

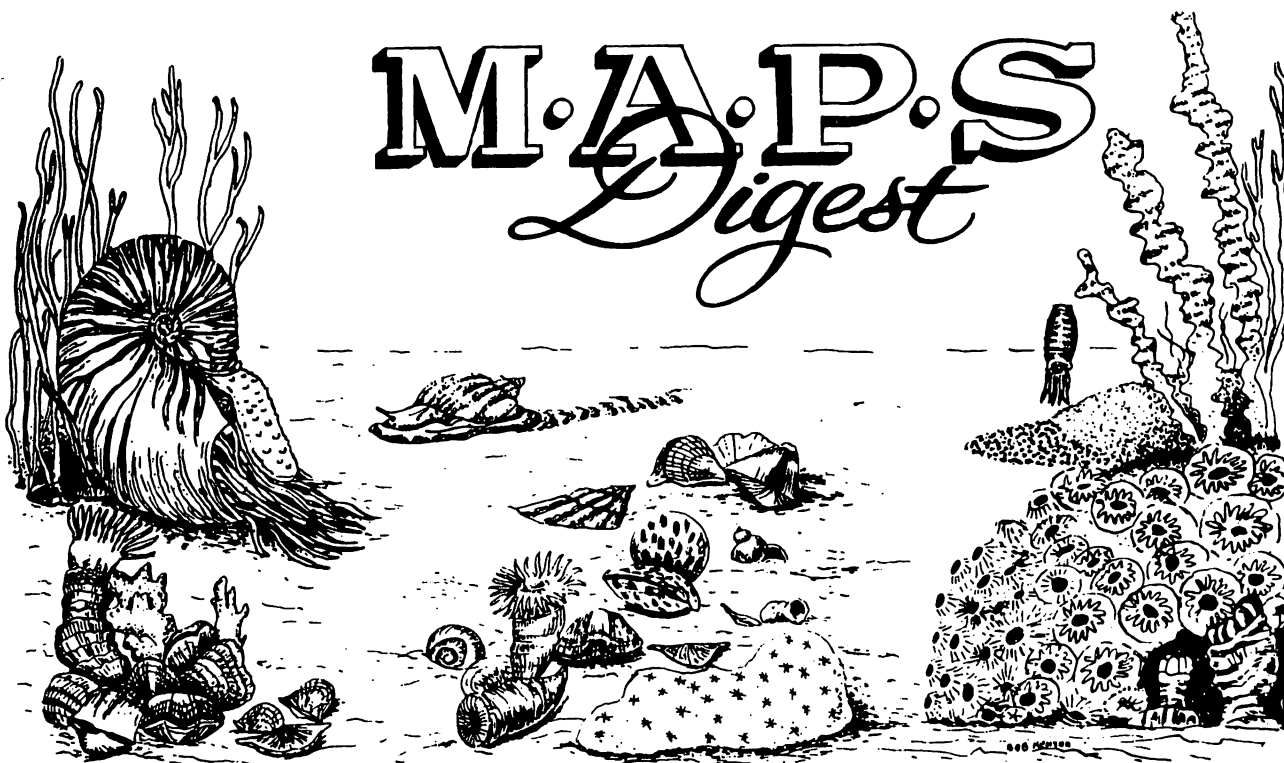
M.A.P.S. *Digest*

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Official Publication of
Mid-America Paleontology Society

December, 1983

...give me beauty in the inward soul;
and may the outward and inward man be at one.

Plato (c.427-c. 347 B.C.)



SIX MASS EXTINCTIONS

New York Times News Service

The catastrophes have come repeatedly. Since life first appeared on Earth, large percentages of the world's plants and animals have been wiped out in mass extinctions. Few scientific puzzles are more tantalizing than these calamities.

The fossil record shows at least six major extinctions. Presumably what has happened in the past may happen again.

The earliest recorded extinctions came half a billion years ago at the end of the Cambrian Period. More than half the animal families disappeared including numerous species of trilobites.

