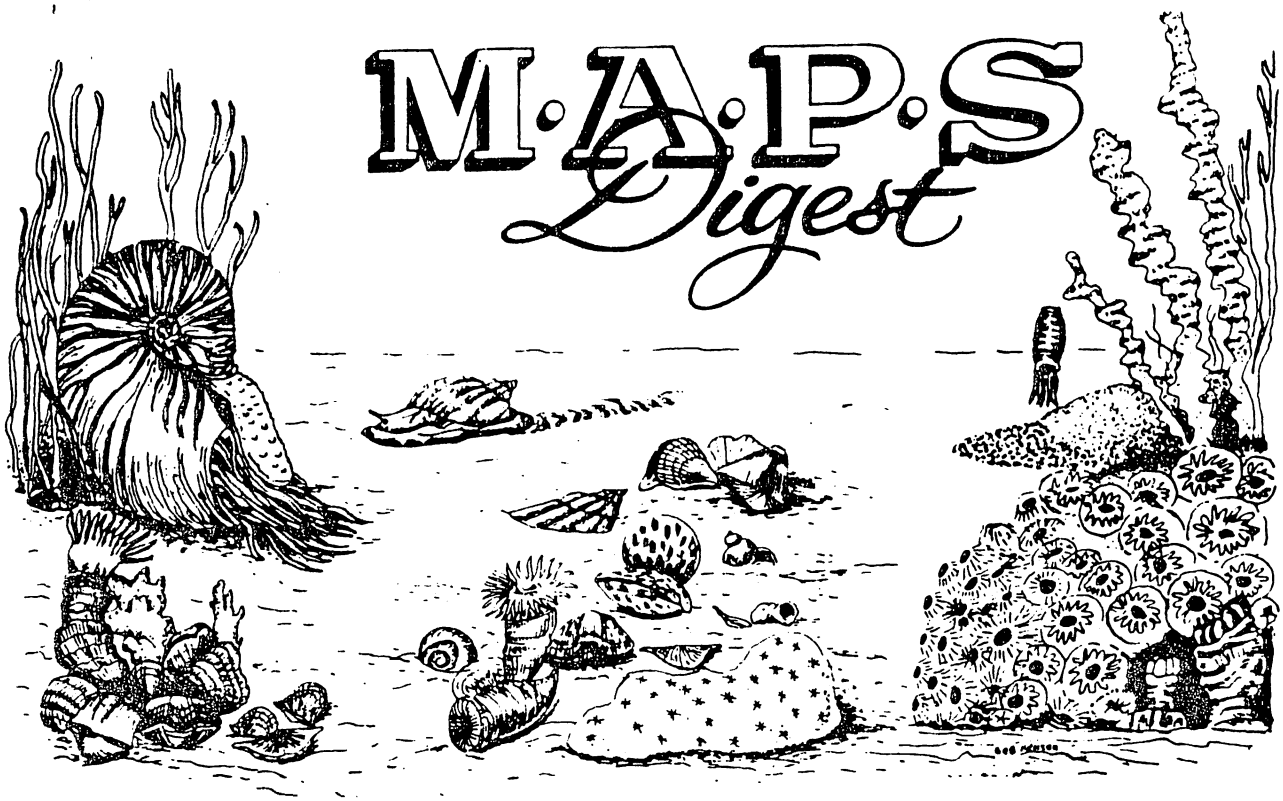
VOLUME 8

M·A·P·S Digest

NUMBER 2



Official Publication of
Mid-America Paleontology Society

February, 1985

MEET YOUR OFFICERS

Howdy! My name is Jeff Nekola and for the next year I will be your second-vice president and field trip chairman. I hope I will be able to schedule some interesting trips for you during this time. I am a biology student at Coe College in Cedar Rapids, Iowa. I have been collecting fossils and minerals for 11 years, and have spent most of my time in the Devonian, Silurian, and Ordovician in northeastern Iowa. My major interest in phyla of fossils are the trilobites and echinoderms. I also avidly collect plant fossils, and have spent most of my time working on Pennsylvanian material from east and south central Iowa.

While fossil collecting is one of my major hobbies, it (and geology) are not my major fields of study. I am studying botany at Coe, and have been working for the past four years as an endangered species botanist for the Iowa Natural Areas Inventory, working specifically with select communities (which normally have a high density of rare and endangered plant species) in eastern Iowa prairies and woodlands. Often, my interest in geology has helped my searching for now endangered plant populations, as many endangered plant species are restricted to definite soil and geologic sites. As such, I spend most of my time in the field hunting for endangered plant species, but at the same time am able to enjoy geology and fossils as well.

