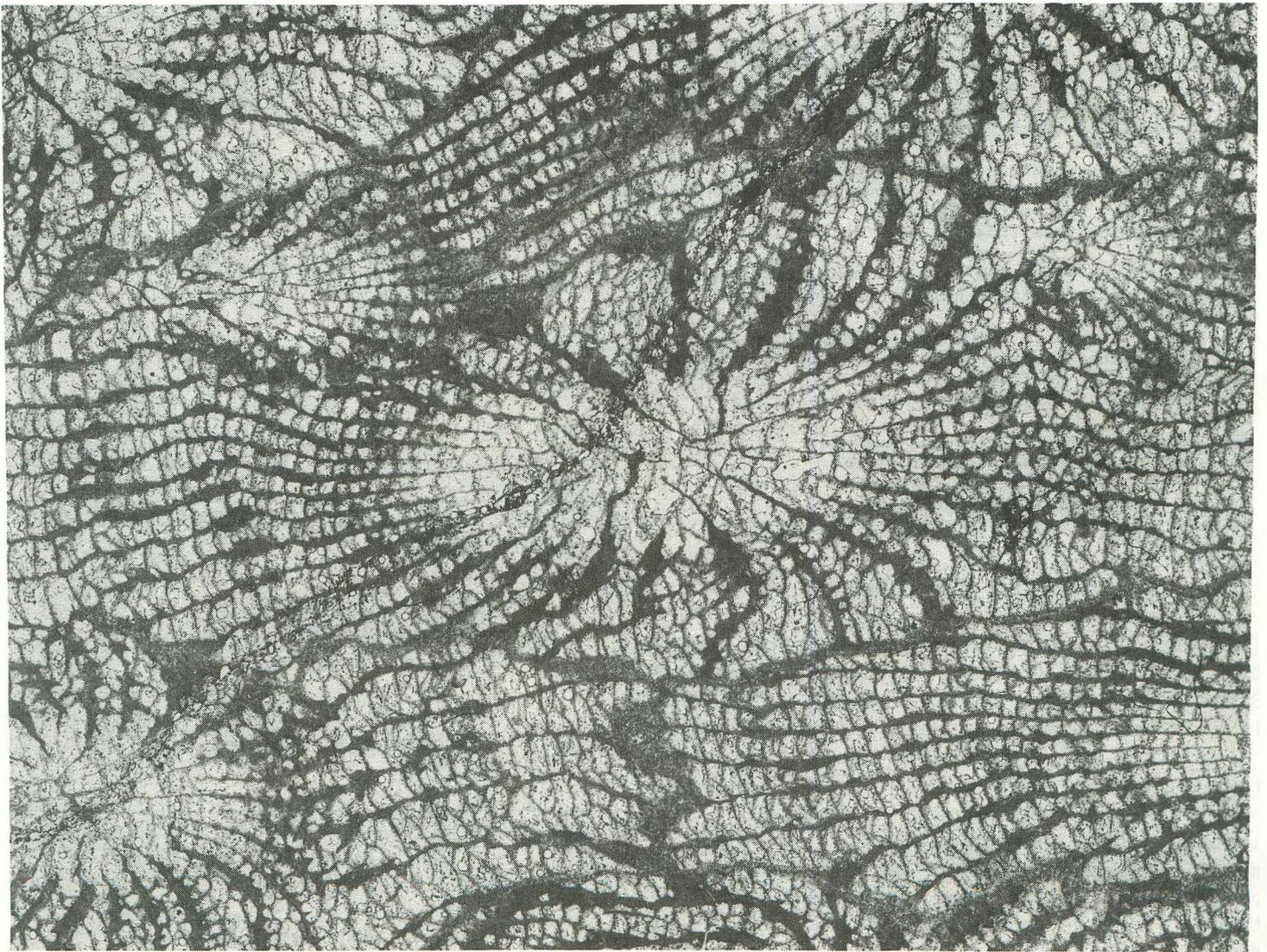


M.A.P.S. *Digest*

Official Publication of
Mid-America Paleontology Society

Volume 15 Number 6
Summer, 1992



MARK YOUR CALENDARS

<p>16 AUG MAPS SUMMER PICNIC, & MEETING Doug DeRosear Residence, 103 S. Oak St., Donnellson, IA. (1 block east of four-way stop) (319) 835-5521.</p> <p>11:30 to ?. Eat at 12:30. Potluck--bring a covered dish, table service and drink.</p> <p>Bring fossils to try your hand at fossil preparation via the air dent.</p>	<p>19 AUG LOST DUTCHMAN GEMBOREE, LEBANON, 20 PA 21 22 Fossil Day, Aug. 21: lectures 23 and demonstrations emphasize paleontology. Dealers offer specials on fossil specimens.</p> <p>Contact: Gemboree, 217 Neven St., Lancaster, Pa 17603 (717)392-6825</p>
<p>*** 92/09 DUES ARE DUE ***</p> <p>Are your dues due? You can tell by checking your mailing label. The top line gives the expiration date in the form of year followed by month--92/09 means 1992/Sept. Dues cover the issue of the <i>Digest</i> for the month in which they expire.</p> <p>We do not send notices but will let you know if you are overdue by highlighting your mailing label on your <i>Digest</i>. We carry overdues for two months before dropping them from our mailing list.</p> <p>Please include your due date and name exactly as it appears on your mailing label--or include a label.</p> <p>Dues are \$15 per U.S./Canadian household per year. Overseas members may choose the \$15 fee to receive the <i>Digest</i> by surface mail or a \$25 fee to receive it by air mail. Library/Institution fee is \$25.</p> <p>Make checks payable to MAPS and mail to: Sharon Scamleitner, Treas. 4800 Sunset Dr. SW Cedar Rapids, IA 52404</p> <p>*****</p>	<p>2 OCT 9th ANNUAL BVFS FLORIDA FOSSIL 3 FAIR: "ICE AGE MAMMALS OF 4 FLORIDA, WINTER HAVEN COMPLEX</p> <p>210 Cypress Gardens Blvd., S.E. corner of Cypress gardens Blvd., & U.S. 17.</p> <p>Fri.--10 am to 7 pm Sat.--9 am to 7 pm Lecture at 3 pm by Dave Letasi Auction around the clock Sun.--9 am to 5 pm</p> <p>Contact: Eric S. Kendrew 4436 Tevalo Drive Valrico, FL 33594-7343 813/681-4350 or Marcia Kehler, 813/644-3778</p>