(Continued
page 4)

MARK YOUR CALENDARS

3 Dec -- MAPS MEETING -- Augustana College
Rock Island, Illinois
1:00 p.m. Board Meeting
2:00 p.m. MAPS Meeting
Presentation of Sponge Slide
Program--MAPS third in a series.

Bring your favorite fossil and
tell something about it.

7 Jan -- MAPS MEETING -- Augustana College
Rock Island, Illinois

13 Apr -- EXPO VI -- Western Illinois University,
Macomb, Illinois
14
15 IT'S A WINNER -- PLAN NOW



to each of you
from all
MAPS Board Members

SECRETARY'S REPORT

The November meeting of MAPS was called to order at Augustana College, Rock Island, November 12, 1983, by President Doug Johnson.

Treasurer, Allyn Adams reported: June 1 Checking \$2,772.83, Savings \$100, Balance \$2,872.83.

Receipts June 1 -- November 1	
Dues	\$539.80
Trilobite Books	39.42
Bad Check Replaced	54.00
Advertising	3.50
Interest on Savings	3.37
	<u>\$640.09</u>

Disbursements June 1 -- November 1	
Postage	\$ 124.67
Engraving	55.00
Banner	23.62
Directories	224.00
Slide Programs	245.00
Digest	500.00
Address Labels	40.00
Application Forms	7.80
	<u>\$1,220.31</u>

Balance on hand November 1, 1983 Checking \$2,156.24, Savings \$103.37, Balance \$2,259.61. Gil Norris moved the report be accepted, Madelynne Lillybeck seconded, motion was carried.

Doug appointed Gil Norris Chairman, Allyn Adams, Madelynne Lillybeck a committee to meet to prepare a slate of officers for 1984.

Tom Witherspoon, Publicity Chairman, reported to Doug Johnson all news media had been sent information for EXPO VI.

Allyn Adams asked about eliminating membership cards. Gil Norris moved only sending membership cards upon request. Tom Walsh seconded, motion was carried.

Gil Norris moved the Constitution and By-Law changes be accepted as proposed in the November Digest. Madelynne Lillybeck seconded, motion was carried.

3 December 83 MAPS Program--Sponge Slide Presentation. 7 January 84 MAPS Program--Fossilmania Report by all who attended.

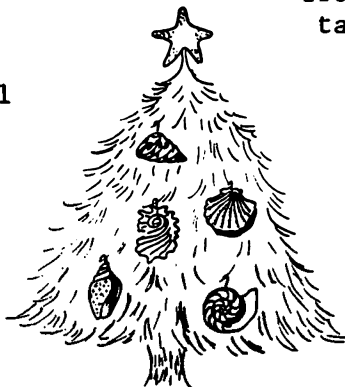
Meeting was adjourned.

A presentation Canadian Fossils by MAPS member Betty Speirs, Red Deer, Alberta, CANADA followed. Mrs. Speirs, with her soft Canadian accent, narrates as the audience is taken on a fossil field trip in Alberta collecting mainly beautiful leaf specimens under blue Canadian skies. Mrs. Speirs generous gift to MAPS of this slide show makes this the 5th slide program in MAPS library.

Gerry Norris moved a reproduction be made for the club, Allyn Adams seconded, motion was carried.

What a beautiful gift. A special thank you from each of us who have seen this presentation, Mrs. Speirs.

Respectfully submitted
Secretary Pro Tem



SLIDE PROGRAM CHAIRMAN

A hearty thank you to Jim Konecny, Prescott, Arizona, who has volunteered to become Slide Program Chairman.

Ready for presentation and your requests:
1) Fossils And The Story They Tell, Script only; 2) Brachiopods--Advanced College Level, includes Script, Tape and Study Guide \$2.00 each; 3) Sponges--College Level, includes Script Tape and Study Guide \$2.00 each; 4) Plant Fossils by Dick Johannesen, Script only; 5) Canadian Fossils by Betty Speirs, Tape only.

Send all requests for presentation to Jim Konecny, 3036 Geronimo Road, Prescott, AZ 86301. If study guides are ordered, make all checks payable to MAPS and send checks to Jim at the time you place your orders. MAPS will mail slides to you, YOU are responsible to insure and return to Jim.