Happy Birthday

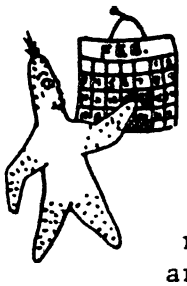
MARK YOUR CALENDARS

9 Feb -- MAPS MEETING -- Augustana College
Rock Island, Illinois
1:00 p.m. Board Meeting
2:00 p.m. MAPS Meeting
DR. RICHARD ANDERSON, Chrmn Geology Department, Augustana College will speak on Mississippian Stratigraphy in Relat to the Upper Mississippi Valle (Minnesota to Missouri)

3 Mar -- MAPS MEETING -- Augustana College
Rock Island, Illinois

19 Apr -- EXPO VII -- Plan to be there.
20 Filled with:
21 LOVE -- Ask the Hammons
LEARNING -- Ask Don Good
LAUGHTER -- Ask Tom Witherspoon
LOOKING -- Ask Tom Walsh
LONGING -- Ask Anyone!!

"A LOVE OF FOSSILS BRINGS US TOGETHER"



MINUTES OF THE MEETING

The January, 1985, meeting of MAPS was called to order at Augustana College by President Marv Houg. The minutes of the December meeting were read and approved. Allyn Adams reported that the January balances are: $431.22 in checking; $1,169.99 in savings for a total of $1,601.21. The report was approved as read.

The thirty members present at the meeting voted to postpone the regular February meeting for one week from February 2 to February 9. Same time 2:00 p.m.; same place Augustana College, Rock Island, Illinois.

EXPO update: Plans are made for three exciting days to meet old friends, to make new ones, to share collecting experiences and exciting newly discovered specimens. Check your January Digest for reservation details. Look forward to hearing Fred Collier, Collections Manager for the National Museum of Natural History talk about bryazoa (Hooray!) and see his exhibit as well as a demonstration of a peel technique for examining fossil sectioning.

The speaker for next month's meeting is Dr. Richard Anderson, Chairman of the Geology Department, Augustana College, Rock Island. His topic is "Mississippian Stratigraphy in Relation to the Upper Mississippi Valley--Minnesota to Missouri".

Madelynne Lillybeck reported that a "barometer meeting" for the organization of a new fossil club, "Falls of the Ohio River" in the Louisville, Kentucky, area will be held on January 25. The club will be a Chapter of MAPS. (Good luck Alan Goldstein and Charlie Oldham in your organizational take-off.)

The business meeting was adjourned.

Members watched an excellent film, This Land "North America and How It Came To Be". The film, a documentary of the geological formation of North America, was produced by the Shell Oil Company.

Respectfully submitted,
Peggy Wallace, Secretary

MEET YOUR OFFICERS, CONT'D.

Peggy Wallace, Dubuque, Iowa, has been a MAPS member since 1978. She has served as Secretary and President and is the 1985 EXPO Chairman.

Peggy has been a Junior High School English teacher in the Maquoketa Community Schools, Maquoketa, Iowa, for fifteen years. Students bring all sorts of fossil specimens to talk about and share.

The field trips, anywhere, for any kind of fossils, are exciting experiences. Blastoids, cystoids, gastropods and bryazoa are her favorite fossils to find. Just now her favorite collecting site is a road cut west of Dubuque where she finds many micro and thumbnail Ordovician fossils. One of her favorites is a tiny split cephalopod that shows all the chambers and the siphuncle.

Devonian Starfish and Crinoids from Bundenbach, W. Germany, for sale or trade. Quality specimens for $15 and up. Also available a complete baby Ichthyosaur of best quality and preparation. About 24" long.

Please send a self-addressed stamped envelope for List - 2.

CHRIS COZART
1633 Jasper
Wheaton, IL 60187
312-462-9778

LOVE THOSE MAZON CREEK AND OTHER CARBONIFEROUS PLANTS? For the first time in over 100 years the Lesquereux Coal Flora Atlas (1879) of 80 plates with over 500 illustrations will again be in print. This is a fine example of 19th century lithography. Many of the names of plants were later reivised or placed in synomony but Lesquereux is cited almost universally by later authors. Send no money, you will be billed at time of publication for $19.95

Dan R. Chlipala
220 S. Roselle Rd., Apt 207
Schaumburg, IL 60194

(Must have 100 orders before Lesquereux Coal Flora Atlas can be printed. Give a friend a gift.)

BOOKS -- ARTICLES -- FILMS

Shell Oil Films, Modern Talking Picture Service 5000 Park Street,N., St. Petersburg, FL 33709 Phone 813-541-5763.

THIS LAND, a documentary of the geological formation of North America. Thanks to JIM and SYLVIA KONECNY, Prescott, Arizona. One could see this film several times and learn more each time. Other films available.

FOSSILS MINERALS & ROCKS, Collection & Preservation. Croucher & Woolley. British Museum (Natural History) London, The Pitt Bldg., Trumpington St., Cambridge CB2 1RP OR 32 East 57th Street Place, NY, NY 10022 OR 296 Beaconsfield Parade, Middle Park, Melbourne 3206, Australia

FOSSILS FOR AMATEURS. Russell MacFall, Jay Wollin. Second Edition, 1983. Van Nostrand Reinhold Company, 135 West 50th St., NY, NY 10020

THE FOSSIL COLLECTOR'S HANDBOOK. James Reid MacDonald. Prentice-Hall, Englewood Cliffs, NJ 07632, 1983.

