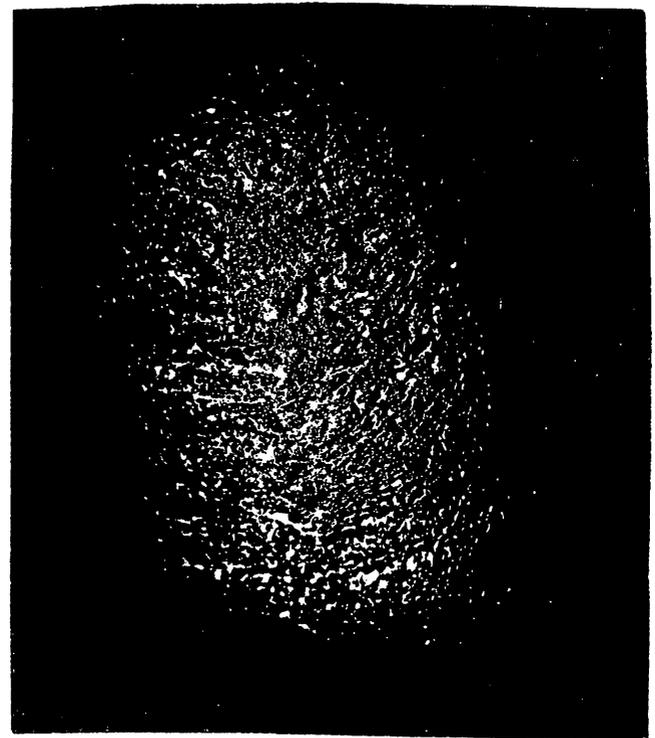
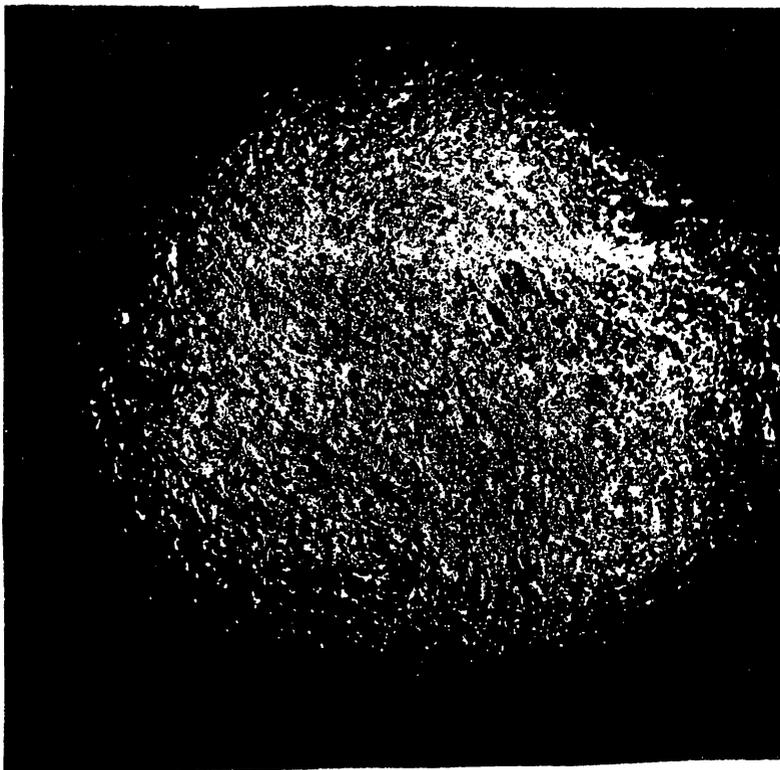
EXTERIOR VIEWS OF SPECIMEN A



INTERIOR VIEWS OF SPECIMEN A (CUT AND POLISHED)



EXTERIOR VIEWS OF SPECIMEN B



EXTERIOR VIEWS OF SPECIMEN C

LETTERS TO THE EDITOR

Dear Sharon,

I, as one of the 28 persons who helped to organize MAPS, feel that a comment or two about our EXPO might be in order. In the beginning, when the EXPOs were held in March, it was impossible to attend because of winter weather or road conditions from here in Wisconsin. But we have attended most of the EXPOs and have seen many changes--some for the better and some not. I agree with a former writer; that is, that the purpose of the EXPO was to enable our members to exchange fossils and improve their collections and to fulfill other purposes as stated in our Articles of Incorporation. Our popular dealer from Wisconsin should be aware that if this non-profit organization were registered in Wisconsin, there could be no selling by members, as individual members could not profit from the organization's activities. I am not aware of what Articles of Incorporation say in Iowa. I do think the initial intention was to provide an opportunity to SWAP fossils.