A special thanks to Gil Norris who spent many hours photographing and collecting information for the Brachiopod and Sponge presentation; to Gerry Norris who did the typing.

These two slide programs would not have been possible except for Dr. Merrill Foster, Geology Department, Bradley University, Peoria, Illinois, who reviewed, critiqued, and added information from his own research on Brachiopods and Sponges. Thanks also to Bob Cooper, 5012 Pfeiffer Rd., Peoria, Illinois who supplied guidance and

his own pictures as well as brachiopod and sponge specimens from his collection and research.

The Brachiopod and Sponge programs are pure science and can be described as pure science. Study groups would be delighted with this work.

Thank you Dr. Foster, Bob Cooper, and Gil and Gerry.

The Plant Program worked by Dick Johannesen is dedicated to Yutaka Baba, Japan, an old friend of MAPS.

These slide programs represent hours of work and a generous gift from all these MAPS members.



ADVERTISING SECTION

Ads \$3.50 per inch (6 lines). Send information and checks payable to MAPS to: Mrs. Gerry Norris, 2623 - 34th Avenue Ct., Rock Island, IL 61201 Phone 309-786-6505

WANTED: Textbook-quality brachiopods. Stratigraphic and collecting locality data required.

Steve Tuftin
P. O. Box 8233
Denver, CO 80201



UNIVERSAL FOSSILS

New List -- 106 -- \$1 - \$2 overseas

Cephalopods, Trilobites, Crinoids, Teeth
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Most obvious fossils in Precambrian sediments are structures, called stromatolites, built up in layers by blue-green algae, but many microfossils have also been reported--rods and spheres which were perhaps formed by algae or bacteria.

ORDER YOURS NOW

TRILOBITES OF THE CHICAGO REGION--\$6.00, includes postage. Send check to: MAPS, Allyn Adams Treasurer, 612 W. 51st Street, Davenport, IA 52806.

NAME TAGS--\$2.80, includes postage. Send check to: Fred S. Farrar, Rte. #2 - Box 295, Poplar Bluff, MO 63901. Phone 314-686-2130

SLIDE PROGRAMS--\$2.00 per study guide (if included with slide program--Brachiopods, Sponges) Send check and/or order to Jim Konecny, 3036 Geronimo Road, Prescott, AZ 86301.

ADS--\$3.50 per inch (6 lines). Send check to: Mrs. Gerry Norris, 2623 - 34th Ave. Ct. Rock Island, IL 61201.



SEDIMENTARY NOTES

R. W. HEINISH, Indianhead Park, IL
Writes "The international Paleo Organization proposed in a recent

Digest is a fantastic idea. I hope the response to this effort is great. I for one need better access to some "Pure" Scientists." Bob was recent Publicity Chairman and has insects in amber at the EXPOS.

DENNIS KINGERY, Rock Springs, WY sent a clipping from The Wall Street Journal about Dinosaur Fever. The clipping had been sent to him from a friend in Connecticut. Dennis had a one man show in Connecticut last year before EXPO. Dennis is probably most renowned for his gigantic plates of fish, but that is only the beginning of his fossil dealer museum. See you at EXPO, Den.

BOB CARLSON, Eugene, OR sent a clipping from the Los Angeles Times about Bargains at Epochal Sale. It was at Judy Owyang's Fossils Etc. shop on Sawtelle Blvd. The article is a cleverly written feature article "amortizing a fish at about 5¢ for every 700 years the fish (30 million years old) lay there fossilizing." It refers to those hallowed trilobites as water roaches which one would step on if it scurried across your kitchen floor--imagine David Bradbury and Doug DeRosear, stepping on a trilobite?

Bob came with wife, Beth, to EXPO V just to look it over. He got put to work immediately and ended meeting lots of people and having lots of fun.





SIX MASS EXTINCTIONS (cont'd p.1)

Another 30 percent of animal families disappeared at the close of the Devonian Period, 350 million years ago. This extinction included many primitive fish and other sea creatures.

A seemingly similar catastrophe occurred 230 million years ago at the end of the Permian Period when half the existing reptile families died out, and 96% of marine species.