SMITHSONIAN, November, 1984, pp 101-108. "Preserved Intact, Prehistoric Flowers Bloom Once Again". (Unbelievable!!)

AMERICAN SCIENTIST, November-December, 1984 pp 558-566. "Taphonomy and the Fossil Record".

THE RESEARCH CORNER -- Copyrighted

STRATIGRAPHIC UNITS--Dr. N. Gary Lane, Chairm.
Geology Department
Indiana University
Bloomington, IN 47405

Many fossil collectors do not appreciate the importance of accurate stratigraphic placemen of the fossils that they collect. If they know the formation from which the fossils were obtained they are content to record that perhaps without independently checking the formational identification to make sure that it is correct.

The value of any fossil--scientifically or hopefully monetarily--should be based in part on whether there is detailed stratigraphic information and locality information ascribed to the specimen. If not, the specimen is virtually useless for modern studies. The collector should know from precisely which bed a fossil was obtained and that information should be recorded. If the specimen was a loose, float specimen that should be recorde. A specimen without this information is generally useful only in a limited taxonomic sense. That is, you can put a name on it but that is about as far as you can go. Putting a name on a specimen does not usually do much to advance the science of paleontology.

Generally speaking there are two broad kinds of studies in paleontology--evolutionary studies and paleoecological studies. In the first we want to determine what kinds of changes occur through time in the skeletons of fossils. Suppose a formation contains 3 species of one genus. We want to know how those 3 species occur within the formation. Are they in sequence--species 1 at the bottom, species 2 in the middle, and species 3

at the top? Or, do all 3 species occur together from top to bottom? Or is there some othe pattern? Only by careful attention to precisely where each specimen is collected can a paleontologist answer these questions. It should be obvious why accurate and detailed recording of stratigraphic position of each fossil is essential.

Now let's take the second kind of study--a paleoecological one. In this area we want to understand the relationship of fossils to the surrounding sedimentary rock and to each other. We want to record which species occur together and which occur in mutually exclusive beds, which occur in limestones or in shales, or in both. Again, detailed notes must be taken in the field while collecting the fossils for the specimens to have any use at all in these kinds of studies.

THE FOSSIL RECORD AND THE DRIFTING CONTINENTS

-- John A. Rivers
47 Revella Street
Rochester, New York 14609

A geological revolution has taken place during the 20th century, i.e., the theory of Plate Tectonics. This theory, which almost sounds like something from a science fiction novel, proposes that the surface of our planet is mobile and consists of many crustal plates which "float" on a sea formed by the semimolten interior of the earth. It further proposes that the surface of the planet is constantly changing in response to dynamic forces within the earth.

The theory proposes that these major land masses have been continuously moving since their formation during the pregeological time (before the PreCambrian Era). During the middle and late parts of the Paleozoic Era the earth's continents came together to form a supercontinent known as Pangaea. This giant land mass was in turn made up of two lesser masses of approximately equal size. Laurasia (which consisted of the larger parts of Asia, Europe and North America) in the northern hemisphere--and Gondwanaland (Africa, South America, India, Australia and Antarctica) in the southern hemisphere.

To most collectors of fossils the study of Continental Drift must seem to be a very dry pill to swallow, but this needn't and shouldn't be. The many oddities found in the fossil record make it a very interesting subject. For the geologist, fossils provide support for the theory, for the paleontologist the theory explains why fossils are found in their present locations. Certain types of fossils support the supposition of a supercontinent better than others. Land dwelling vertebrates offer the most convincing evidence. In most cases a solid connection between continents would have had to exist if these creatures were able to move from one continent to another. Airborne creatures would have been able to cross water barriers and so are eliminated as evidence for land links.

To make it simpler to explore these happenings, I am going to break the events into two geographical parts. First we will examine the history and componants of Laurasia.

The wanderings of continents prior to the Cambrian Era are not too well understood. However, by the middle of the Cambrian, North America is thought to have lain astride the equator, with the equator running roughly from Baja California northeast through the central part of Canada's Northwest Territories. By the late Devonian Period, North America had drifted south and rotated until the equator ran from Oregon on the west coast through Baffin Island, Canada, on the east. The continent then began to move slowly northeast until it collided with Europe.

This movement helps to explain why fossil corals (found today living only in tropical and sub-tropical waters) and huge coral reefs are found across the northern portion of North America, in sediments deposited during the Paleozoic Era. It also explains the existance of huge subtropical forests which grew across North America during the Carboniferous Periods, and which formed our present coal deposits.