In all fairness to as many members as possible, I think the maximum number of tables could be even less than they are. It was never the intention, to my understanding, that the purpose of EXPO was to provide a bonanza for fossil dealers. There are many other vehicles for that. I would like to see the EXPOs returned to the swapping of fossils only (or, buy, sell, swap & trade). I have heard comments regarding the increased trend away from fossils. I do think literature has a place. I do not think vertebrate fossils (including dinosaur bone) have a place when from a state where their removal is prohibited.

Sincerely,
Mary
Boland

Dear MAPS Members:

This letter is in response to the question about how many tables the "dealers" should have at the EXPO. I do not believe in making a decision on what I have read only; two or three letters are not enough to do so; this is my reason for not writing sooner. I do hope the Editor puts my whole letter in the MAPS paper.

I am a Seashell dealer. I also started selling fossils about 2 years ago. At a seashell show, I have the choice of three or more tables, whichever meets my needs, which is usually four tables, but I could have more if I wanted them. The cost for renting the tables is \$60 each up to \$200 each. This money goes to the club that puts on the show. I understand that the tables at MAPS are only \$10, or I think this year they have gone up to \$15. I also belong to the C.O.A. This is a club of all the seashell collectors and seashell clubs. This convention is, I think, more like a MAPS convention; the only difference is at this convention I sell shells and fossils, with the table rent being \$60 per table, plus donations for the auction, plus donations for the raffle, plus \$25 registration. We have to be there for the whole show, not leave like the "dealers" can at MAPS.

The reason "DEALERS" is written the way it is is because I think there are very few real dealers at MAPS. The rest are people that want to sell their surplus fossils or make some money to pay for their trip to the MAPS EXPO. If you are a dealer, then pay dealers' prices. Which of you that do not sell fossils all the time have a tax number? Do you

collect taxes on what you sell, and if not, why not? Every dealer has to have a tax number from the state he is in to be in business. So if you are dealers at MAPS, I suggest you get a tax number and collect the taxes due the state!!!!

If MAPS gets rid of all the so-called dealers, there will be no problem in getting the money back from the loss of the maybe-dealers: raise the rent to \$60 or more if necessary. If the maybe dealers cannot afford to pay this, then they just will not be able to sell or trade what they have. If they have to have money to pay their expenses, give their fossils to a real dealer on consignment. I do this at the C.O.A. convention as it works well for everyone.

To play at being a dealer, two tables, I guess, would be more than enough. To be a real dealer, four tables many times is not enough. I was told that if the maybe-dealers could not sell at MAPS, then they would just get rid of MAPS; there would be no point in going to a MAPS EXPO. I thought most of the people that went there went to learn something and to meet new people. I was also told if the dealers want to sell fossils, they should go to Tuscon, but since they also want to be dealers, maybe they should also go to Tuscon to sell their fossils, and they will find out what it really costs to be a dealer. MAPS is growing, the dealers and MAPS need a larger building. I was told that the cost of the rent for a larger building was out of sight at \$750 per day. I do not see how this can be so. Raise the rent on the dealers and let the dealers pay for this so-called high rent. If you only have dealers, not maybe-dealers, the dealers will have no problem paying more, MAPS will come out ahead, and MAPS will grow. As I see it now, MAPS has no place to go except down; I am sure you all would be surprised to know that dealers come from all over the world for a C.O.A. convention. This could happen at MAPS also, if given a chance.

Those of you that want to trade your fossils, I am sure you will find a place to do so. The people at the C.O.A. convention do not have any problem here.

