FROM YOUR PRESIDENT

It is the beginning of a new year. A time when one reflects on past accomplishments and sets new goals and objectives. During 1982 MAPS continued to grow in membership and hosted another very successful Exposition. Also, I'm pleased to report that our finances are in pretty good shape. The new brachiopod program is progressing with the goal for completion EXPO V. Requests for use by many of you have been received. Watch the Digest for an announcement of its completion.

What are our plans and hopes for MAPS in 1983?

1. We anticipate our membership will reach 500 families for the first time.

2. Several new programs are in the making and we believe at least 2 (one on corals and one on plants) will be completed this year.

3. Another EXPO will be held in April. It promises to be even larger and better than any other. Whether you can join us at the EXPO or not, each family unit is encouraged to donate at least one good specimen to be auctioned during the EXPO. This should be mailed right away to assure arrival prior to the big event.

(May be mailed to: H. Paul Rechten, 7405 Shields, Harvard, IL 60035 — 815-943-4178. (continued page 2)

MARK YOUR CALENDARS

5 Feb MAPS Meeting -- Southpark Mall, Moline, Illinois.

9 a.m. 5 to 5 p.m. JOIN US IN THE MALL
2:00 p.m. Board Meeting, Southpark Displays - Literature - Comaradie

The purpose of this meeting is to expose our club to potential new members. It should be a festive day. The more the merrier.

Location: Mall in front of Wards SEE YOU THERE!!

15 Apr -- EXPO V -- Macomb, Illinois
16 Grand Ball Room, Western
17 Illinois University

28 Oct -- Austin Paleontology Show -- MAPS
29 Pottsboro, Texas, west of Dennison.
30 See page

1984 -- 13, 14, and 15 April -- EXPO VI

"A LOVE OF FOSSILS BRINGS US TOGETHER"
SECRETARY'S REPORT

The January MAPS meeting was called to order at Augustana College, Rock Island, Illinois, by Don Good on January 8, 1983.

Reports from the secretary and treasurer were approved.

Don Good reported that room reservations for EXPO V are being received.

Gil Norris reported that there will be an exhibit by rock clubs at the Southpart Mall in Moline on February 5 and 6. Hours will be 10 a.m. - 5 p.m. on Saturday, and from 12 noon - 5 p.m. on Sunday. The planners expect about twenty display and demonstration tables.

Alberta Cray reported that the new patches being designed for MAPS members are still in the ordering process. She is hopeful that they will be available at EXPO.

February is the fifth anniversary of MAPS.

Dr. Hammer, Augustana College, presented a fascinating slide lecture on "Triassic Vertebrate Fossils of the Antarctic".

Respectfully submitted
Peggy Wallace, Secretary

FROM YOUR PRESIDENT, Continued

4. MAPS will be determining ways it can be more supportive to our scattered membership, both on an individual level and for newly formed fossil groups. The entire January meeting of the Executive Committee was devoted to this topic.

Lastly, I wish a good new year for each of you. May this be a year you make some really great finds.

Don

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AUDIT REPORT

Beginning Balance $2,098.39
Income 7,251.10
TOTAL $9,349.49

Expenses for 1981-1982
Disbursements $6,961.73
Ending Balance 2,386.76

TRIASSIC VERTEBRATE FOSSILS OF THE ANTARCTIC

Dr. W. R. Hammer
Augustana College

The topic presented at the January meeting of MAPS dealt with Triassic vertebrates of the Antarctic. Today Antarctica is characterized by a very harsh climate which is virtually intolerable to terrestrial life. However, during the early Triassic faunal evidence indicates it was much warmer, perhaps even subtropical.

The vertebrates recovered from the Triassic Fre­mouw Formation in the Transantarctic Mountains are all reptiles or amphibians. Most numerous are specimens of various species of mammal-like reptiles, particularly Lystrosaurus. One Lystrosaur species was large (though not "dinosaurian") by modern standards, reaching a length of perhaps eight feet and a shoulder height of 4 to 5 feet. This animal represents the giant of the fauna to date, with other reptiles ranging from small lizard size up to the size of a dog. Both carnivorous (meat-eating) and herbivorous (plant-eating) forms make up the fauna. Lystrosaurus is a herbivorous reptile and actually has no teeth except for two tusks used probably for defense. A sharp beak and correspondingly sharp front edge on the lower jaw allowed the animal to slice off plant material from its stems. Keratinized linings in the roof of the mouth allowed for mastication.