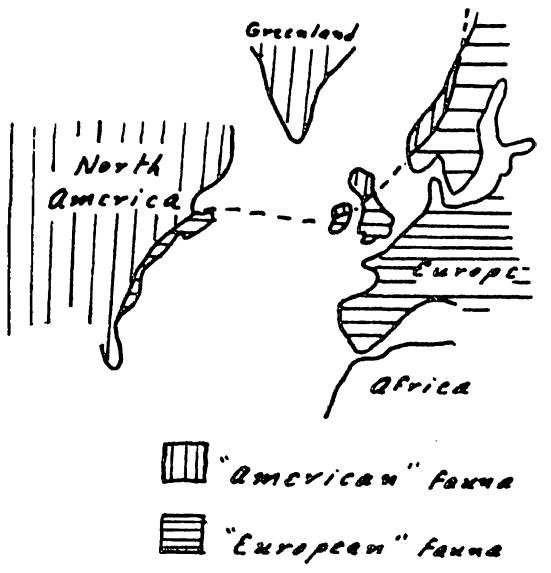
Although the remains of fresh water fish are usually regarded with suspicion as indicators of continental land links it is interesting to note that at the present time, with the Atlantic Ocean as a barrier, of 32 genera of fish found in North American Lakes and streams only 22 percent are also found

.n Europe. This was not always so. In 1968 Alfred Romer showed that during the Devonian Period of 58 genera found then in North America 57 can be also found in European red beds deposited during that period. The only way so many genera could be common on both of these continents would be if there were no salt water barrier to impede their movement from one continent to another.

Approximately 275 million years ago (during the Permian Period) North America, South America, Europe and Africa came together to form the supercontinent Pangaea. The force of this collision buckled both continent's coastal regions forming mountain ranges. This crash also resulted in a weakness in the continental crust near the line of impact. About 230 million years ago these continents began to pull apart. As they separated, a portion of Europe remained attached to the North American continent and parts of North America became part of Europe. The reason for this was a fault which appears to run through the western portion of Norway, across Scotland and then appears to correlate with the Lake Char Fault which runs across western Newfoundland; Quebec (just south of and parallel to the St. Lawrence River); the western portions of Vermont, Massachusetts and Connecticut; the southeastern tip of New York; central New Jersey; the southeastern corner of Pennsylvania and continues south through Maryland. For fossil collectors, the interesting part about this fault is that the two sides are hosts to entirely different assemblages of marine fossils. Areas to the west of the line are typical "American" fossils while those on the east side are of "European" types. This would indicate that western Norway and portions of Scotland and Ireland are transplanted parts of North America while Nova Scotia, New Brunswick; portions of Newfoundland, Quebec and New England were originally parts of the European continent.

By the late Cretaceous, North America had drifted to the west and rotated counterclockwise, opening the southern portion of the North Atlantic. This brought the northeastern part of Asia into a reasonably close proximity withthe northwestern part of North America. The fossil record on both sides of the Pacific Ocean, at this time, bears a very strong similarity to each other. The remains of dinosaurs ranging from small coelurids to huge tyrannosaurus and sauropods are very similar in both Mongolia and western North America. The Tarbosaurus of Mongolia is so closely related to the Tyrannosaurus of North America that the difference is hardly noticeable. This also holds true for most of the other dinosaurs who inhabited these two continents.

This suggests that there was a land bridge of some kind which made it possible for dinosaurs to move freely, back and forth, between the two continents.



The connection between Siberia and North America may have been a series of Islands lying in close proximity to each other during the late Cretaceous but by the early Cenozoic, further drifting of the continents had probably established a solid land bridge. Evidence for this can be seen in the Paleocene age mammalian fauna of Mongolia consisting of rodent-like mammals, insectivors and various hoofed animals. Many of these small mammals apparently migrated from North America.

I am hoping to travel out West this summer in search of fossils. I understand Texas is a good state in which to collect ammonites If possible I would also like to collect Mazon Creek nodules. Can MAPS help me find information about collecting sites?

