M·A·P·S Digest

Volume 3 Number 5 January, 1980 Official Publication of the Mid-America Paleontology Society

IT'S A WORKSHOP, THE MONTHLY MEETING, A POT LUCK, DON and JOANN'S HOUSE, 2 FEB 80

FROM OUR PRESIDENT

I just want to encourage everyone to attend the National Fossil Exposition on March 22 and 23. Also, please inform other fossil enthusiasts of this, the largest fossil assemblage in the world by private collectors.

We're also soliciting a nice specimen or two, with data, that can be auctioned at the Expo. If you are unable to bring or send it by someone, please mail it/them to Gil Norris, 2623 - 34th Ave. Ct., Rock Island, IL 61201. Success at the auction will serve 2 purposes: 1) assure us we won't need to increase dues, and 2) provide greater participation by members, even if they're unable to attend. The contributor will be recognized by name at the sale of the specimen.

Lastly, I can't say enough good things about our members and committees. They are doing a superb job. Just today I received a letter from Bob Kenyon stating that, in spite of the fact this is his busiest time, he volunteers his professional art skills for both the slide program and signs at the Expo.

Thanks, Bob, and others.

Don

FEBRUARY MEETING

The regular February meeting will be held at the Don Good home at 210 N.W. 3rd Street in Aledo, IL, Saturday, February 2 at 2:00 o'clock. The 2 highways coming into Aledo are #17 and #94. They both share a 4-way stop at the Court House (only stop on either highway). From this stop, go 4 blocks West and 4 blocks North and it's the large yellow house on the corner.

The program will be a slide program en-

(continued page 2)

MARK YOUR CALENDARS

2 Feb	MAPS Meeting -- SIGNIFICANT CHANGE -- Workshop, 10:00 am Nat'l Fossil Expo slide program; 2:00 MAPS meeting; evening pot luck, 410 N.W. 3rd St., Aledo, Illinois
22 - 23 Mar	NATIONAL FOSSIL EXPO II Western Illinois University Macomb, IL
6 - 8 June	Rocky Mountain Show Topeka, KS
12 - 15 June	National Midwest Show, Lincoln NE

"A LOVE OF FOSSILS BRINGS US TOGETHER"

MAPS MINUTES -- JANUARY

The regular meeting of the M.A.P.S. Club was called to order at 2 p.m. Saturday, January 12, 1980. The meeting was one week late because Fryxell Science Hall was closed over New Year's weekend. About 20 members attended.

Minutes were read and approved.

The Treasurer's report was read and approved. Moved by Dick Johannesen and seconded by Ray Fairbank.

A report was given on Expo II by President, Don Good.

A possible new meeting location for the 1980 July meeting was discussed. Edwards River group will not be holding their usual meeting which MAPS has always attended. A possible field trip to Carthage, IL on July 4, 5, and 6 was proposed. No formal action was taken but a further investigation to include camping facilities is under way.

VERY IMPORTANT...it was decided that the February 2, 1980, meeting would be held at the home of Don Good, President. The purpose of the meeting will be to get the Expo II slide program in order. Those working on the slide program are expected to arrive at 10:00. The regular February meeting will begin at 2:00. Don's home is located at 410 N.W. Third, Aledo, IL. Please bring any slide and/or equipment that may be of help in this project--finding, cleaning, mounting, showing, fossils.

Motion for adjournment by Tom Miller seconded by Ray Fairbank.

The program was a workshop on trilobite identification given by Doug DeRosear.

Respectfully submitted
Tom Miller, Secretary

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Seven-eighths of the Earth's history took place during the Pre-cambrian.

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FEBRUARY MEETING, Continued

titled: "an Introduction to Fossils". Don gave this for the Omaha club last May. It will be embellished and modified for later use at the National Show.

We will conclude with a pot luck supper.

Persons who can work on the slide program are expected to arrive at 10:00 that morning. Too, some may want to stay over to complete this project on Sunday.

If you have any questions and a phone call will help, Don's number is--309-582-5232.

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WE NEED YOU

One of the highlights of Expo I was the live auction. It has been decided to repeat that highlight with another auction at Expo II.

Several things happen because of this auction. All day people walk around the table admiring the beautiful fossils deciding which one causes them to smile inside. They go away and come back and go away and come back and decide how much to spend to get their very favorite fossil. Watching people at the auction is interesting. Most people act like "cool hand Luke" the whole time, but if you happen to catch their eye when they get that special fossil--then you know about that smile inside. Shows outside, too.