<p>ABOUT THE COVER</p> <p>This month's cover is an acetate peel sent by Albert J. Copley, Northeast Missouri State University, Kirksville, MO. The peel is of Hexagonaria, a Devonian age colonial coral from the Cedar Valley Formation, near Iowa City, Iowa. The slice was cut parallel to the growth direction. The acetate peel was used as a photographic negative and printed onto a piece of photographic paper and enlarged about 10 times in the process. (This copy was reduced 78% and would therefore be about 7.8 times the original size.)</p> <p>See pages 4-6 for the story and another peel print.</p>	<p>31 OCT FOSSILMANIA X, OAKDALE PARK, GLEN 1 NOV ROSE, TX 2</p> <p>Fri.--10 am to 6 pm Sat.-- 9 am to 6 pm Sun.-- 9 am to 2 pm</p> <p>Contact: Kenneth Smith, 8449 Sweetwater Drive, Dallas, TX 75228</p> <p>15 APR 1993 MAPS NATIONAL FOSSIL 16 EXPOSITION XV--EXTINCT 17 ECHINODERMS</p> <p>Fri., Apr. 15: 8am - 6pm Sat., Apr. 16: 8am - 5pm (Business meeting and auction following) Sun., Apr. 17: 8am - 3pm</p>

MAPS SUMMER PICNIC

Most of the MAPS Board members were busy with other endeavors and unable to attend the scheduled July picnic, so the picnic/meeting was postponed to August 16. Everyone is welcome to attend, so check the calendar, prepare your favorite potluck dish and join us for a relaxing afternoon.

SEDIMENTARY NOTES

Dr. Thomas Martens, Germany, wrote in June: For the first half of this year I'm an exchange visitor in the Carnegie Museum, Vertebrate Dept. of Pittsburgh, PA. I will be back in Germany in July. I collected fossils in North Texas, near Pittsburgh, and in a couple of days I visit New Mexico for 2 weeks to collect vertebrate fossils.

David Jones, Worthington, MN, who sent information about the Black Hills Institute discovery of a second *Tyrannosaurus rex*, added: And, to add to the fun, one of your recently enrolled members, Tim Stenerson of Red Wing, Minn., collected some well-preserved bones from the pelvis of a Triceratops or very large duck-bill dinosaur in Harding County, South Dakota, earlier this month (May). Enroute home, Tim stopped in a clay pit in Brown County, Minn. (Dakota or Windrow formation--mid-to-late Cretaceous) and up came a shark tooth an inch high. One of the *Isuridae*, I believe--tall central spike with small side-shoulder spikes.)

GET WELL WISH

Dear MAPS Members:

Just before this year's EXPO, fellow MAPS member Bob Beaver had a heart attack and was not able to attend the show. On behalf of all MAPS members and myself, I wish Bob a speedy recovery. Get well soon, and take it easy digging those fine Pennsylvanian plants.