What some of the so-called dealers at the C.O.A. convention wanted was a time for them to sell their shells, with no interference from the dealers, so the real dealers decided if this was what they wanted to do, then they also would get to pay all the expenses that the real dealers had been doing, and we dealers would not sell and pay nothing. Doing it this way, the C.O.A. would have lasted one year and been out of money.

I am in business to make money. I cannot set up on two tables, so until this rule changes, I do not see how I will be able to be at any MAPS meeting. No dealer can compete with someone that goes to make a little money to pay his/her expenses. What I can do is pay \$100 per table, give donations and door prizes, if you get the maybe-dealers out of the business of selling fossils.

I doubt if this will be printed because I am saying things that a few of the MAPS members do not want to hear; in fact some of the Officers of MAPS will not like to read this. If I told everything I heard about MAPS the way it is run, there would really be an uproar.

I do hope that this will give all of you an idea of how a convention should be run. Do it right and grow, do it the way you are doing it now and watch MAPS go down the drain. I know many people that will

not join MAPS just for the reason they do not like what is happening. For MAPS sake, PLEASE change the way you do things.

Sincerely,
John Bernard
SHELLOAK DESIGN STUDIO
Rt. 3, Box 74
Crossville, TN 38555

CONTINUED FROM PAGE 5: SYSTEMATICS

usually notice that each specimen bears distinct generic and specific names. Curators generally shy away from indicating uncertainty with a label such as "Phylum *Annelida*; more specific taxonomic information is not yet available." Since museums do this, it's natural for the individual collector to want to follow suit. Instead, the individual should be encouraged to acknowledge uncertainty where it exists and even to question apparent certainty. For instance, if you're interested in fossil shrimp, and if you should be viewing a display of these fossils, question the names which have been assigned to the individual specimens. If you can get into the habit of doing this, you'll be surprised at how adept you'll become at naming and classifying.

The second reason you'll need patience is that the information is not easy to find. A publication will frequently refer to previous publications on the subject, and you can often learn a lot by following up these references. Be prepared to think just as highly of books and articles written as many as 150 years ago as you do of recent studies. Familiarize yourself with libraries in your area with extensive holdings in the geological sciences.

With all four methods of identification, you often find experts giving very different names to the same fossil. One reason this happens is that some systematists like to lump while others like to split. Even though the names differ, each rests on a solid scientific foundation. Sometimes, it's fun to see an author list all the names a fossil has had over a number of years and a number of experts.

PART II NEXT ISSUE

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.

FOR SALE: **Micrograver Air Abrasive Unit**, 3/4 HP Compressor, Work Chamber, Nozzle, and Hoses. Like New. Will deliver to EXPO XIV. \$475.00.

Tom Coughlin (314) 645-8713.

FOSSIL EXCHANGE MONTHLY

Offering to MAPS MEMBERS
1 yr. \$20 subscription for \$10 plus
a free 30 word ad. Make check to:
John D'Orazio, 95 Hill St.

Bloomfield, NJ 07003

INVERTEBRATE FOSSIL PUBLICATIONS

- #1 Fossils & Localities, Clairborne Group (Eocene) TX 45p., 6 pls., \$7.40.
- #2 TX Cret. Bivalves & Loc., 155 p., Illus. \$9.25.
- #3 TX Cret. Echinoids 143 p., Illus., \$9.25.
- #4 TX Penn. Brachs. 242p., Illus., \$15.00
Add P&H, \$1.25/pub. TX res. add 8.25% tax

Paleontology Section, HGMS,
10805 Brooklet, Houston, TX 77099

INSECT INCLUSION AMBER From the Dominican Republic. 35 Million Years Old (postpaid).
12 Fossil Packet...\$100
12 Smaller Fossils...\$75
12 Mini Fossils...\$50
12 Micro Fossils...\$30
12 La Toca Tubes (no insects)...\$20
12 Botanical...\$15
12 Turdite (insect fecal debris)...\$15
ALSO INSECT INCLUSION NECKLACES
RICHARD TREXLER
721 N.W. 14th Court
Miami, Florida 33125
Telephone (305) 649-9346

AUBURN CALIFORNIA Fossil Shop just off Interstate 80 Old Town. Wide variety of fossils from all over the world. Special request and trade invited. **NATURE'S ART**, 1568^c Lincoln Way, Old Town Auburn, CA 95603; (916) 887-8710

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

Don Lawler
2110 Shumate Rd.
Ekron, KY 40117
502-828-8400

Stone Sculptor. Will trade. Interested in collecting.