The amphibians of Triassic Antarctica were not at all similar to modern frogs or salamanders. They were subaquatic living in the rivers of ancient Antarctica and looked rather "crocodilian" like (modern crocodiles are reptiles). The large ones (5 to 7 feet in length) fed on fish, while some of the smaller species were probably insect eaters.

Overall this fauna of fairly large cold-blooded animals is typically one of warm temperate to subtropical climates. Yet Antarctica today boasts the harshest climate on the globe (as cold as -127°F in some places during the winter months!) Certainly one of the reasons for the climatic decline was the fact that during the Triassic, Antarctica was still a part of Pangaea (the ancient supercontinent) and did not occupy its current polar position. Other factors, such as warm ocean currents or a different tilt to the earth's axis relative to the sun, may also have contributed to the mild climatic conditions of Triassic Antarctica. These are problems still under consideration as we continue our investigation of Antarctica's past.

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CLARIFICATION AND CORRECTIONS

EXPO V -- HOUSING, UNION

The price of rooms, paid in advance must be rented for both Friday and Saturday. The following price list reflects the price for both nights:

Single $46.00, Double $63.00, 3 people $71.00, 4 people $80.00, Rollaway $6.00

DUES ARE DUE

In order to have your name listed in the Membership Directory dues must be paid. Putting the Membership Directory together is one very big task.

Protect yourself, stay involved in the fastest growing rock club. If you haven't taken time to write that check for $7.00, stop now before you even finish reading the Digest.

Make checks payable to MAPS, send your check to our new Treasurer, Allyn Adams, 612 W. 51st Street, Davenport, IA 52806.

We'd like to begin putting the Directory together within the next couple weeks. Thanks.

MY ERROR

If you are interested in the TEXAS PALEONTOLOGY SERIES, listed as being available in the December issue of the Digest, (p. 3), the following is the correct address:

Paleontology Section, HGMS
7602 Jackwood
Houston, TX 77074

I inverted a number. Sorry! Thank you, Jim Garrison, 155 Pinecone Drive, Lawrence, Kansas 66044.

USED BOOK DEALERS

Someone could have a good time with that heading. In the November issue of the Digest, (p. 3), two addresses were given for the purchase of used books. Neither of those addresses seem to be working addresses. More about that when we are able to report.

OOPS! A BIG FAT BLOOPER

In the January, 1983, issue of MAPS Digest I credited "Ontogeny recapitulates phylogeny" to Wachsmuth and Springer. MAPS member Ulrich Weiss, who is a distinguished organic chemist, called my attention to the fact it is actually Haeckel's law. Seems he learned it as a high school student in Prague, Czechoslovakia back in the 1920's. Of course this was the result of a crossed crossed circuit in my memory bank which seems to happen all too frequently... The law of Wachsmuth and Springer has to do with the position of cirri and angulation of the stem in reference to the circlets of cup plates in crinoids and is too lengthy to be repeated here.

H. L. Strimple

(Ed. comment--makes me feel somewhat better to know I'm in good company. Love the sharp audience out there to keep everything honest. Keep it up!!)

DR. EUGENE S. RICHARDSON JR.

Dr. Eugene S. Richardson, Jr. was curator of fossil invertebrates at the Field Museum from 1946 until he retired in October, 1982. He specialized in the fossils found in the Mazon Creek area near Joliet.

With another Field Museum curator, Gordon C. Baird, he received a 1980 National Science Foundation grant to lead a team of scientists, volunteers and amateur collectors to take a census of the fossils in the Mazon Creek area and to try to reconstruct the ecology of the area as it was 300 million years ago.

He is coauthor of the book "The Paleo-Ecological History of Two Pennsylvanian Black Shales."

Many MAPS members call him friend. The door was always open as long as he was curator at the Field Museum.

The first story I heard of him was how he encouraged people, young and old, to continue in their quest for fossils and knowledge. He had a drawer of little treasures he often shared.

Death came as a release but all of us who knew him have lost a friend.

CHICAGO TRIBUNE--23 Jan.

Dust off your display cases? It's EXPO time, you know.
There has been considerable attention devoted to plates located in the posterior (CD) interray commonly referred to as anal plates. To date there has been no consensus of opinion concerning the origin of these extra plates and indeed it is almost certain that more than one mode of development is involved depending on the lineages.