There is something else special about that auction. Everyone looks to see where the fossil originated and who donated it. There is conversation about that person. Last year only some people knew most everyone, but this year more of us can say, "Oh, yes, I know him/her." More smiles.

Then there's something else happens. Before the show everyone on the Board is wondering how we're going to make it through June with the meager balance in the treasury. Then they walk around the fossil-auction table (must be a better way to say that) and they begin to quit

(continued page 9)

Rev. 12/79

GEOLOGIC TIME SCALE

Submitted by: Philip Marcus, 2020 Henderson Avenue, Wheaton, MD 20902

Era	Period	Epoch	Beginning of Interval (Millions of Yrs. ago)	Important Events
Cenozoic (2%)	Quaternary	Recent	.01	Modern man spreads worldwide
		Pleistocene	1.5 - 2	Many mammals vanish
	Tertiary	Pliocene	5	Oldest-known hominids
		Miocene	22 - 23	Mammals reach their maximum diversity Grasslands - grazing mammals
		Oligocene	37 - 38	
		Eocene	53 - 54	Modern types of flowering plants appear
		Paleocene	65	Spread and diversification of mammals
Mesozoic (4%)	Cretaceous		136	Dinosaurs and many other organisms become extinct Peak of dinosaur diversity Flowering plants appear
	Jurassic		190 - 195	First birds. Dinosaurs increasingly abundant
	Triassic		225	First dinosaurs, first mammals Abundant cycads and conifers
Paleozoic (10%)	Permian		280	Extinction of many animals
	Carboniferous	Pennsylvanian*	345	First reptiles. Great coal forests, first conifers, first cycads
		Mississippian*		
	Devonian		395	First amphibians First insects Fishes abundant
	Silurian		430 - 440	First land life (plants and invertebrates)
	Ordovician		500	First tabulate and rugose corals First bryozoa
	Cambrian		570	First abundant record of marine life: trilobites common, first vertebrates
Precambrian (approximately 84% of the history of life)				First living things - perhaps 3.5 billion years ago

*The Pennsylvanian and Mississippian Periods <u>together</u> are equivalent to Carboniferous.

SMITHSONIAN INSTITUTION
National Museum of Natural History, Department of Paleobiology, Washington, D.C. 20560

NATIONAL FOSSIL EXPOSITION II

Just an overview of final decisions:

1. Set up permitted from 4 - 8 on Friday, March 21.
2. Fellows available to help with carrying Friday evening, Saturday morning and Sunday afternoon.
3. Dormitory housing available again this year.
4. Table rental will be $5.00 per day or $8.00 per weekend (6 ft. tables). We do not anticipate having to limit number, but if we do, we can guarantee 5 tables.
5. Those who requested registration material will receive it by February 1 or earlier. If you did not get yours or have not requested it earlier, please contact me, Don. 309-582-5232
6. We encourage displays. Free table space provided. One difference this year...all displays downstairs and all selling and swapping upstairs.
7. Banquet on Saturday night. Live auction at 1:15 on Sunday. Materials to sell solicited from all members.
8. There is no plane transportation into Macomb this year, but we will transport you from Moline, IL airport if you will let us know when to meet you.
9. Show hours--Saturday 8 a.m. to 5 p.m. and Sunday 9 a.m. to 4 p.m.
10. Check for table reservation must accompany your returned registration.
11. Mr. Harrell Strimple, University of Iowa Curator and Treatise author on Crinoids, will be our after banquet speaker.

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PAID UP MEMBERSHIPS

Allyn and Dorris Adams, IA
Ghioldi Beppi, ITALY
Jack and Diane Dare, IN
Dieter Gebauer, GERMANY
Andrew and Josephine Hay, IL
Phil and Betty Hunt, IA
Roxanne Kremer, IL
Lewis W. Kehr, IL
Rozaline K. Johnson, CA
Fred Labohn, AZ
Harold S. Meals, CA
Eileen Mosiman, IL
George F. Melloy, IL
Judy Owyang, CA
T. Jefferson Shanks, IN
Charles and Dorothy Shoemaker, IL
Perry Wingerter, IL

(Editor's Note--This will be the last issue unless memberships have been renewed. It is always sad to see old friends go. If for any reason you did not renew your membership, we hope you miss us and decide to come back. In any even happy fossil hunting, hope all your trips are bountiful. To the rest of us, just watch to see what all happens this year--new friends, old friends solidifying this unique, exciting club, and fossils? you bet! better than ever. Up-to-date membership list by Expo II. Meet you there.)