Marvin Orlinick
1465 Geneva Loop, Apt. 8C
Brooklyn, NY 11239
718-642-6428

Window Maintenance. Will trade. Past V.P. and present field trip scout for NY Paleo Soc. Loves paleontology.

Vic Reynaud
1845 Vine St.
Denver, CO 80206

Ed Smith
2921 So 18th St.
Tacoma, WA 98405

Interested in study and collection of fossils.

Ms. Theresa Stepenski
5325 B Crescent Lane
Oak Forest, IL 60452

Jack B. Weldon
2232 Brevard Rd. NE
St. Petersburg, FL 33704
813-823-4762

PLEASE NOTE THE FOLLOWING CHANGES OF ADDRESS OR CORRECTIONS:

Leslie R. Adler
Box 30312
Postal Station "B"
Calgary, Alberta, CANADA

Retired Math-Science Teacher. Will trade Currently visiting Montana, Utah, Colorado on fossil trips.

Steve Brown
5345 W. Pike
Zanesville, OH 43701

John, Kathy & Kristan Catalani Collecting since 1972. Earth Science Teacher. Will trade. Interested in Platteville, Ordovician cephalopods, Mississippian echinoderms. Likes an all-fossil club and meeting people.

Thomas Coughlin
6502 W. Park Ave.
St. Louis, MO 63139-3430
314-878-4979

Pat & David Hughes
RR. 4 Box 63
Ames, IA 50010
515-292-2187

Mark G. McKinzie
8702 AcreView Dr.
Oklahoma City OK 73151

Rick Crosslin
348 W. Marion St.
Danville, IN 46122

Sally Labadie
503 W. Maple
Bancroft, MI 48414-0146
517-634-5222

Jeff Nelson
Box 213
Ocoee, FL 34761

Andy Howard
Converse College
Spartanburg, SC 29302-0006
803-596-9126

Bill May
1384 Classen Blvd.
Norman, OK 73071

Larry Rasmussen
1323 1st St.
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**This Is To Certify That
The Person(s) Named On The Reverse Side**

IS A MEMBER OF

Mid-America Paleontology Society

AND IS ENTITLED TO ITS PRIVILEGES

AND BENEFITS

Sharon Ann Lester
TREASURER

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 (except February) meetings are scheduled for 1 p.m. in the Science Building, Augustana College, Rock Island, Illinois. The February meeting is held at Monmouth College, Monmouth, 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 June.

President: Marvin Houg, 3330 44th St. N.E., Cedar Rapids, IA 52402
 1st Vice President: Lyle Kugler, 612 8 E. 3rd St., Aledo, IL 61231
 2nd Vice President: Allyn Adams, 612 W. 51st Street, Davenport, IA 52806
 Secretary: Jo Ann Good, 404 So. West 11th St., Aledo, IL 61231
 Treasurer: Sharon Sonnleitner, 4800 Sunset Dr. SW, Cedar Rapids, IA 52404
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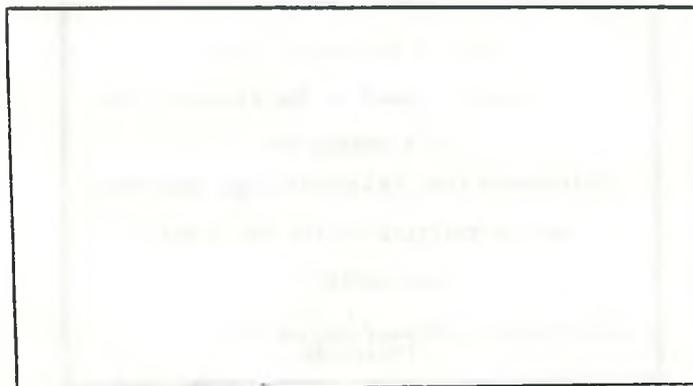


CYATHOCRINITES

MID-AMERICA PALEONTOLOGY SOCIETY

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Dated Material - Meeting Notice