Although new reptile species evolved, 180 million years ago they suffered even more severe extinction at the end of the Triassic Period. Almost all 400 genera of ammonoids, as well as 80 percent of the reptiles--35 percent of all families--perished.

The Cretaceous extinction that killed off the dinosaurs, numerous oceanic species and land plants and animals coincided with the impact of an asteroid or giant meteorite. Evidence is still being gathered to support this theory. Such events have left hot spots within the Earth's crust, providing a favorable environment for new life to evolve.

The most recent mass extinction came at the end of the Pleistocene Period except in Africa, when most giant mammals, including mammoths, mastodons, and ground sloths died out.

Lewis Kehr, Ottawa, Illinois
Gerry Norris, Rock Island, Illinois



A NOTE FROM YOUR EDITOR

Many thanks to all of you who have so generously contributed to the Digest this year with your clippings, articles, and letters of support.

Many more of you have been extremely patient when your Digest did not arrive, you got 2, or your address did not get changed as quickly as it might have. There is another person involved with mailings now which helps a lot but communication now becomes the key word and MAPS has grown considerably--we are no longer just a little fossil organization.

My job would become impossible without you! The loss of Harrell Strimple has been profound. He called often and I was able to consult with him for clarity, timeliness, definition. He

became the bridge to the professional world of paleontology. He had large dreams for MAPS. Dr. Lane is there but harder to reach and a long way away. His continued support is very much appreciated!

One request I need to make. When sending articles with line drawings, the printer has asked if you would please ink these drawings--black, of course. Last month Val Gunther included the most exquisite drawings and try as he would the printer was unable to do justice to them. After all your work, it is a tremendous disappointment if it does not reproduce at the printers.

January begins another year with MAPS. This means your dues are due. The Board is able to keep dues at \$7.00 at least until another postage hike. Send them as soon as possible to: MAPS c/o Allyn Adams, Treasurer, 612 W. 51st Street, Davenport, IA 52806.

Thank you for your continued support. You have my love

Madelynne Lillybeck



1984 MEMBERSHIP DIRECTORY -- MARCH 1 DEADLINE

The MAPS Board would like to include in the new membership Directory (given at EXPOO a section listing of Paleo Societies with a name or two within that society to contact and the date of your annual swap or show.

Will someone in Australia, Canada, Europe, Japan please help with information about your continent or country.

Listed below is what is available to your editor at this time. Will you please send added information or corrections no later than March 1 to Madelynne Lillybeck, 1039 - 33rd St. Ct., Moline, IL 61265

AUSTIN PALEONTOLOGICAL SOCIETY, Don O'Neil or Frank Crane -- BUFFALO GEOLOGICAL SOCIETY, Gary Rakes -- CALVERT MARINE MUSEUM, Dr. Dave Bohaska -- THE CHICAGO AREA PALEONTOLOGICAL SOCIETY, Paul Caponera or Dave Hutchison -- THE DELAWARE VALLEY PALEONTOLOGICAL SOCIETY Eugene Hartstein -- DRY DREDGERS, Roger Laib -- THE FLORIDA PALEONTOLOGICAL SOCIETY, INC, Clifford Jeremiah -- THE FOSSIL COLLECTORS ASSOCIATION OF AUSTRALASIA, Frank Holmes -- FOSSILS FOR FUN SOCIETY, INC., Arbor and Lucile Hutchinson -- GENESEE VALLEY FOSSIL SECTION, John Rivers -- MID AMERICA PALEONTOLOGICAL SOCIETY, Don Good or Gil Norris -- The

MONMOUTH AMATEUR PALEONTOLOGY SOCIETY, Ralph Johnson -- PARKS PALAEONTOLOGY SOCIETY, Hilda Finnigan -- THE PALEONTOLOGICAL SOCIETY OF WASHINGTON, Frederick J. Collier -- THE SOUTHERN CALIFORNIA PALEONTOLOGICAL SOCIETY,

June Maxwell -- THE NORTH DAKOTA PALEONTOLOGICAL SOCIETY, Michael Brauer.