The late R. C. Moore, in an effort to create common terms, proposed that the lowermost plate in the cup above CD basal be termed the primanal for all crinoids. The area does appear to uniformly mark the passage of the hind gut toward the anus and the proposal was accepted by those of us present. Among the inadunates with more than one anal plate this means the element called a radianal became the primanal whereas when only one plate was present which might represent anal X rather than radianal it also became the primanal. The term primanal was actually used in the broad context for several months, as in a major study by Moore & Strimple in 1973.

However, George Ubaghs of Liege, Belgium, who was also a major author of the Treatise challenged the general usage of primanal because the lowermost "extra" plate in CD interray in a camerate crinoid was not identical to the radianal plate of an inadunate crinoid and convinced R. C. Moore, editor of the Treatise, to restrict the term primanal to camerate crinoids. There was never any question about the origin of the plate.

In Section 5 I mentioned the primanal of camerate crinoids which in some lineages is not much different from a radial plate. In the present Section the anal plates of inadunate and flexible crinoids will be discussed.

The Order Disparida (monocyclic inadunates) is characterized as having simple cups and crowns, nonpinnulate arms, prominent radial and oral plates. Asymmetry which is expressed as "bilateral symmetry in different rays" is common, is almost universal in the order. Pentameral symmetry is attained in a few genera (examples, Taidocrinus Tolmochev, Pygmaecrinus Bouska, Metallageocrinus Strimple). Although the cups are simple they are also complicated because of compound radials which are a common feature in chronologically older (primitive) genera. A compound radial is one which is horizontally divided with the distal (upper) section called a superradial and bearing the arm. One scenario for the origin of the radianal (RA) plate is that it represents the lower radial (inferradial) which has migrated from the C ray into the CD interray. In my opinion such migration does take place in some lineages but it does not follow that it applies to all inadunate crinoids. For example, in the little Ordovician genus Eustenocrinus Ulrich there are compound radials in all five rays, primibrachs I are nonaxillary and are said to be "fixed", what would normally be the C ray arm has been captured by the hind gut and serves as an anal tube so that primibrach I has become anal X in the C ray.

The Order Cladida (dicyclic inadunates) includes a varied assortment of crinoids. The Suborder Cyathocrinina includes forms having five to no anal plates in the cup (rarely more than three). When more than three anal plates it is rather obviously due to a widening of the posterior interradius and incorporation of tegmen plates in the cup. At least the cladids are not plagued with compound radials, although Carabocrinus of Ordovician age has a compound radianal. In general the cyathocrinines retain a narrow radial articular facet (primibrachs do not fill the upper width of radials).

The Suborder Dendrocinina of the Order Cladida is said to have three to no anal plates. Some primitive forms (e.g. Ottawacrinus, Merocrinus, Cupulocrinus) have what can be termed one or more compound radials. There is only one such element in Merocrinus and it is interpreted as being an inferradial in the Treatise primarily because the anal tube (and anal X) is developed as a half arm above C radial. It might be more correct to interpret the "inferradial" as C radial and the plate above as an axillary primibrach I. This is a problem I will be forced to face again in the not too distant future in
Figure 2. Sketches of the posterior (CD) inter-ray as found in selected individual Late Paleozoic inadunate crinoids. No two individuals belong to the same genus. Those to the left demonstrate migration of anal plates in which the radianal is the last remaining in the cup; to the right the radianal is resorbed and anal X is the last remaining in the cup. Letters represent position of radials; diagonal lines the radianal (RA); horizontal lines the right tube plate (RX); stippling the anal X.

studies under way but am not prepared to consider it further as I write this. It is hard to realize I started to worry over this very thing over 20 years ago while working on Bulletin 100 for the Oklahoma Geological Survey.

Suborder Poteriocrinina has four, three, two, one, or no anal plates in cup. I would like to think of this group as being better understood than most but realize that many unresolved problems remain. Commonly there are three anal plates in "normal" position, that is, the radianal (RA) is in oblique position to the right of anal X, resting on CD basal but in broad contact with BC basal, supporting RX (or right tube plate) above in broad contact with C radial to its upper right (see Section 4, Figure 1 -- December Digest). Anal X is directly above CD basal, has broad contact with D radial to the left, RA to the right below and RX to the right, extends slightly above the cup where it bears a single tube plate on its upper surface. RX is directly above RA, contacts C radial to the right, a tube plate above, anal X to the lower left. It extends above the cup and is higher than anal X. I have termed this as "primitive" in conjunction with studies of modifications which take place in late Paleozoic time when evolutionary changes take place which lead from three to no anal plates. A rather rare diverse condition exists in some lineages in which the anal plate does not reach the summit of the cup and an anal tube plate enters the cup producing four anal plates. I have observed this in some species of Agassizocrinus, Intermediocrinus and Cryphiocrinus all of which are late Mississippian in age.