*****

Please add the following to your list of new members:

Bobby & Beverly Davis
2717 No. Tamiami Trail
North Ft. Myers, FL 33909
813-995-4444

Collecting 3 years. Taxidermist. Will trade. Interested in all fossils, marine life in particular. Wants to become associated with other collectors and to trade. Has shells.

Tom Fersak
#13r Gateuby Village
Rock Springs, WY 89201
307-362-8546

Collecting 1 year. Will trade later. Very interested in fossils. Interested in all kinds of fossils.

Rosemary Ganshirt (Mrs. H. T.)
5506 Valerie
Houston, TX 77081
713-665-7149

Collecting 4 years. Housewife. Will trade. Wants to learn more about fossils and what others are doing in this field. Special interest in invertebrate fossils.

Claude Yves Germain
7 Rue ou Port
Port Manech 29139
Neves, FRANCE

Collecting since 1935. Will trade. Professional geologist. Special interest Paleozoic early Mesozoic. Wants to join and exchange with collectors in USA.

Ralph & Nancy Hood
1010 - 8th St. Ct.
Silvis, IL 61282
309-792-9214

Interested and collecting since a child. Will not trade. Elec foreman, Rock Island RR, Tax Consultant, Interested in all fossils. Interested in learning.

Fred Labahn
Campwood Route
Prescott, AZ 86301
602-445-7606

Collecting 20 years. Retired. Will trade. Interested in brachiopods, invertebrates in general. Wants to share collecting and studying.

Paul G. Lampl
228 S. 24th Street
Terre Haute, IN 47803
812-232-9641

Collecting 2 years. Elec. Eng. Will trade. Interested in Mazon Creek, material from IL, IN, & OH, all fossils. Wants to learn about Penn., Miss. and Ordovician.

Jean & Jack Mueller
7323 W. Palatine
Chicago, IL 60631
312-775-4830

Collecting 10 years. Printer. Will not trade. Interested in all fossils. Interested in locating hunting areas and identification.

Bill & Gail Robinson
624 Evers
Green River, WY 82935
307-875-2855

Collecting 5 years. Will not trade at this time. Interested in all fossils especially fish. Wants to know anything about the subject.

Jack & Kathy Shirley
7476 West Chester Road
Pisgah, OH 45069
513-777-7793

Collecting 10 years and 2 years respectively. Elect. Eng. and Sales Rep. Will trade. Interested in trilobites, crinoids, echinoids, edrios, starfish, blastoids. Meet other collectors and increase knowledge of paleontology.

Bari Sines
708 Dewar Dr.
Rock Springs, WY 82901
307-362-5031

Collecting 10 years. Will trade. Interested in vertebrates, insects, fish, articulate creatures. Joined because of increased pressur from outside source. (Dennis Kingery)

Doran A. Wade
112 Sweetwater Drive
Rock Springs, WY 82901
307-362-2918

Collecting 15 years. Will trade. Interested in vertebrates. Wants to share information and fossil hunt with others.

TREATISE ON INVERTEBRATE PALEONTOLOGY-CRINOIDS

by
H. L. Strimple
The University of Iowa
Iowa City, Iowa

The Treatise on Invertebrate Paleontology was founded after World War II by the late Raymond C. Moore. Also founded was the University of Kansas Paleontological Institute along with a journal, The University of Kansas Paleontological Contributions. Paleontological Contributions have two formats, the larger format to cover major studies and called Articles, the smaller format called Papers. The primary purpose for the Contributions was to record information for inclusion in the Treatise, however, acceptable subject matter is at the discretion of the editor, who was R. C. Moore until his demise and is R. A. Robison at present.

The following acknowledgment is taken from a recent issue of the Treatise, "The Treatise on Invertebrate Paleontology" has been made possible by (1) grants of funds from The Geological Society of America through the bequest of Richard Alexander Fullerton Penrose, Jr. for initial preparation of illustrations, and partial defrayment of organizational expenses in 1948-1957, and again since 1971, and from the United States National Science Foundation, awarded annually since 1969, for continuation of the Treatise project; (2) contribution of the knowledge and labor of specialists throughout the world, working in cooperation under sponsorship of The Geological Society of America, The Paleontological Society, The Society of Economic Paleontologists and Mineralogists, The Palaeontographical Society, and The Palaeontological Association; and (3) acceptance by The University of Kansas of publication without any financial gain to the University."