Can anyone add more? Anyone want to volunteer to gather this information?



FROM THE MATRIX

DIFFERENTIATING THE DEVONIAN TABULATE CORALS Emmonsia and Favosites

Submitted by

Allan Goldstein, Louisville, Kentucky

The corals of the genera Favosites (Lamark, 1816) and Emmonsia (Edwards & Haime, 1851) are difficult to differentiate unless one has a knowledge of the anatomy of these tabulate corals. Early workers studying the Devonian fauna at the Falls of the Ohio and other locations confused the two genera. Mistakes were being made even as late as 1938.

Ordovician strata.

Other corals with squamulae include Caliapora from the middle Devonian of Europe and Squameophyllum from the lower Carboniferous of Ireland. If any reader has either of the above, please contact the author.

Favosites and Emmonsia have more similarities than differences. They include:

The most conspicuous anatomical difference is the presence of squamulae in Emmonsia. Squamulae are often much more conspicuous than tabulae which are unmistakable in Favosites. The

Treatise (vol. F) defines squamula (squamulae-pl) as follows: Small plate(s) projecting sub-

horizontally in eavelike manner from wall(s) of a corallite(s) toward axis. If you think you have Emmonsia, here is a quick way to check. Find a longitudinal (vertical) break in the cor-

al where the tabulae (horizontal partitions (horizontal partitions separating corallites) are visible (fig. 1). If the chamber is empty and the wall is smooth, the coral is not an Em-

monsia. If small shelvelike structures (often tongue shaped) are visible between the tabulae (which may be absent or inconspicuous), the coral is Emmonsia. (See fig. 2). The various

species of Emmonsia have squamulae with different characteristics, but invariably, they give the chambers a "cluttered" appearance. Emmonsia is restricted to lower and middle Devonian strata, while Favosites can be found in upper

*Corallites are polygonal, most in the 0.5-5.0mm range.

*Corallites have mural pores. A mural pore is a small circular or oval hole between adjoining corallites (treatise), it occurs uniserially (single row), biserially (double row), offset biserially, and triserially (triple row).

*Corallum grow in a ceroid habit. (Ceroid meaning walls of adjacent corallites are closely united.)

*Corallum grow in hemispherical, sub-hemispherical, flat, or dendroid (branching) forms.

Below (next page, Ed.) is a list of species belonging to the genus Emmonsia. If a coral in your collection has the same trivial name following Favosites, take a close look at it, it may be an Emmonsia.

The following information applies to the table on the next page.

*no information in my references. 1. Occurs in colonies up to 10 feet in diameter and five feet thick. 2. Often surrounds crinoid columns.

Column 2 abbreviations

irreg - irregular
hemisph - hemispherical
elong - elongate
cir - circular
cyl - cylindrical
subcyl - subcylindrical
dend - dendroid

Column 5 abbreviations

uni - uniserial
bi - biserial
tri - triserial



<u>Emmonsia</u> sp.	Corallum Shape	Corallite Diameter (all in mm)	Shape of Corallite	Mural Pores	Author
<u>amplissima</u>	hemisph	4.3 - 5.3	polygonal	large, bi/tri	Davis
* <u>arbuscula</u>	irreg				Hall
<u>bacula</u>	elong/cir	1.5 - 2	polygonal	med, uni	Davis
<u>carmoni</u>	dend/cyl	0.75 - 1.5	polygonal	small, uni/bi	Stewart
* <u>convexa</u>					Davis
<u>cymosa</u>	irreg	1.5	polygonal	uni	Davis
<u>lemmonsi</u>	hemisph	1.5 - 2	hexagonal	bi, can be uni or tri	Rominger
<u>epidermata</u>	low hemis or flat	2.3 - 2.8 with smaller	tetra/hexa	large, uni/ offset bi	Rominger
<u>2eximia</u>	hemisp/or	3	polygonal subrounded	med, bi	
	globose	1 - 2	polygonal	med, uni	Davis
* <u>ocellata</u>					Davis
<u>polymorpha</u>	dend.	2	polygonal, rounded	med, uni/ rarely bi	Goldfuss
<u>radiciformis</u>	knobby	2 - 3 1 scattered	polygonal	uni/bi	Rominger
<u>ramosa</u>	dend	1 - 2	polygonal	large, uni	Rominger
<u>tuberosa</u>	hemisph	3	pentag/hexa	vry large, bi	
	elong/subcyl	smaller	trigon/tetrag	offset, bi	Rominger

The author can provide most Emmonsia species in exchange for Paleozoic corals from other locations.