Sincerely,
David M. Tanking
Niobrara Paleo Co.
Lawrence, KS

FOSSIL COLLECTING BILL NOW ON SENATE FLOOR

The Paleontological Resources Protection Act of 1992, a bill which would restrict the collecting of vertebrate remains on public lands, is currently before the Senate and will probably be acted on by the end of August. The bill apparently is similar to one restricting archaeological digs and restricts not only vertebrate remains but also any other fossils found in association with them. It also apparently is being tacked onto another bill on the floor. (Our information is sketchy at this time.)

Anyone with concerns about the bill should address his/her Senator and have the Senator contact the Chief of the Branch of Paleontology and Stratigraphy for more information.

BLACK HILLS INSTITUTE FINDS 2ND T-REX
source: Sioux Falls, SD, *Argus Leader*,
Apr. 24, 1992
sent by: David Jones, Worthington, MN

In less than two years the Black Hills Institute, a commercial fossil collecting/marketing firm headed by Pete Larson, has turned up two skeletons of *Tyrannosaurus rex*. The latest is at least 30 percent complete, and Larson expects at least 60 percent of the skeleton will be found. The find, which is only the 11th skeleton ever found that is more than 25 percent complete, is still mostly buried.

The first skeleton, found in 1990 and named "Sue" after its discoverer, is the largest, most complete T-rex ever found. "Stan," the new skeleton, was found by amateur paleontologist Stan Sacrison seven or eight years ago, but it was not identified until Sacrison took Larson to the site. So far, Larson and colleagues have uncovered parts of the spinal column, a femur and the pelvis. They've also recovered two teeth, with roots, indicating the skull is nearby.

The Institute plans to build a Black Hills Museum of Natural History near Hill City with Sue and Stan as the main attraction.

See page 3 for related story.

SUE SEIZED BY FEDERAL GOVERNMENT
excerpt from a letter by Ed Armentrout

...About a year ago an employee of the Black Hills Institute...found a skeleton of Tyrannosaurus rex..., which turned out to be the best thus far discovered in the world. The BH Institute removed the fossil and transported it to Hill City, SD, and spent the last year preparing it for display. On May 14, 1992, 30 FBI Agents descended on the BH Institute's property and forcibly removed the T-rex skeleton...transporting it to the SD School of Mines and Technology for storage until the court case as to ownership is settled. The Feds maintain the fossil was illegally removed from federal trust lands. The BH Institute maintains the land was privately deeded and they paid \$5,000 to the landowner for the fossil...

Dr. Donald Wolberg, a paleontologist for the state of New Mexico and Secretary of the (national) Paleontological Society, recently stated in a Baltimore news release that "Pete Larson and his group (BH Institute) are among the best collectors in the entire world...they have an international reputation."...

OPEN LETTER TO MAPS MEMBERSHIP

from: Jon Kramer, President, American Assoc. of Paleontological Suppliers

Dear Fellow Fossil Lovers,

I am writing to urge you to take action! The federal government, state and local agencies as well as various unfriendly academic groups are working to **shut you out of collecting fossils!**

Wake up! It's happening right now! If you don't act you will not be collecting fossils in the future.

The fact is there already exist laws which greatly restrict fossil collecting in many states--Illinois, Wyoming, New Mexico, to name just a few. Others are currently proposing laws to spread this disease. **You need to get up and voice your opinion.** And there is an excellent opportunity to do so at the proposed Northern Plains

Governors' Conference in Rapid City, South Dakota, scheduled this August 24-26. This conference is being hosted by the US Forest Service Regions 1 and 2.

The proposed conference intends to address issues relating to fossil collecting on private and public lands. **This is a complete waste of time and tax dollars.** This work has already been done by the National Academy of Sciences which issued a 243 page report (entitled "Paleontological Collecting") in 1987 capping three long years of research. The report reached a consensus between land managers, professional organizations and amateur groups on the most feasible way to oversee fossil collecting in the US. The recommendations are both reasonable and responsible. If certain jealous academic groups had not undermined efforts to implement the report, many of the recommendations would have been enacted and we would be spared the continued fighting over "who's allowed to collect what."

Here's a perfect chance for you to fight for your fossil-collecting rights!

First--Write to your US Congress members making them aware of this blatant waste of time and public dollars. Inform them of the N A S report and urge its implementation. Further compel them to take action to cancel the proposed Governors' Conference since the work has already been done.

Second--Send letters to the coordinators as well. They are:

Mary Peterson Nebraska National Forest
 Barbara Beasley @ 270 Pine Street
 Terri Liestman Chadron, NE 69337

Third--If we cannot get this conference canceled, **plan to be there!** It is an open meeting in which all interested parties are invited. It is supposed to be held August 24-26 at the Rushmore Plaza Holiday Inn in Rapid City, SD.