Taxonomic studies would be much simpler if crinoids had just realized how helpful they could have been had they evolved in a straight forward, consistent manner. It is almost perverse the way they actually evolve toward the same end result but sometimes by different routes. It is highly probable the radianal is a basic cup plate, probably the C ray infer-radial of older stock and therefore the element could be expected to remain in the cup so long as an anal plate was retained. In many lineages this actually is what happens but unfortunately there are diversities in which the radianal is gradually resorbed and the anal X is the remaining single plate. It is thought that Delocrinus (with one anal plate) evolved from Phanocrinus by migration of RX from the cup and resorption of RA. In the family Cymbiocrinidae it is certain the radianal migrated to posterior position and the remaining single anal plate is radianal. These matters are documented but would require the listing of several references. I don't remember why my studies of this particular phenomenon did not get included in the Treatise but was probably forgotten in the press of other matters. George Ubaghs was aware of it because he used some of my drawings in another study several years ago, and it probably influenced him in rejecting the use of primanal in inadunate crinoid terminology.

The plate diagram of a specimen of Cyphocrinus is illustrated by Figure 3 and is considered in some detail. It is a dicyclic camerate
Fig. 3. Sketches of anal plates of the posterior (CD) interradius of selected inadunate crinoids. The figure to the left represents a somewhat advanced modification, wherein the RX plate has been eliminated from the cup, if the crinoid is evolved from a form like that illustrated to the right. This is not an uncommon situation in late Mississippian or Pennsylvanian time. However, both arrangements coexist in Devonian and earlier time and it is possible that an occasion among these older forms RX migrated from the anal tube down into the cup. The obvious incentive would be to form a broader base of support in the cup itself for the anal sac or tube. In any event I do not consider the two anal plate arrangement to be "advanced" in the older genera.

Many genera of flexible crinoids have a small quadrangular shaped radial anal much like that shown in the left illustration.

Many genera of flexible crinoids have a small quadrangular shaped radial anal much like that shown in the left illustration.

(infrabasals are present) and has recently been placed in a new family Elpidocrinidae by Frest & Strimple along with some other genera. Because this is a basal view the ray designations are counter clockwise starting with A at the bottom. There are a large number of fixed brachial plates and particularly interbrachials in the calyx. Two primibrachs are present in each ray, the second being axillary. First interprimibrachs are large, commonly followed by two plates in the next range and there may be as many as five at the summit of the calyx. The posterior (CD) interray is readily distinguished in that primanal is in contact with CD basal. The pattern of anal plates is 1-3-3-5. Interbrachs are present between half-rays of the fixed arms. Free arms would attach to the last fixed brachials. Interbrachs join tegmen plates.

Anterior (A)

Fig. 4. Plate diagram of Cyphocrinus based on C. gorby Miller. Radials black, lateral interray interprimibrachs lined, CD interray interbrachs dotted (primanal marked X), CD basal marked CD, fixed arms ridged and marked with dashes.

When attempting to compare with other forms notice will be taken that five infrabasals, basals and radials are present and that radials are in contact all around except for the posterior interray where a primanal interrupts, first primibrachs are quite large and followed by numerous plates, fixed arms bear a ray or ridge, there are 10 arms and they are well separated all around, in a basal view the primary interrays are depressed. All of these as well as other factors must be taken into account when attempting to identify polyplated camerate crinoids.

If you find something that "sort of looks like" the above in the Burlington Formation, check harder because it is an older (Silurian) genus.

In crinoids of this nature, that is having very small infrabasals, a problem often arises when the proximal columnals of the stem are preserved because the plates may be partially or entirely covered by the stem.

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(Editor's comment--From Harrell's point of view this is all everyday language. From the lay point of view it is more likely to "whew." These articles lend themselves to an opportunity for a study group. Last fall contact was made with a man who understands and identifies petrified wood--one problem, he lives in Tacoma, WA. MAPS member, Steve Edmondson, suggested getting even 2 people together and with a text, a piece of wood, and at the least a hand lens, go to work. Harrell's articles are a natural for this same procedure. With A Silurian, Mississi-
ILLUSTRATING FOSSILS

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

With this item I intend to start a series of several short articles on illustrating fossils. Because paleontological research concerns objects, that is, fossils, it tends to be very visual in content. Good photographs are indispensable for conveying the information we want to get across to fellow workers.