BIBLIOGRAPHY

- Davis, W. J., 1887. Kentucky Fossil Corals, A Monograph of the Fossil Corals of the Silurian and Devonian Rocks of Kentucky, Pt. 2: KY Geol. Survey, xiii pp., 139 pl.
- Moore, R. C. (ed.), 1956. Treatise On Invertebrate Paleontology, Part F: Coelenterata; Geological Soc. of America and University of Kansas Press, 498 pp., 358 figs.
- Stewart, G. A., 1938. Middle Devonian Corals of Ohio: Geol. Soc. of America Special Paper 8, 129 pp., 20 pl.
- Stumm, E. C., 1964. Silurian and Devonian Corals of the Falls of the Ohio: Geol. Soc. of America Memoir 93, 184 pp., 80 pl.

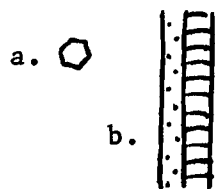


Fig. 1 Favosites (a) transverse view. (b) longitudinal view. Note empty chambers between spatulae and offset biserial mural pores. (2x)

Fig. 2 Emmonsia (a) longitudinal view, note prominent squamulae and inconspicuous tabulae. (b) two corallites showing shelf-like squamulae projecting off wall. External squamulae belong to neighboring corallites. (c) Transverse view showing squamulae projecting in from corallite wall. (d) Longitudinal view showing relation of squamulae with mural pores. (a,b 2x; c,d 5x)



THE PROFESSIONAL'S CORNER --

ILLUSTRATING FOSSILS -- No. 7

Dr. N. Gary Lane - Copyright, 83
Geology Department
Indiana University
Bloomington, IN 47405



This is the final article on illustrating fossils. And I imagine some of you are sick and tired of reading about this complicated and long-drawn-out procedure. And I have not even touched on illustrating fossils by various forms of artistic rendering-- sketches in pencil or pen-and-ink.

The final step in assembling your finished prints into a plate. First get a good quality, stiff, heavy white cardboard. I personally like Crescent Illustration Board, which is available at many art supply stores. Cut the board to page size, 8½ x 11. Trim each print leaving about a 1/4 inch border around the picture of the fossil. Then you will need some dry mounting tissue available at photography stores. If you have used resin coated enlarging paper then you should get the low temperature mounting tissue for color prints. If you have used a Kodabromide or other non-resin-coated paper then you can use the higher temperature mounting tissue.

Turn the print over onto a clear sheet of white paper and tack a piece of mounting tissue onto the back of the picture with the tip of a warm iron. Have the tissue larger than the print. Then cut out print and tissue together--into your white border if you have one, or cut both around the picture outline if you are cutting out the picture. When you have all of your pictures ready to mount, put them on the cardboard.

On your card draw a box the correct size for the plate size of the journal to which you will submit the plate. Virtually all finished plate sizes are smaller than page size. Arrange your pictures on the plate area following these rules: 1. Smallest prints should go at the top and left hand corner of the plate. 2. Largest and/or darkest prints should go toward the bottom and right-hand corner of the plate. These rules result in a plate that is not "top-heavy" in appearance, and has the apparent weight at the bottom. 3. Choose prints that have as close the same tone and density as possible. It is distracting to look at one picture that is very light next to another that is very dark. 4. Within these constraints try to keep pictures of the same general kind together. That is, all pictures of one species or one genus should be in the same part of the plate, not scattered around over the plate. This makes it easier for the viewer to look at all views of

the same fossil. 5. All space on the plate should be utilized. Don't leave too wide spaces between prints. Of course, they should not be crowded right next to each other, but it is better to have on plate with the space well-utilized than two plates that look half-empty. Re-producing plates is expensive and an editor may tell you to combine your 2 or 3 plates into 1 or 2.