I know you all will agree that fossil collecting is one science where the amateur makes a real difference. **If you don't get involved, there won't be amateurs!**

THE USE OF ACETATE PEELS FOR FOSSIL STUDY

Albert Copley

Northeast Missouri State University
Kirksville, Missouri

The use of acetate peels for the study of carbonate rocks is relatively common. In this short article, I will offer suggestions as to how you may use the technique for fossil study. An acetate peel is a plastic replica of an acid-etched rock surface. A rock is not a homogeneous material, and it will therefore etch differentially when a suitable acid is applied to the rock. Fossils which are completely embedded within the rock may be studied, although only in cross section. The peel which you make will faithfully reproduce details of the fossil and it can be studied under high magnification through a microscope. The acetate peel can also be used in preparation of illustrations, or can itself be used as an illustration, such as in a slide presentation.

STEPS IN MAKING ACETATE PEELS

FIRST: ROCK SLICING. The first step in preparing an acetate peel is to slice the rock being studied. A small trim saw will do quite well for small specimens. Be sure the rock is clamped into the saw so it will not come loose during the sawing. For a large rock, of course, you must use a larger saw, but technique is the same otherwise. As the rock is almost through being sawed, the pitch of the sawing sound will change. Ease up on the pressure, so the edge of the rock will not break in a ragged shape. After cleaning, check the rock; has it been sawed to show the desired feature? In spite of precautions a rock may break with a small lip on the otherwise flat surface. Not to worry! A small hand tool will remove the lip--a pair of pliers will work nicely.

SECOND: ROCK SMOOTHING. Ordinarily you may start the grinding process with a medium grade grinding compound. If you have a lap wheel, it may be used, however; a piece of plate glass will be O.K. Sprinkle silicon carbide grinding compound onto your moistened plate. Move the rock with a figure 8 motion. This will avoid the formation of grooves in the rock surface or on the lap surface. If using a lap wheel

be sure to rotate the rock slowly for the same reason. When the rock has been smoothed and all saw cut marks removed--which with soft carbonate rocks will take only a few minutes--wash the plate and rock thoroughly. A single grain of coarse grit will cause you much anguish in the next step. Sprinkle the fine grit onto the grinding surface. You should use only enough water to make a thin slurry. Too much water and your grit will wash off--not enough and it will be too tacky to move properly. Continue the grinding until the surface is smooth. You should go through the 600 grit in preparation of acetate peels.

THIRD: ETCHING. When through, clean all work spaces thoroughly, and proceed to the next step. For a small carbonate rock (limestone) it is possible to drop hydrochloric acid, 10% strength onto the rock surface. Larger specimens should be completely immersed. Keep the surface completely covered. Time required is 20 to 30 seconds. Wash the surface gently. Do not touch the surface which you have just etched. It has etched differentially, because of differences in the rock fabric and texture. You will not be able to see this etching.

You may etch a wide variety of non-carbonate rocks with concentrated HF (hydrofluoric acid) acid. Fossils are not so common in such rocks, but may also be studied by this technique. HF is corrosive to lung and skin tissue, and great care should be exercised to avoid any contact. In fact, your lungs have zero tolerance to hydrofluoric acid. A ventilating hood should be used. I am including this section for information only. I presume that if you have access to HF, you also have a ventilating hood and a working knowledge of how to handle corrosive chemicals. The HF is dripped directly from the original container onto the rock to be etched. Etching time should be 20 to 40 seconds. Most siliceous rocks etch nicely in about 20 to 25 seconds. The etching process may be terminated by pouring water onto the

surface. This is recommended only if you have had previous experience working with corrosive chemicals. A plastic tray of the sort used for developing photographs is convenient for working with acids and is essential if the acid is HF. Nitric acid has proven effective in the etching of gypsum and metallic meteorites.

The rock surface prepared by acid should be considered very fragile. Avoid touching it. Do not direct a hard stream of water onto it. It should be dried thoroughly before proceeding to the next step. A thin stream of acetone directed onto it and allowed to dry will take the water with it and will greatly shorten the drying time.

FOURTH: APPLYING ACETATE PLASTIC. When completely dry the surface should be moistened thoroughly with acetone. A plastic squeeze bottle with a glass nozzle works successfully and wastes a minimum of acetone. Be sure the bottle is not made of a plastic which is soluble in acetone! After the plastic is laid on flat it may be smoothed gently to remove excess acetone. I suggest you lay the plastic on with a rolling motion, much as you might lay a rug. Air bubbles which have formed may sometimes be removed by a gentle smoothing action with the hand. The peel should be allowed to dry at least one hour, but several hours would be better. It may then be peeled off. Patience at this stage will be rewarded. Trim inside the part which has taken the impression. It probably will have a tendency to curl and may be inserted between the pages of some ponderous tome to flatten overnight.