The Treatise is divided into parts which have no relation to the time of publication. Part T Echinodermata 2, Volumes 1 to 3 (published 1978, 1027 pages, 619 figures) is devoted to the crinoidea although a small addition to the Subphylum Homalozoa is included at the end. In 1951 Georges Ubaghs from Belgium, and Hertha Sieverts-Doreck from Germany spent several months at the Paleontological Institute working with R. C. Moore, who was also a crinoid specialist, on Part T. Ubaghs was to do the camerates, Doreck the articulates and Moore the inadunates and the flexibles. But the years passed and Part T was shelved. In about 1969 Moore asked me to participate with him and I accepted a very limited portion which soon grew into a major project. Ubaghs did finish most of the camerates and much of the introduction. Sieverts-Doreck developed very poor health and H. Wienberg Rasmussen of Denmark took over the articulates. Sections were also prepared by N. Gary Lane, Indiana University, Albert Breimer of the Netherlands, Russell M. Jeffords- Exxon Prod. Research Co., James Sprinkle, University of Texas, R. E. Peck, University of Missouri, D. B. Macurda, Jr., University of Michigan, D. L. Meyer, University of Cincinnati; Michael Roux of France, R. O. Fay, Oklahoma Geological Survey, and R. A. Robison, University of Kansas, The final cut off on Part T was 1976.

Just about anything you want to know about crinoids is included in Part T, skeletal morphology, stereom, ontogeny, ecology and paleonecology, evolution, glossary of terms, stratigraphic distribution, and classification is included. Every genus of fossil crinoid ever proposed is included in Volumes 2 and 3 and those presently accepted are described and illustrated by at least the type species.

Considering the relative simplicity of crinoids there is an amazing diversity exhibited by them through time. There are crinoids that fuse their arms into five paddle-like appendages, incorporate part of the arms into the calyx, have balloon-

like, umbrella-like, looped, twisted, or chimney-like anal sacs, some breathe through special slits in the cup walls, some have deciduous stems and sit on the substrate, arms may be from 0 to 100 or more. They are all in the Treatise on Invertebrate Paleontology, Part T, Echinodermata 2, available from The Geological Society of America, 3300 Penrose Place, Boulder, Colorado 80301, at a cost of $55.00.

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SUPERNOVA KILLED DINOSAURS, ROCKS INDICATE

The Houston Chronicle
Houston, Texas
Tuesday, May 29, 1979

by
Rosemary Ganshirt
5506 Valerie
Houston, Texas 77081

Berkeley, Calif (UPI) --A team of University of California researchers says a bursting star may be the reason behind the sudden extinction of dinosaurs and an abrupt change in the course of Earth's evolution 65 million years ago.

Researchers said Monday they have found higher-than-expected traces of the radioactive element iridium in rock beds in Italy they say came from a massive supernova--or star "outburst"--near the beginnings of evolutionary history.

The UC team said the iridium traces are tentative evidence that the supernova wiped out dinosaurs and 75 percent of all other earthly life forms during the Cretaceous period 136 million to 65 million years ago.

Researchers said the metal, extremely rare on earth, was found in fossill beds the age of which matches the period when the dinosaurs were mysteriously destroyed.

The supernova theory was suggested 30 years ago but considered implausible at the time, according to Dr. Luis Alvarez, a scientist at UC's Lawrence Berkeley Laboratory.

He said scientists also have formulated and discarded several other theories of the dinosaur's destruction--including the idea that smaller mammals ravaged their eggs or that the huge creatures simply didn't have the brainpower to control their massive bodies.

The evidence suggesting the stellar cataclysm was discovered along a winding mountain road near Gubbio, Italy, scientists said. They said the area, where 50 million years of geologic history are bared in rock beds, was once on the ocean floor.

Rosemary further mentions Immanuel Velikovsky, EARTH IN UPHEAVAL, 1955 offers this same theory.

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"The evolution of hard parts...could be associated with a number of problems facing early, highly organized organisms. Some researchers believe that the ozone content of the atmosphere was less in the late Precambrian, and that shells were developed to shield the soft-bodied creatures from radiation. Others think that shells afforded protection against predators, the latter appearing for the first time in late Precambrian times. Climatic and chemical changes in sea water have also been suggested to account for what palaeontologists accept as one of the major mysteries of the fossil record."