Gary Lumannick
11770 S.W. 29th St.
Miami, FL 33175

TRILOBITE MOLTING

by

Lloyd & Val Gunther

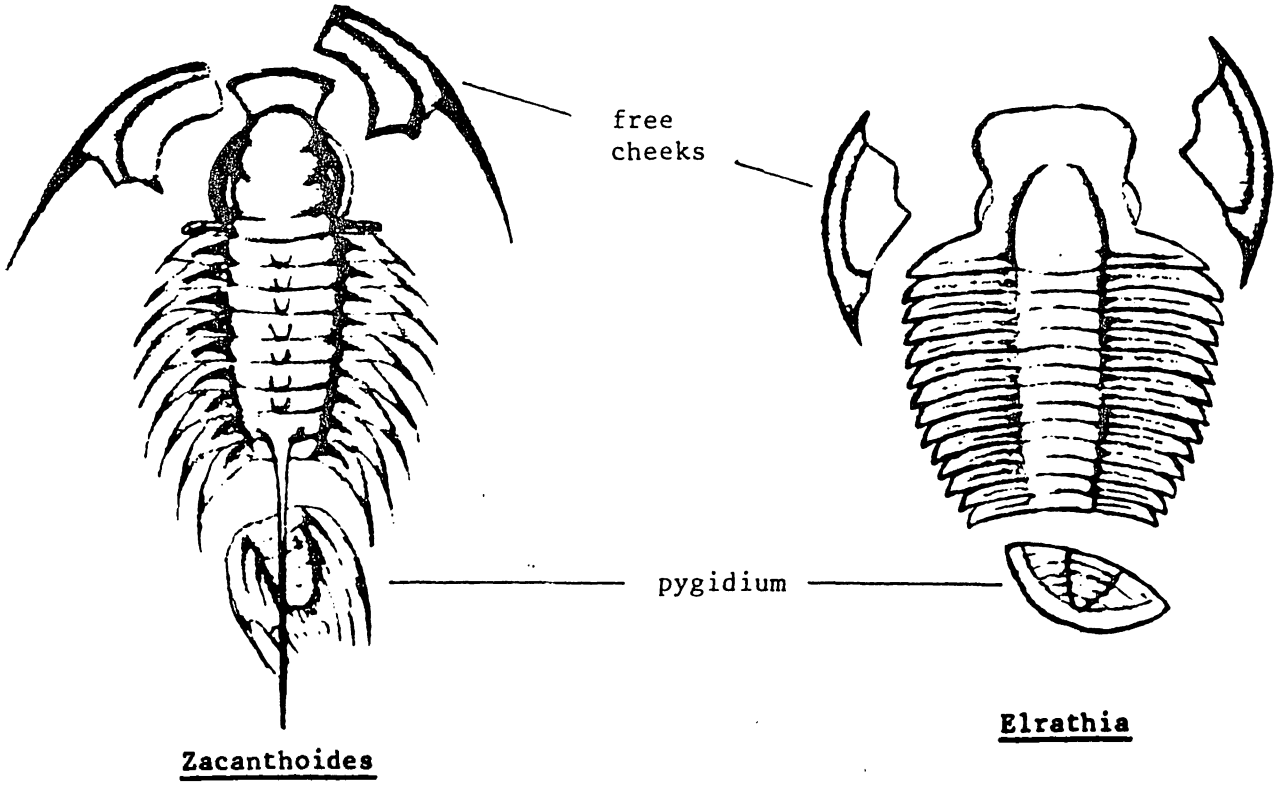
Trilobites, like other arthropods, grew by molting. Having a hard chitinous unyielding exoskeleton, the animal had to shed its old "skin" periodically in order for growth to take place. This rapid growth stage took place only during the brief period after the trilobite had shed its outer coat.

Molting is considered to include all the processes of withdrawal from the old integument, to the subsequent tissue growth. The words ECDYSIS and EXUVIATION are used to describe this process. Ecdysis involves both a passive phase and an active phase. During the passive phase, the trilobite increases its water intake and thereby increases in size. This swelling results in the old exoskeleton parts separating at the weakest points, the sutures. The active phase of ecdysis is termed exuviation and involves the active withdrawal of the animal from its old exoskeleton.

Most of the trilobite remains we all find are the exuvia or shed parts. These are often recognized as the "heads", "tails", body segments, and free cheeks of the animal. Often these are found in abundance and oftimes referred to by collectors as "hash". This accumulation of parts usually being the result of having been transported there by waves or currents before burial.

Since trilobites, during their lifetime, molted many times, the chance of finding the entire preserved animal is small compared to finding the shed parts.

The early stages of molting are illustrated in the sketches below:



PLEASE MAKE THE FOLLOWING CHANGES TO UPDATE YOUR MEMBERSHIP DIRECTORY:

CODY J. ACKERMAN
203 E. Signal Dr.
Rapid City, SD 57701
605-348-1655

Meat cutter. Will not trade. Major interests are fossil vertebrates and invertebrates from South Dakota. Also have small mail order business in my home-- C & J FOSSILS

WILLIAM BEAVER, 77 River Meadows Dr., Lodi, CA 95240

ROBERT BILLMAN, 2318 E. Sandra Sue Dr., Overland, MO 63114 -- Phone -429-7336

DAVID BRADBURY, 516 S St. Andrews, Los Angeles, CA 90020 -- Phone 213-388-9187

JOHN, KATHY, & KRISTAN, CATALANI, 408 Justine Ave, Bolingbrook, IL 60439

HOWARD & DARLENE EMRY, 719 Opal, Boise, ID 83705

JERRY & BONNIE FAUROTE, 1071 Plum Valley Dr., Crete, IL 60417

FRANK & RAELEE FRAZIER
7995 E. Mississippi F-24
Denver, CO 80231
303-355-7794

Sr. Research Geologist/Fine Art Bronze Studio. Collecting 25 years. Primarily interested in trilobites and the classic collecting localities. Wants to see greater contact between amatures and professionals. Not very interested in trading.