FIFTH: MOUNTING YOUR ACETATE PEEL. Peel the acetate from the rock, and trim it just inside the boundary of the rock edge. You should discard it, if it is defective, be optimistic, however. Put the peel between the pages of a thick book for a day or so to flatten properly. Acetate plastic has a tendency to warp with the heat of a projection lamp, and for best results should be mounted in glass. The size will be governed by the size of the desired mount--anything from a half frame 35mm to a 3-1/2" x 4-1/4" lantern slide. Now trim the peel to the desired size, and be sure to orient it to include your desired fossil.

Insert into a plastic slip-in slide mount. Heat sealing slide mounts may also be used. The plastic slip-in type of slide mounts have so many advantages, however, I personally avoid the cardboard heat sealing type like the plague! If you have some handy, however, here is the technique. Fold the mount, keeping the peel in the designate place. Iron the mount edges, careful you do not get the hot surface of the iron over the peel--it will warp easily, or melt when in contact with the hot iron!

SIXTH: USING YOUR ACETATE PEEL. The advantage of the peel over a microscope thin section is that a relatively large area may be studied, and the peel may be easily prepared. A major advantage, also, is in the inexpensive preparation and quickness of preparation of an acetate peel vs. a microscope slide. A microscope slide or a thin section of course must be used to identify certain minerals. A peel is ideally suited for producing superb illustrations and transparencies illustrating fossil shapes and patterns. It may be treated just as a negative except that for best results it should either be mounted in glass or used in a glass negative holder, as it usually has a tendency to curl. Your peel is now ready for projection. Included with this short article are several illustrations made by the techniques described. If you wish to experiment with various photographic techniques check an article entitled "Photographic Techniques Utilizing Acetate Peels," which I wrote for the Journal of Geological Education, January, 1974, cover, and pages 4-6.

Right: A pelecypodal limestone from Notrees, Texas. This shows a large number of clam shells, some of them broken and fragmented. This acetate peel print was made by treating the acetate peel as a negative and printing onto photographic paper. Enlargement is about ten times.



MEMORANDUM OF UNDERSTANDING

between the U.S. Geological Survey, Department of the Interior; Bureau of Land Management, Department of the Interior; National Park Service, Department of the Interior; and U.S. Forest Service, Department of Agriculture for MANAGEMENT OF FOSSILS ON PUBLIC LANDS

The U.S. Geological Survey (USGS), Bureau of Land Management (BLM) National Park Service (NPS), and the U.S. Forest Service (FS), have agreed on a Memorandum of Understanding (MOU) for the Management of Fossils on Public Lands. The MOU is reproduced below; it became effective on May 4, 1992. It is hoped that other land managing agencies will become signatories to the MOU. The MOU establishes "The Federal Interagency Paleontological Working Group (FIPWG). Paleontologists wanting additional information should contact John Pojeta, Jr., Chief, Branch of Paleontology and Stratigraphy, U.S. Geological Survey, National Center, MS 982, Reston, Virginia 22092 (telephone 703-648-5288).

I. PURPOSE

The purpose of this **Memorandum of Understanding** (MOU) between the U.S. Department of the Interior's Geological Survey (GS), Bureau of Land Management (BLM), and National Park Service (NPS), and the U.S. Department of Agriculture's Forest Service (FS), is to provide procedures and guidance for communication, cooperation, and research about issues of common concern in the management of paleontological resources, which are known as fossils. The MOU will provide a long term means for a consistent flow of up-to-date information about fossils to support the land and resource management responsibilities of the BLM, NPS, and FS, to facilitate the research conducted by GS paleontologists, and to increase and improve the National Paleontological Data Base (NPDB) that is maintained by the GS.

II. OBJECTIVES

The provisions of this MOU will identify the various agency objectives and responsibilities in the management of paleontological resources. The MOU will provide the means to develop the necessary data base of information on fossils and where they need to be considered in agency planning and program related activities and budgets. This MOU shall also serve as a means for increasing interagency cooperation in public education, interpretation, and outreach programs aimed at the dissemination of information to the general public and relevant scientific and avocational interest.

III. AUTHORITY

USGS: The Organic Act of the USGS, March 3, 1879 (43 U.S.C. 31), charges the agency with the classification of the public lands, the collecting of fossils, and the writing of reports on the paleontology of the Nation.

BLM: a. Federal Land Policy and Management Act of 1976, P.L. 94-579 (FLPMA) Section 102, which requires the public lands to be managed in a manner that will protect the quality of scientific and related values, and Section 307, which authorizes the Secretary of the Interior to enter into cooperative agreements involving the management of the public lands.

b. National Environmental Policy Act, P.L. 91-90 (NEPA) Section 101, which established the Federal policy to preserve important historic, cultural, and natural aspects of our national heritage.