Now carefully position each print, cover it with clean paper and carefully tack it to the cardboard with the tip of a warm iron. Once each print is firmly in position so it won't move, place the paper over the plate and press the entire iron surface down to seal all edges down firmly. You may need to check and do some spot sealing on stubborn edges that insist on curling up. Now each figure on the plate needs an identifying letter or number. Some journals insist on one or the other. You can buy sets of seal on letters and numbers all ready to use. Once these are on your plate is finished.

I always cover the plate with a sheet of white paper taped at the top with masking tape to keep the pictures and plate surface clean. Now all you need to do is write up an explanation of the figures on the plate--i.e.--Fig 1. Brachiopodus indianensis, ventral view, so and so locality, magnification X ???, Catalog No. so and so, and you are all done.

Well, that's enough on photography. Next month I'll start a short series on basic concepts and principals of stratigraphy.

Please Note Address Change --

Edward S & Pat Wilson, 39202 Dillingham
Westland, MI 48185

James Garrison 1851 C South 31st
Kansas City, KS 66106

Arbor & Lucile Hutchinson, 931 EdDorado Way
Sacramento, CA 95819

THE PROFESSIONAL'S CORNER, Cont'd. -- Dr. Merrill Foster

Geology Department

Bradly University

Peoria, Illinois 61614



IN PURSUIT OF THE ICY BRACHIOPOD

Introduction

It never ceases to amaze me how so many Midwestern fossil enthusiasts can have such narrow fossil interests. It is the rare collector who won't turn up his or her nose at a fossil that isn't a skeleton from an echinoderm, cephalopod, complete arthropod, or complete vertebrate. This means that the majority of fossils, including most of the geologically useful fossils, are largely written off and ignored. If these ignored fossils were all common and ugly, this attitude would be understandable. But this is not the case! These neglected fossils include numerous taxa with aesthetically beautiful skeletons. Rare species and rarely preserved skeletal structures abound. A particularly noteworthy member of this rather unpopular portion of the fossil world is the phylum Brachiopoda. The brachiopods rank near the top with regard to beauty, long geological range, and importance to the science of geology. I believe many Midwesterners are prone to undervalue brachiopods because these fossil hunters live in what is probably the richest fossil brachiopod area in the world. In addition, they usually don't know which brachiopods and which brachiopod structures are rare.

I was fortunate enough to be raised in California where fossil brachiopods are rare and, when found, difficult to extract from the rock. As a result, I have always had a fondness for brachiopods. I vividly remember as a young man in California drooling over such Midwestern brachiopod goodies as the Ordovician orthides, strophomenides, and rhynchonellides from the Cincinnati area or the Devonian spiriferides from Rockford, Iowa and Silica, Ohio. I like all fossil groups to some degree. However, I do like some fossils much more than others. My favorites have included the traditional Midwestern favorites. Nevertheless, brachiopods and a number of other less popular groups have also always stood near the top of my favorites list.

I started my serious fossil research focusing on trilobites, brachiopods, and receptaculitids. In the 1960's, I realized as various other paleontologists have, that biologists were only making a limited number of the kinds of observations on Recent invertebrates that we needed in order to more fully understand ancient invertebrates. In fact, every year it seems that biologists pursue fewer and fewer of the kind of studies we paleontologists need as an ever increasing number of their ranks devote more and more time to biochemistry and medicine. For example, at the university where I teach, geology majors know more basic biology and how to recognize the major kinds of animals and plants better than biology majors. If paleontologists want adequate information about living organisms to use in their fossil studies, we will usually have to go get it ourselves. Since brachiopods are the only group of the three I started studying to still live, I have devoted particular attention to them in the ensuing years. I have studied and am studying Recent brachiopods from

the northeast Pacific, New Zealand, South America, Africa, Antarctica, and the Central Atlantic. My most comprehensive work to date has dealt with cold water brachiopods living south of 40° south latitude. This is the research I intend to discuss in this account. Time and space limitations prevent me from covering many of my adventures, observations and conclusions here, but I will try to relate the ones that still linger uppermost in my memory.