The photographs for any journal article are invariably in black and white. Color is too expensive. Fossils that are selected for photography should be the best, the most complete, the cleanest that are available. First a background should be put on the fossil. This can be Kodak red opaque or black opaque or washable black ink. The opaque should be diluted with water. These can all be removed later with water although some of the color may penetrate deeply into rock matrix and be impossible to remove. If you don't want any colors left on a specimen you should experiment with less desirable material first.

When the background is dry the specimen is ready for coating. The standard way to provide a white coat is with ammonium chloride smoke. Ammonium chloride is a white powder. When it is heated it gives off a dense white smoke. The fossil is held in the smoke to provide an even light white coating over the black background. There are several reasons for doing this. First, it blots out all color differences that detract from the structure of the fossil itself. Many specimens are blotchy with greys or browns that do not photograph well. Second, you will find that the coating tends to accentuate fine detail and ornament. Third, the white on black background provides a contrasty specimen that should result in a snappy, contrasty print.

The ammonium chloride should be used with good ventilation and you should not breathe the fumes. Heating in a pyrex test tube or narrow-mouthed flask to give a concentration of smoke is best. You cannot touch with your fingers any surface to be coated, so the fossil may need to be mounted on something for coating. I commonly use the blue rubbery typewriter key cleaner. Clay can be used but it is oily and may stain the specimen. Finally, if you try to do this on a hot, humid summer day with no air-conditioning the white coating will sublime and disappear before you can get it photographed. Once you get the specimen coated you are ready to shoot. More on that next month.

*****
PUBLICATIONS

FOSSILS QUARTERLY is a fine paleontological journal which should be of interest to all MAPS members. The articles deal with all aspects of paleontology and each issue is well balanced with respect to the subject matter of the articles therein. These articles are well written, with both the amateur and expert in mind. I find this journal very readable and educational.

As one might well expect of a paleontological journal of this high caliber, there is a MAPS member behind it all, Dr. Richard L. Casanova, the editor of FOSSILS QUARTERLY. Dr. Casanova is a big supporter and promoter of MAPS. Officially, I would like to express our gratitude to Dr. Casanova and FOSSILS QUARTERLY for valuable assistance in the publicity of MAPS.

FOSSILS QUARTERLY is published quarterly. The subscription rate is $9 per year. Send check or money order, payable to FOSSILS QUARTERLY, to Dr. Richard L. Casanova, 3616 Garden Club Lane, Charlotte, NC 28210.

R. W. Heinish
17 Briarwood Court
Indianhead Park, IL 60525

HATS OFF TO R. W. HEINISH

Bob has been the Membership Chairman for MAPS this year. What a Membership Chairman he has been! Have you observed that the new members seemed not to slow down at all this year? Usually they slow to a trickle and then when the ads come out in the trade magazines just before EXPO membership picks up.

This is one of those jobs where one does much work but it's all behind the scene work so no one seems to know. Unfortunately Bob says he can not do this job again next year. Too bad! He's been a dynamo!!

His name comes up every board meeting with smiles and accolades--he's never been there to know.

ARCHAEOPTERYX IN HIDING

Rumours abound in palaeontological circles in Germany that a new specimen of Archaeopteryx lithographica was found by a private collector some time last year. The new find, from the classic Solenhofen-Eichstatt area of Bavaria, is purportedly as good as or better than the two existing complete specimens, one which is in the British Museum (Natural History) where it is undergoing a further round of extensive preparation.

Of the five known skeletons of Archaeopteryx (the sixth example is a single perfectly preserved feather) the "Maxberg exemplar" found in 1956 is the least known, as the owner is loth to allow specialists even a glimpse of it and only a preliminary description has ever been published.

Whereas the neighbouring state of Braden-Wurttemberg has legislation which prohibits the sale of finds of scientific importance without special museum authorization, in Bavaria, where no such legislation exists, it is a case of finders-keepers or sale to the highest bidder. And with prices in the hundreds of thousands of deutschmarks for Pterosaur specimens, what price an Archaeopteryx? Mike Howgate

Dr. Charles Peterson
Columbia, MO

NATURE, 9 December 82

SCIENTISTS STUDY BONES BURIED 10,000 YEARS AGO

Dallas, Texas (AP) -- She was past her prime when she died, and she had been crippled for a long time. Comrades laid her on her side in a shallow grave, drew her legs to her chest, and pillowed her head on her hands.