NPS: The Organic Act of the NPS, August 25, 1916 (16 U.S.C. 1), established the NPS and charges it to "promote and regulate the use of the federal areas known as national parks, monuments and reservations...by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is

to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

USFS: The Organic Administration Act of June 4, 1897, provides the authority for the Secretary of Agriculture to regulate the occupancy and use of National Forest System lands. In addition, the Forest and Rangeland Renewable Resources Planning Act of August 17, 1974, as amended by the National Forest Management Act of October 22, 1976, requires the Forest Service to establish a comprehensive system of land and resource planning. The planning process is to include the development and maintenance of a comprehensive and appropriately detailed inventory of lands and resources.

IV. PROCEDURE

The USGS will:

- a. Respond to the land managing agencies information requests with appropriate expertise as determined by the Chief, Branch of Paleontology and Stratigraphy.
- b. In support of land managing agency planning requests about paleontological resources, GS will prepare a report assessing and interpreting the information in the NPDB, about the known paleontological significance of the area in question.
- c. The USGS will respond to land managing agencies requests for assistance in developing interpretive presentations for the public.

The BLM will;

- a. Identify through its planning process those BLM administered Public Lands where paleontological resources are likely to be a planning consideration.
- b. Will notify the USGS Chief, Branch of Paleontology and Stratigraphy, of BLM planning efforts where assistance in assessing the paleontological resource and its significance will be required.
- c. BLM may also solicit input from the USGS on permitting for fossil collecting and paleontologically related activities.
- d. Provide the USGS with appropriate information regarding all paleontological sites and activities on BLM lands.

The NPS will;

- a. Identify through its planning process those units of the National Park System where paleontological resources are likely to be a planning consideration.
- b. The NPS will notify the USGS Chief, Branch of Paleontology and Stratigraphy, concerning those planning efforts that will require input from the National Paleontological Data Base.
- c. NPS may also solicit input from the USGS on research applications received from educational institutions, museums, and other scientific organizations to conduct fossil research activities on lands within the National Park System.

d. Provide the USGS with appropriate information regarding all paleontological sites and activities on NPS lands.

The USFS will:

a. Identify through its planning process those FS administered lands where paleontological resources are likely to be a planning consideration.

b. Notify the USGS Chief, Branch of Paleontology and Stratigraphy, of National Forest Planning efforts where assistance in assessing the paleontological resource and its significance will be required.

c. Request USGS assistance, when needed, on a case-by-case basis regarding permitting for fossil collection and other paleontological activities.

d. Provide the USGS with appropriate information regarding all paleontological sites and activities on NFS lands.

V. PROGRAM OPERATION

Upon receipt of an agency request, the USGS will submit a timely report based on the NPDB that will: (1) describe the current state of paleontological knowledge of an area, including a selected bibliography of the major published articles about the paleontology of the area in question, (2) a map of appropriate scale indicating major known fossil localities of the area, and (3) a recommendation of the known paleontological significance of the area. If the USGS does not have on-board expertise in an area, it will provide a list of other paleontological researchers and activities in the area in question.

The land management agencies will take into account the information contained in the paleontological reports prepared by the USGS and others to determine the appropriate management requirements for specific areas or specific fossil resources.

VI. MEETINGS

An interagency committee known as "The Federal Interagency Paleontological Working Group" (FIPWG) consisting of the Chief, Branch of Paleontology and Stratigraphy USGS; Chief, Division of Recreation, Cultural and Wilderness Resources (BLM); Chief, Wildlife and Vegetation Division (NPS); and Geology Program Specialist, Minerals and Geology Management Staff (FS), or their delegates, will meet as early as possible in each fiscal year to identify and prioritize anticipated needs of the land managing agencies. Additional meetings can be convened, as required, through the USGS.

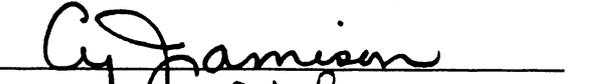
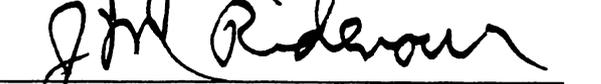
VIII. ADMINISTRATION

a. Nothing in this MOU shall be construed as affecting the authorities of the participants or as binding beyond their respective authorities or to require any of the participants to obligate or expend appropriated funds.

b. Disagreements between participants concerning procedures under this MOU, which cannot be resolved at the operational level, will be referred to successively higher levels, as necessary, for resolution.

c. The participants will review the MOU at least every 5 years to determine its adequacy, effectiveness, and continuing need.