General. -- Introduction to Antarctic Research

I undertook my study of the brachiopods of the far south with the unwritten understanding that the U.S. National Museum had extensive unstudied collections from all over the area that I could work with. To my horror, after I had fully committed myself to the project, I found out that all they had were a few tiny collections from a limited number of localities. I was therefore forced to go into the frozen waters at the south end of the world and get and study my own brachiopods. This adventure turned out to be one of the most exciting parts of my research, but was also the most dangerous time-consuming, and nerve-wracking. It provided an opportunity to visit some of the most beautiful locations in the ocean and to see and collect live brachiopods in their environmental settings.



The Ordovician period probably saw a greater expansion within the animal kingdom than any other similar time interval. Trilobites... continued to diversify but in proportion to the other animals present, no longer had their former dominance. However, new developments like large raised eyes in phacopids and numerous spines in odontopleurids suggest new ecology

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813-493-6920

Cele Wood
10509 Manor Road
Leawood, KS 66206
913-642-7545



Custodian. Collecting 15 years. Has small collection will trade. Major interest crinoids and trilobites. Very interested in the paleontology field.

Retired Museum Curator-Geology. Will not trade. Major interest trilobites, brachiopods, crinoids, edrioasteroids, corals, invertebrates. Wants to continue study of fossils with the best group. (Thank you, hope it turns out well!)

Phlebotomist. Will trade. Major interest crinoids. Has crinoid stems, brachiopods, Kansas fossils for trade. Wants to further study of fossils.

Retired Elementary Teacher. Just beginning Interested in fossils. Attended "Fossilmania '83". You've picked a most fascinating hobby--welcome.

Fossil Dealer. Will trade. Interested Placentacerts, trilobites, bone material. Has Devonian fish, Scotland, British ammonites, decorative specimen e.g. polished. Wants to make American contacts for supply and exchange.



Painting Contractor. Will trade Interested Pleistocene mammals, wood, insects in amber, bird bones, feather, imprints & tracks. Has many bone materials--whale bone, turtle, shark Oligocene specimens not yet named. Trade & write.

Retired American Airlines & Beulah Teacher. Interested in all aspects of paleontology. Love field trips. Love to travel in motor home.

Aircraft (Exp.) Will trade. New at this hobby and exploring it. Has Kansas fossils for trade. Attended "Fossilmania".

Petroleum Technologist. Will trade. Interested Upper Cretaceous vertebrate fossils. Has Dinosaur teeth & bones crocodile teeth, bones and other vertebrates.



Police Officer. Will trade. Interested in post cranial osteology of Plio-Pleistocene mammals. Has Florida Plio-Pleistocene mammal bones & teeth. Interested in Paleontology and desires to support MAPS, exchange information.

Legal Administrator/Business Owner. Collecting 4 years Wants to learn more; become acquainted with others with similar interests; gain experience through field trips



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.

MAPS is affiliated with the Midwest Federation of Mineralogical and Geological Societies, and with the American Federation of Mineralogical Societies. Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Family membership \$7.00; individual membership \$7.00; junior membership \$5.00 (between ages 8 and 16).

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather) October through May at 2p.m. in the Science Building, Augustana College, Rock Island, Illinois.

President: Doug Johnson, Box 184, Donnellson, IA 52625

1st Vice President:

2nd Vice President: Alberta Cray, 1125 J Avenue, NW, Cedar Rapids, IA 52405

Secretary: Peggy Wallace, 290 South Grandview, Dubuque, IA 52001

Treasurer: Allyn Adams, 612 W. 51st Street, Davenport, IA 52806



DUES ARE DUE

FIRST CLASS MAIL

CYATHOCRINITES

MID-AMERICA PALEONTOLOGY SOCIETY

Madelynn M. Lillybeck
MAPS DIGEST Editor
1039 - 33rd St. Ct.
Moline, IL 61265

Dated Material - Meeting Notice