Ten thousand years later, a Texas archaeologist found her bones. During the millennia since her death, 10 feet of dirt had been deposited on her grave, and the great weight had crushed her skull. But the skeleton was intact--the archaeological find of a lifetime.

Texas Highway Department workers had been digging for a year at the site near Austin, hoping to find and preserve whatever they could before construction began. It was a routine excavation in an area rich in Indian artifacts.

Then, on Dec. 29, Wayne Young turned a slice of earth and saw three skeletal fingers. Two inches away, the rounded shape that proved to be the skull was unearthed.

"It's hard to put into words how we felt," said Young. "People have been looking for early
skeletons in North America for 80 years, and here it was."

Frank Weir, director of the highway department's archaeology division, said only five such graves have been found in North America, and only 10 skeletal remains approaching the estimated age of the early Texas woman. "She could be the oldest; could be as old as 12,000 years. But I'm being conservative, and saying 9,000 or 10,000 until we have an exact age."

The old human bones found so far in North America are fragments from the Anzick site in Montana, thought to be 12,000 years old.

The Texas woman was fairly tall—5 feet 2 inches to 5 feet 4 inches—and Weir said he believes she died when she was between 25 and 35 years old....

There is no way to know how she died. The oval grave, once only one foot deep, was scratched out of the earth with sticks. She was buried along with a tool, a flat quartzite stone with a cutting edge, and a shark tooth that Weir theorizes was part of a necklace.

Carbon dating will determine the age of the bones, a process that will take about six weeks. Then Al Wesolowsky, a physical anthropologist at the University of Texas at San Antonio, will begin studying the bones.

The bones of the head and face will be pieced together, and Weir—who is also a painter and sculptor—hopes to be able to reconstruct the woman's face. "We think that the ancestors of this woman, who is an ancestor of modern Indians, came to North America by crossing the Bering Strait. We hope with this we can find out something about the way they lived, and maybe even what they looked like," Weir said.

Excavating the skeleton took two weeks, and while the archaeologist worked in the deep hole, crowds gathered....

His first awe at the find never left him, he said. "I remember one night, we were camping out at the site, had a big bonfire going, and I was lying there looking up at the stars, trying to get inside her head, trying to imagine what it would have been like 10,000 years ago.

"Just then, a satellite crossed the sky."

THE DESMOINES REGISTER
19 January 83

UNIVERSITY OF IOWA MUSEUM OF NATURAL HISTORY

A major exhibit Gallery in the University of Iowa Museum of Natural History which will utilize the most modern state of the art in exhibition, including dioramas, is in process of being developed. Monetary donations may be made to the University of Iowa Foundation but the purpose of this note is to encourage donation of museum quality fossils which have been found in Iowa or adjoining states. Material is being gathered at present. So if anyone has something they consider to be of such quality they should contact Dr. Holmes Semken, Department of Geology, University of Iowa, Iowa City, IA 52242. If a specimen is accepted for exhibit it will be displayed with the donors name shown on the label. Exhibits will be prepared to last about 25-30 years, which will cover a whole generation. There are presently about 43,000 visitors a year to the Museum and there are certain to be more when the new Iowa Hall is completed, hopefully in about three years.

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ADVERTISING SECTION--

Ads may be placed in the Digest for $3.50 per inch (6 lines). Send information and checks made payable to MAPS to: Mrs. Gerry Norris, 2623 - 34th Avenue Ct., Rock Island, IL 61201.

MALICKS' FOSSILS, INC. INVITES your correspondence. Catalog #25 will soon be available. Over 13,000 species of fossils in inventory. I'm prepared to purchase unusual fossils, estate collections. Do you collect fossils that I don't list in my catalog? Add spice to your collecting activities by communicating with me.

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Baltimore, MD 21214
301-426-2629

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FOR SALE

Stylemys nebrascensis (tortoise) SKULL, SHELL, forelimb, prepared and mounted. For more information call or write: DOUG JOHNSON, P. O. Box 184, Donnellson, IA 52625 -- 319-835-5957.

*****

It's MAPS fifth birthday. How about a celebration at EXPO VII? Yeah!!
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: Don Good, 410 N.W. 3rd Street, Aledo, IL 61231
1st Vice President: Doug Johnson, Box 184, Donnellson, IA 52625
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