...and HERE'S A PIECE OF THE ROCK

ALL ABOUT OOZE
the seas's carpet

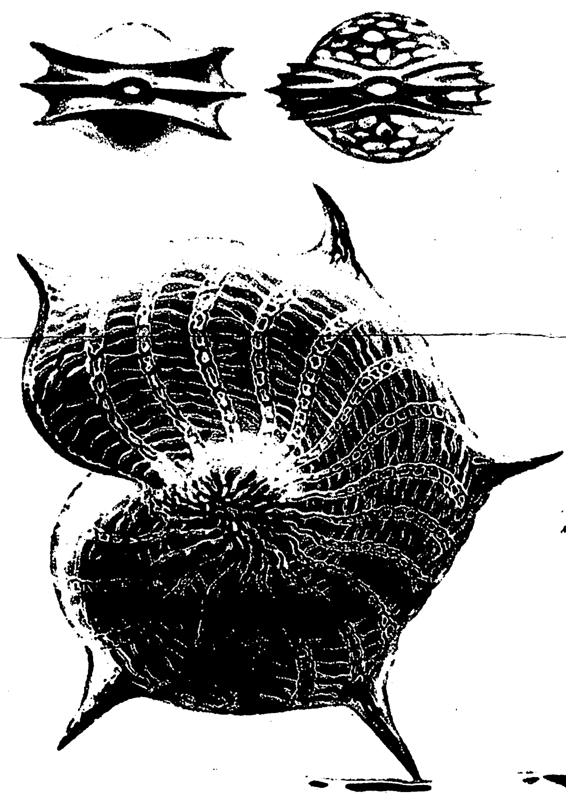
by
Nicholas Rosa

Illustrations by Nancy Warner

OCEANS Number 6, 1979

All the microfossils in the deep ooze have living modern counterparts that are still making ooze. Below are the major classifications of ooze.

RED CLAY is not derived from nor related to the red clays of the land. Red clay occurs where extremely small inorganic particles are plentiful and well oxidized. The particles consist of fine dust and silt from the land, fine volcanic ash, and perhaps inorganic precipitates from the seawater. A red clay may contain organic components such as diatom tests and protozoan shells, but the inorganic material predominates. Red clay is the largest of the oceanic drift--the relentless "snowfall"--the ooze.



foraminiferans, enlarged

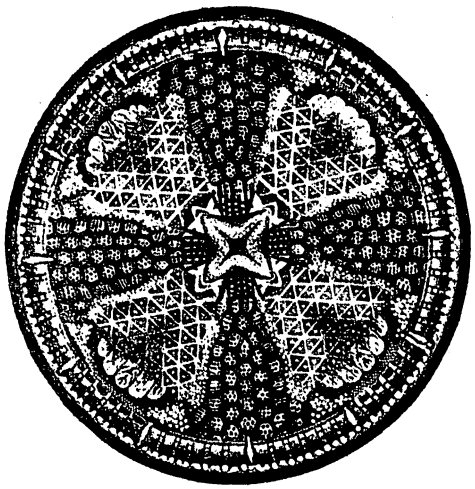
GLOBIGERINA OOZE. Certain amoebalike protozoans have tiny limy "basket" shells, perforated all over. Through the perforations the little animals protrude leg-like extensions of the inner cell material--their pseudopods. The pseudopods are used for locomotion and for capturing smaller organisms. The entire group is called the foraminifera, and the most prominent genus is Globigerina. This ooze is the second most important deep-sea sediment. When a ~~globigerina or other foraminiferan outgrows~~ its shell, it secretes a new one, while hanging onto the old. This happens a number of times in the lifetime of the organism. The result in some species is a straight, tapering series of shells. In others, the line of shells curves, or curls into a spiral. Spiral forms roughly resemble the chambered shell of a nautilus, but on miniature lines.

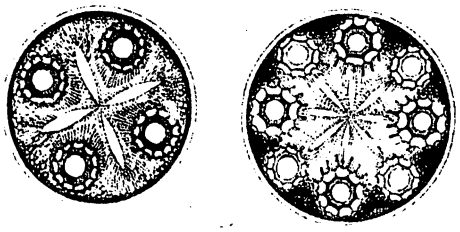
For reasons not completely understood, warm-water populations of the genus Globigerina coil their shells to the right, and cold-water populations coil to the left. At least about 95% of the members of a population will coil in the "preferred" direction. Also in some foraminiferans, the proportions of the isotopes of certain chemical elements differ between the warm- and cold-water forms. Index fossils coiling one way or the other tell the scientist much about the climate and ocean regime of the time in which the fossil foraminiferans lived.