STUART GRIEVE, 226 N. Railroad, Laramie, WY 82070 -- Phone 307-742-2079

MARIE HAALA, 1538 S. Bluff Blvd., Clinton, IA 52732 -- Phone 319-242-3849

FRANK & MARY HOLTERHOFF, 2816 Sausalito Drive, Carrollton, TX 75007 -- Remove Phone #

AL, JACKIE, JASON, & TRACY JANESKY, 111 River Rd., New Milford, CT 06776

LARRY MARTIN
3987 Queen Ann Dr.
Orlando, FL 32809

Add the following to nodule: "Dealer in fossils from Florida and elsewhere, will buy, sell or trade."

TOM A. MILLER, 4035 Sturdevant St., Davenport, IA 52806

LARRY L. OLIVERI, 257 Bixby Dr., Milpitas, CA 95035 -- Phone -943-9554

STAN HYNE, 708 Mr. Vernon, Ann Arbor, MI 48103

MARK GOOD, 7704 Enfield Ct., Apt. 3-11, Norfolk, VA 23505

KEN OLSON, 514 6th Avenue, N, Lewistown, MT 59457

RICK & JOELLEN POROPAT, 6425 Alamo Ave., Clayton, MO 63105 -- Phone 314-725-6984

GARY RUDOLPH, 1301 Jester Court, Brunswick, OH 44212

JOHN SCHROEDER, 600 Moulton #201, Los Angeles, CA 90031 -- Phone 213-227-5606

DOUGLAS E. SINCLAIR, 308 5th Ave., Charles City, IA 50616

TOM & LINDA ARNOLD P.O. Box 331 Richlandtown, PA 18955 215-536-6038	Tom/Musician, computer programmer, Linda/Pressroom Mgr. Will trade. Major interest vertebrate (shark teeth, whale/porpoise, reptile etc), some invertebrates. Trade: Miocene vert. & invert. (MD, VA, NC), Cretaceous vert & invert (NJ & TN), Devonian (PA) invert. Wants to learn/ to share acquired knowledge & to increase fossil collection.
GEOGGREY BARRETT 2838 38th St. S.W. Calgary, Alberta CANADA 403-246-8738	Toolmaker. Will not trade. Major interest invertebrates especially corals & brachiopods. Wants to contact others with similar interest.
CHARLENE BERRY 1409 Nicole Lane Mountain Home, AR 501-425-8003	Will not trade. Major interest Mississippian crinoids, blastoids, and micro-fossils. Wants to meet other people with the same interest.
DAVID M. BLAIR N 67 W 33441 Cay K Stonebank, WI 53066 No Phone	Machine Operator (plastics factory). Will trade. Major interest trilobites. Has Wisconsin calymene trilobites for trade. He's crazy about fossils.
(MRS.) RUTH B. BRODERSON 2262 North Richmond Avenue Wichita, KS 67204 316-838-4914	Retired journalist. Not prepared to trade at this time. Interested in all fossils. Wants to associate with others interested in paleontology, to learn from them, and to study the fossils I collected in many locations 25 to 30 years ago.
JOSEPH ALFRED BUTCH 111 Cedar Road Cheektowaga, NY 14215 716-836-0366	Geologist. Will trade. Major interest fossil assemblages and associations/paleo ecology, paleozoic invertebrates also interested in Geotechnical Engineering & Environmental studies. Has Old Geology books, technical maps & reports for trade. Interested in paleontology.
J. W. CARPINELLO (JOE) 1310 Lincoln St. N. Chicago, IL 60064 312-473-4754	
DAN R. CHLIPALA 220 S. Roselle RD. Apt 207 Schaumburg, IL 60194 312-351-2647	Tool & Die Maker. Will trade. Major interest Paleozoic plants & animals. Catalog. statistical sample for ecological & lithographic hypothesis. Testing of a flora Delta desposition of plants for possible biostratigraphic statistacal inferences. Any Statistical plant samples out there. Will trade Mazon Creek plants for Paleozoic plants from other locals especially like to get Dev., Miss.
W. KEVIN COLEMAN 1121 Wood Heights Lewisville, TX 75067 214-221-7997 /890-5977	Geologist. Collecting 10 years. Will trade. Interested in all fossils (flora & fauna) with special interest in ammonites & trilobites.
RALPH K. COPPOLA Saginaw Valley State College University Center, MI 48710 517-790-4295 -- O 517-686-6561 -- H	Director of sponsored programs. Will trade. Major interest fossil fish & shark teeth. Wants to learn more about fossils and make contact with others interested in fossils.

FRAN EVELAND
2714 W. Glen
Peoria, IL 6161[illegible]
309-688-8515

Lab Technician. Might trade. Hasn't narrowed down her interest yet. I like collecting fossils and I'd also like to learn more about them. Even though I have collected for several years, I find I don't know too much about names and classification. Like to become familiar with different species. Want to meet more people who are also interested in fossils.