- d. The terms of this MOU may be renegotiated at any time at the initiative of one or more of its participants, following at least 30 days notice to the other participants.
- e. This MOU may be cancelled at any time by one or more of its participants, following at least 30 days notice to the other participants.
- f. Any participant may propose changes to this MOU during its term. Any change will be in the form of an amendment and will become effective upon the signature of all of the participants. It is anticipated that several other Federal agencies will be invited and elect to participate as members of FIPWG.
- g. The need for this MOU is expected to continue for 5 years, at the end of which period it will expire, unless canceled, extended, or renewed.
- h. Before this MOU is due to expire, if all the participants agree that there is a continuing need, it may be extended or renewed.
- i. The USGS delegate to FIPWG shall remain the permanent working group chair.
- j. This MOU will become effective upon signature by all participants.

		Date
Director, USGS		12/26/91
Director, BLM		2/11/92
Director, NPS		3/23/92
for Chief, USFS		5/4/92

PLEASE NOTE THE FOLLOWING NEW SOCIETY:

COLORADO, DENVER

WESTERN INTERIOR PALEONTOLOGICAL SOCIETY (WIPS)

P.O. Box 200011

Denver, Colorado 80220-0011

Jordan Sawdow, Address above

MEET: September through May on the first Thursday of the month

PUBLICATION: Trilobite Tales, Editor Lou Taylor

SHOW: Participate in and help organize the Denver Gem and Mineral Show each September.

FIELD TRIPS: Active field trip program June, July, August.

ADVERTISING SECTION

Ads are \$5.00 per inch (6 lines x 1 column--43 spaces). Send information and checks payable to MAPS to: Mrs. Gerry Norris, 2623 34th Avenue Ct., Rock Island, IL 61201. Phone: (309) 786-6505. This space is a \$5.00 size.

To extend currently running ads, please send request and remittance to **Editor** by the 15th of the month. We do not bill. Ads do not run in the EXPO issue (April). Ads up to 8 lines by 54 spaces can be printed in smaller type to fit a 1" space.

VIDEOTAPE! THE BEST OF EXPO XIV! This 30 minute tape features more than 200 of our best 35mm close-up fossils slides taken at EXPO XIV transferred to videotape. Most fossils have names superimposed and run about 6-8 seconds each; music added. \$14.95.

Al Copley, 17 Leisure Drive, Kirksville, MO 63501.

INDEX FOSSILS OF NORTH AMERICA. \$65.00 postpaid. (Offer expires 6/30/92--limited supply.) We now stock Chicago Pneumatic and ARO air-powered scribes.

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FOSSIL BOOKS and fossil collection, preparation and display supplies. Over 100 paleo titles-including many state collecting guides. Air tools, flexible shaft machine, etc. Retail only. Catalog US \$2.00/Canada \$3.00. We ship only to US/Canadian addresses. **PALEO BOOKS & PREP SUPPLIES**, P.O. Box 542, Hot Springs, SD 57747. Tel 605/745-5446.

FOSSILS ON DISPLAY: Directory of Fossil Exhibits in North America. Includes University and museum exhibits. Listed are address, phone, hours, what they have, and "MUST SEE" items. Available only on IBM computer disk (specify 5 1/4, or 3 1/2); read and print only what you want. \$9.95.

Al Copley, 17 Leisure Drive, Kirksville, MO 63501

Experienced fossil collector/dealer needs female science teacher or active collector for correspondence, perhaps travel for fossil-collecting or shows. Overseas travel possible. Are you single, unencumbered, educated, attractive, athletic, adventurous? Do you believe that the trek from curiosity to knowledge is the grandest adventure?...that new experiences keep life interesting? If so, write to Harry Miller, 150 S.W. 96th Lane, Ocala, Florida 34476.

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INDEX FOSSILS OF NORTH AMERICA (We found some more) Usual price \$90.00; our price (while they last) \$69.95 postpaid.

EARTH TREASURES--Northwestern Quadrant (out of print). We have a few prices @ \$18.95 postpaid.

WATER REPTILES OF THE PAST AND PRESENT (1914 edit). Soiled but good cond. \$100.00 postpaid. (Call before ordering out-of-print books).

THE UPPER CRETACEOUS OF KANSAS. 1898. (Excellent condition) \$100.00 Ppd.

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

Ron Baalke
1665 Brueburn Rd.
Altadena CA 91001
818-797-4092

Software Engineer. Will trade. Major interest amber, vertebrates. Has for trade mesosaurus, amber. Has been interested in fossils since he was a kid. Wants to expand his knowledge.