Most globigerinas and related forms are bottom-dwellers in shallow water. About one percent of all the known species, ancient and modern, took to a pelagic life, drifting in the plankton of the surface waters of the open sea. But these few species at any time have been most prolific, and have produced the great deposits of deep-bottom "globigerina" ooze.

"no vestige of a beginning--
no prospect of an end"

EVOLUTION OF THE EARTH
Robert H. Dott, Jr.
Roger L. Batten





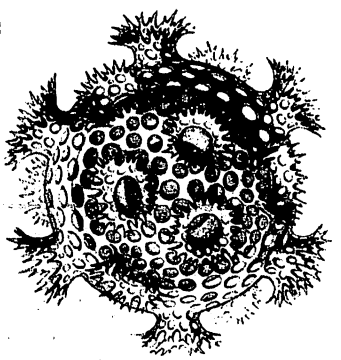
diatoms, enlarged

DIATOM OOZE is a product of cold temperate and polar water. A diatom is a single-celled plant of the algal group encased in a two-part glassy shell or test. The test has intricate patterns of larger and smaller perforations which enable the tiny plant to absorb nutrients from the water and to discharge oxygen and wastes into it. The tests are made of opal, a form of "hydrated silica". Opal is hard, not very soluble in cold water, and transparent.

When a diatom outgrows its test and divides into a pair of daughter cells, each new cell keeps half the old test and secretes a mate to it. Discarded tests sink toward the bottom. Diatoms are grazed upon by the countless billions of small planktonic animals. The animals shed undigested tests in their fecal matter which ultimately settle downward. Diatom ooze may contain up to thirty percent coccolith material. Coccoliths are limy platelets made, like clamshell, of forms of calcium carbonate; and they are much smaller than the already microscopic diatom tests.

Diatom ooze is abundant in the polar seas and parts of the northern Pacific and Atlantic Oceans.

RADIOLARIAN OOZE accumulates in cool rich water, like diatom ooze, and in deeper water than globigerina ooze. Radiolarians are also single-celled amoeba-like animals, but instead of a limy basket shell, they have a spiky internal skeleton made of opal (like the diatoms" tests). This ooze builds up at rates between one and two centimeters (2½ centimeters = 1 inch) per thousand years, and covers less than ten percent of the cold ocean floor.



radiolarian, enlgd

PTEROPOD OOZE. Pteropods are cousins to the crawling snails, but they drift in the plankton near the ocean surface. The snail "foot" is divided and extended into a pair of "wings" by which pteropods "fly" in the water. The function of the "flight" is to keep them in the productive sunlit layers, where their food is plentiful. Pteropod ooze is not widespread but has distinctive deposits here and there in warmer, shallower waters. A living pteropod will "fly in a drop of water on a microscope slide.

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WE NEED YOU, Continued

frowning even though they can't smile, yet. Well, after the auction--they may or may not have a fossill--but, you guessed it, you don't have to catch an eye to see the smile, it's just there. We can make it through June.

Now there are still some more who need to smile. You know, they say it helps digestion, and lowers high blood pressure, and takes off years--you know (I'm talking about smiles). Well, this is where WE NEED YOU so you can smile, too. Everyone out there has a fossil to be shared. How about sending it to Gil--no, better still, all of you come to Expo II and bring it!! Ugh! Would that be great. It's true, we need your help. Bring/send a fossil to auction and make some dreams come true.

If you can't make it, send your fossil to Gil Norris, 2623 - 34th Ave. Ct., Rock Island, IL 61201. I can see Gil smiling now.

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The Mid-America Paleontology Society (MAPS) was formed to promote popular interest in the subject of paleontology, to encourage the proper collecting, study, preparation, and display of fossil materials; 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 Sosieties, 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 $6.00; individual membership $5.00; junior membership $3.00 (between ages 8 and 16); dealer membership (non voting) $20.00.

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

President: Don Good, 410 NW 3rd Street, Aledo, IL 61231

Vice President: Wallace Harris, 325 E. Franklin, McComb, IL 61455

Secretary: Tom Miller, 3219 West Locust St., Davenport, IA 52804

Treasurer: Alberta Cray, 1125 J Avenue, NW, Cedar Rapids, IA 52405

DIGEST Editor: Madelynne Lillybeck, 1039-33rd St. Ct., Moline, IL 61265

CYATHOCRINITES

MID-AMERICA PALEONTOLOGY SOCIETY

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Dated material - Meeting notice