DR. JOHN W. FOX
Director of Anthropology
Baylor University
Waco, TX 76798
817-755-1165

Professor. Will trade. Interested in arthropods (trilobites, crabs, etc), starfish. Have pyritized ammonites. Have Cretaceous starfish from Texas to trade.

add Frazier here

DR. ROBERT GASTALDO & FAMILY
1137 Owens Road
Auburn, AL 36830
205-821-6982

Professor Paleobotany, Auburn Univ. Possibly trade. Familiar with siderite concretions from Herrin, IL and Mazon Creek. Actively working on compression flora from Alabama and Illinois. Now looking for Calamites cones. Professional interest and new contacts.

JOHN & MARY HADAMIK
West Hill Rd., Rt. 2, Box 200A
Vestal, NY 13850
607-748-1412

RICHARD E. HILL
4632 E. 14th St
Tucson, AZ 85711
602-325-9820

Astronomical Observer. Will not trade. Interested in Paleozoic invertebrates--preparation. Maybe trade later. I enjoy preparing specimens, expecially trilobites, as a recreation. My professional & amateur astronomical pursuits leave me little time to do so, but I do enjoy it. We have no local club. Richard Ratkevich may try to stary one.

JOHN H. HUNTER II
105 Arizona Dyess
Dyess A.F.B., TX 79607
915-695-6078

Air Force Pilot. Will trade. Interested Paleozoic trilobites. For trade: Paciphacops raymondi, Reedops deckeri Leonaspis williamsi, Diacalymene clavicula, also brachs. Enjoy trading info with others.

RAYMOND JONES
117 N 4
Arkansas City, KS 67005
316-

Student electrical engineer, K-State University. Will trade. Major interest vertebrates, sharks, Paleozoic and fossils in general. For trade: Fossils from U. Cre. Niobrava (sp?, Ed, can't read) Chalk (shark teeth) & Penn./Permian invertebrates. Wants to trade.

GLEN J. KUBAN
10397 S. Lake Blvd. No k-21
Parma, OH 44130

JAMES D. HOLLADAY
1861 Overcrest
Fayetteville, AR 72701

BILL MAY
6213 Cedarwood
Lawton, OK 73505
405-248-2396

Police Officer. Will trade.Major interest vertebrate Paleontology, shark teeth and spine. For trade: Permian vertebrate fossils; Xenacarthus teeth & spine.

ERNIE & ALICE MCWILLIAMS
2307 Farriers Bend
Friendswood, TX 77546
713-482-3758

Both engineers. Possibly trade. Major interest vertebrates & invertebrate paleontology. Want to broaden knowledge of fossils & locations.

ANNE MARIE MUNGER
49 Evelyn Ave
Phillipsburg, NJ 08865
454-4140-201

Factory Worker. Possibly trade in future. Interested in everything Marine fossils of Atlantic Coastal Plain are available, so shark teeth, teeth of any kind, & trilobites. Wants to expand knowledge of other localities. Be a small part of a fascinating hobby.

ELLICE PRASSE
104 - 4th Ave
Forreston, IL 61030
-938-3104

CHARLES L. RAMAY
10727-D Park Village Place
Dallas, TX 75230
214-368-4948

Geologist. Major interest trilobites and cephalopods.

EDWARD O. RIES
4611-37th
Lubbock, TX 79414
806-799-2722

Engineer. Will trade. Major interest ammonites. Has ammonites for trade. Interested in fossils.

GAILA TIES
2517 Stonecrest
Abilene, TX 79606
915-692-7185

Geologist. Will trade. Major interest cephalopods. Has fossils from Oklahoma & Texas for trade. I love hunting for and collecting fossils.

JOHN R. SCHULZ
P. O. Box 312
Rogers, TX 76569
817-642-3596

Histological Tech.--Also student taking geology. Will trade. Interested in all fossils. Has l. Cretaceous & some Perm. Texas fossils for trade. Wants to learn about fossils and find new areas to look for fossils.

GARY SPURR
1103 Hansboro
Dallas, TX 75224
214-339-4470

Film Processer. Will trade. Interested vertebrates. Has Texas Cretaceous vertebrate material for trade. Interested in fossils.

CHARLES F. STYLES
636 W. Main
Ottawa, IL 61350
815-433-9436

QA Documentation-Review Specialist. Will trade. No major area of interest at this time. Nothing for trade yet. Wants to find, collect, study, identify, and learn what I can about fossils.

VERNON L. SWANSON
RR#1, Box 432
Alexandria, IN 46001
317-724-2460

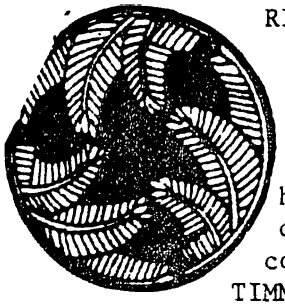
Retired. General interest in all fossils. Wants to expand interest in fossils; learn.