Rhonda Boutelle
3631-SE 10th Ave 103
Cape Coral FL 33904

George Charles Fonger
107 Sharpstead Ln.
Gaithersburg MD 20878
301-977-0318

Research Toxicologist. Will trade (only vertebrates) Major interest lower vertebrates. Has for trade stratigraphically controlled shark & bony fish teeth, some Cetacean mat. Member American Fossil Federation, Bowie, MD. Wants to find out others interests, contact points (both myself to lead possible trips east--meet new people.)

Robert C. Garber
375 South End Avenue #7L
New York NY 10280

Mr. Christopher J. Gervasi
411 Covington Rd.
Haverford PA 19083
215-853-1201

Undergraduate student: environmental science/law (1992). Will trade. Major interest vertebrates; Miocene & Pleistocene mammals, Green River Fish, turtles, Cretaceous marine reptiles, dinosaurs, trilobites, ammonites, amber. Has for trade plants, ferns--St. Clair PA, shark, whale, porpoise material -- Calvert Cliff, Aurua NC, trilobites, brachs--NY, mosasaur, plesiosaur mat.

Robert W. Menser
2819 North Warner
Tacoma WA 98407
206-759-9603

Semi-retired gem cutter. Will trade. has for trade Washington coprolites, fossil woods of gem quality, crabs, more. Several friends belong.

Anthony Newsome
5464 Walnut Bend Rd.
Indianapolis IN 46254
317-297-8331
W: 317-274-7289

Teaches at Indiana U at Indianapolis. Will not trade. Major interest trilobites. Wants to learn more about collecting and trading.

John & Diana Norton
1502 Powers Lane
Champaign IL 63821
217-352-8692

Registered nurse. Will trade. Major interest fossil plants and trilobites. Attended 1992 MAPS EXPO.

Cameron O'Connor
P.O. Box 175
Colden NY 14033
716-941-6629

Geologist-N.Y.S Department of Health. Will trade. Interested in almost all types of fossil hunting; major interest in Mesozoic fossils. Has for trade Dinosaur bones, insects, fish, NY and PA invertebrates; PA plants. Wants to meet people interested in the hobby, display in shows, etc.

Ray Ogilvie
816 Pitty Pat Dr.
Florence SC 29505
803-662-2356

Knitting Machine Tech. Will trade. Has for trade many species of Eocene and Pliocene mollusc, Cretaceous shark teeth (mainly Scapanorychus) and turtle shells. Also fossil wood (Cretaceous). Can get other items on request. Wants to trade for items unavailable in SC and possible to arrange trips to other states.

Bob & Vivian Shaha
115 Lazy Lane
Ada OK 74820
405-436-3232

Claim superintendent (insurance). Will trade. Major interest trilobites, ammonites, vertebrates. Have for trade trilobites (calymene), Texas ammonites, echinoids, brachiopods from PA. Member of Ada Hard Rock & Fossil Club, Ada, CO. Want contacts with others who have an interest in fossils.

Larry & Joy Walker
Rt. 2 Box 160A
Gays Mills WI 54631
608-872-2466

Engineer. Will trade. Major interest Middle Devonian brachiopods, coral, and crinoids of Arkona, Canada, area. Has for trade coral of Arkona, Canada, area. Enjoys collecting, preparing, and studying fossils.

Bart & Patty Bourne
P.O. Box 430
Kensington P.E.I.
CANADA C0B 1M0
catalogs.

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Ms. Donna K. Goodwin
The Fossil Shop
61 Bridge Street, Box 1086
Drumheller, Alberta
CANADA T0J 0Y0
401-823-6774

PLEASE NOTE THE FOLLOWING CHANGES OF ADDRESS OR CORRECTIONS:

Bev Johnson
108 36th Ave. SW
Cedar Rapids IA 52404
319-365-5336

Retired. Will trade. Has for trade Hexagonaria. Interested in new sites to hunt.

Mark G. McKinzie
Oakwood Forest
106 East Ash Lane Apt 1626
Eulesa TX 76039

Geoff Thomas (semi-retired)
P.O. Box 497
Forster NSW 2428
AUSTRALIA
065-54-9073

John R. Powell
3237 Yanceyville St., Apt 6D
Greensboro NC 27405

Mr. Marc Auge
7 Rue du Bochet Haut 08500
Les Mazures REVIN
FRANCE

The Mid-America Paleontology Society (MAPS) was formed to promote popular interest in the subject of paleontology; to encourage the proper collecting, study, preparation, and display of fossil material; and to assist other individuals, groups, and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Membership fee: One year from month of payment is \$15.00 per household. Institution or Library fee is \$25.00. Overseas fee is \$15.00 with Surface Mailing of DIGESTS OR \$25.00 with Air Mailing of DIGESTS. (Payments other than those stated will be pro-rated.)

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

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