RAYMOND M. THOMPSON
4505 S. Yosemite St.
Stoney Brook #338
Denver, CO 80237
303-773-6990

Consulting Geologist. Will trade. Interested in all fossils and their stratigraphic meaning. Starting to collect as retirement hobby--no trading material yet. Wants broad interest of members & their concerns.

ROBERT H. WARREN IV
12678 Whispering Hills Ln.
Creve Coeur, MO 63140

Ed. Comment--My apologies, Bob. Somehow missed you when you joined. Send information for a nodule and it will be included in the Digest.



RISE OF PLANT LIFE

Title of Fossil Plant Exhibit

The Dallas Civic Garden Center's small collection of fossil plants has been augmented by the loan of the personal paleontological collection of BILL AND CONNIE TIMM, members of the Dallas Civic Garden Center and Mid-America Paleontological Society. . .

These plant fossils are imprints in hardened deposits of mud and sand and illustrate the emergence and successive new forms of plant life with increasing structural complexity.

"The Rise of Land Plants" begins with a pre-Cambrian algae about 4.5 billion years old and ends with fossil wood samples from the Cenezoic of about 25 million years ago, when modern plants, conifers, and flowering types had developed. Petrified wood samples from the Houston, Harris County, Texas, are on display and date from the Cenozoic.

The exhibit presents an outline of changes occurring through the course of geologic time. New plants appeared while others disappeared. Some which developed have flourished into modern times, others have only survived to the present in very limited numbers. The Ginkoes preceded the dinosaurs; cycads developed during the age of dinosaurs. The dinosaurs vanished, but these two plant types survive in modest numbers. The Garden Center has 8 species of cycads in the conservatory collection. . . . (No Ginkgo.)

One of the most important steps in plant development occurred in the Early Paleozoic when plant life went through a transition from an aquatic environment to a terrestial one. These early forms were largely giant club-mosses and "seed-ferns". While "see-ferns" were the first seed-bearing plants, they should not be confused with true ferns. The decomposed remains of these early plants led to the formation of extensive coal beds all over the world.

The next important development was the replacement of most of the plants of the Paleozoic with woody, vascular, seed-forming gymnosperms (i.e. conifers) of the Mesozoic. During this era there were elaborate forests of Ginkgoes, cycads, and conifers. Anglosperms, flowering plants, made their appearance in small numbers at the close of the Mesozoic. The adaptive abilities of angiosperms led to a phenomenal rate of variation and radiation of offspring.

Today, angiosperms constitute the dominant plants of the earth occupying virtually eve habitat from sea level to mountain niches, from swamps to deserts, as well as from warm humid tropics to tundra wastes.

During the course of the late Mesozoic through the Cenozoic (present era) plant and animal groups developed a mutual and beneficial dependency. The rise and diversification of plants was a contributing factor to a similiar phenomena among insect A variety of insects developed adaptive strategies which aid pollination of flowering plants. In response, flowering plants developed color and fragrance to attract certain specific insects and in some cases birds.

In addition to insects and birds, mammals likewise diversified and adapted to new environments which developed with the rise of flowering plants. For example, as grasses developed and spread, mammals which could subsist on grasses moved into prairie/savannah environments. Some birds adapted subsistence strategies dependent on the nectar and seeds of flowering plants Carnivores became specialized preying on the herbivores. An intricate check and balance system grew out of interdependency between plants and animals and continues into the present.

"The Rise of Land Plants" has been received very enthusiastically by both students and the general public. . .

Bill & Connie Timm, 922 Wedgewood Way, Richardson, TX 75080. Sounds terrific! Could you bring your display to an EXPO? MAPS Digest does not get many articles on plants. Many thanks for yours.

Happy Valentine's Day

The complex processes that preserve organic remains in rocks also leave their own traces, adding another dimension of information to fossil samples.

Anna K. Behrensmeyer

ALL SYSTEMS GO!! 17 members have signed up for the fall trip to W. Germany. We needed 15. The more who go, the less the cost. MUNICH, MAPS will greet you in October. More details in the March Digest. What a spectacular holiday!

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: January 1 through December 31 is $7.00 per household.

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). September, October, May, June, and July meetings are scheduled field trips. The August meeting is in conjunction with the Bedford, Indiana, Swap sponsored by the Indiana Society of Paleontology, the Indiana Chapter of MAPS. November through April meetings are scheduled for 2 p.m. in the Science Building, Augustana College, Rock Island, Illinois. MAPS Annual International Fossil Exposition is held in the Spring, and a second show in the Fall, Fossilmania, is sponsored by Austin Paleontological Society, a MAPS Affiliate.

MAPS official publication, MAPS DIGEST, is published 9 months of the year--October through June.

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Dated Material - Meeting Notice