Two Texas Pennsylvanian Brachiopods
MARK YOUR CALENDARS

18 MAR  MAPS MEETING at IBEW Hall  
1211 Wiley Blvd. S.W.  
Cedar Rapids, IA  
1:00 Board Meeting  
2:00 MAPS Meeting  
Cedar Valley Rocks & Minerals Society Show

14 APR  NATIONAL FOSSIL EXPOSITION XI-MAMMALS  
15 16  
Grand Ballroom, Student Union  
Western Illinois University  
Macomb, IL  
The simplest way to the Union is  
to turn off IL Hwy 67 west on  
University Drive, then go south  
to the Union. (Follow the  
signs.) Set-up is permitted on  
Friday at 8:00 am  
Friday: 8:00 am - 7:00 pm  
Keynote Speaker: Peter Larson  
President of Black Hills  
Institute of Geological  
Research, Inc., at 7:30  
Saturday: 8:00 am - 5:00 pm  
Live Auction Saturday evening,  
following a short business  
meeting and awards presenta-  
tion  
Sunday: 8:00 am - 3:00 pm

31 MAR  TAMPA BAY FOSSIL CLUB 2ND ANNUAL  
1 APR  FOSSIL FAIR.  
2 APR  MUSEUM OF SCIENCE & INDUSTRY  
4801 East Fowler Ave, Tampa, FL  
Set-up Friday, open to public  
Sat. & Sun.  
10:00 am to 6:00 pm Sat.  
10:00 am to 5:00 pm Sun.

ABOUT THE COVER

TEXAS PENNSYLVANIAN BRACHIOPODS  
by: Tom and Rosemary Akers, Spring, TX

This month’s cover drawing and article were provided by Tom and Rosemary Akers. Rosemary  
wrote that the "article comes from the Brachiopod Study Group of the Paleontology Section  
of the Houston Gen & Mineral Society. This group is focusing its efforts on brachiopods  
from the Pennsylvanian Period in Texas. We hope to have our fourth publication, Texas  
Pennsylvanian Brachiopods, in about a year. This publication will cover all of such  
brachiopods mentioned in the professional literature. To date we have found about 65  
genera and over 150 species."

The Phylum BRACHIOPODA or brachiopods are  
 bivalves with bilateral symmetry which  
usually live attached to the sea floor by  
either a stalk (pedicle) or cementation to  
an object. The phylum is partially  
characterized by the presence of a  
lophophore which is a special organ for  
both breathing and eating. Brachiopods are  
divided into two classes commonly called  
inarticulates and articulates. In the  
Pennsylvanian period in Texas we have about  
65 different genera and over 150 different  
species, and they represent a remarkable  
diversity of form. Like sea and land  
animals, the brachiopods have adapted to a  
variety of situations in the shallow sea by  
such changes in form.  
cont. on p. 4
EXPO XI — MAMMALS

EXPO XI is just about a month away now, and we hope lots of you will have the opportunity to attend.

Karl Stuekerjuergen, Show Chairman, reports that there are only about a dozen tables left. People are coming from 24 states, Canada, Italy, and Germany, so we should have a good variety at the show.

Madelynne Lillybeck, editor of the EXPO edition of the Digest, reports that articles are rolling in, coming from all sections of the country; there will be something from the North, South, East, and West. She says there is always a time of panic when she wonders if it will all come together, but then it does, and it looks like this year’s EXPO edition will be as enticing as ever, thanks to the generosity of the members of MAPS! Madelynne says she’ll see you at EXPO.

Toni Verdi is planning to be at EXPO again this year with another one-time postal cancellation depicting a mammal--in keeping with the theme of this year's show. So look for the Postal Station set-up and get your souvenir cancellation, available only at EXPO!

Get your fossils ready and/or bring only as much money as you can afford to spend. Gear up for seeing old friends and meeting new ones. Plan to take in Pete Larson’s presentation Friday night and the Live Auction Saturday. (Don’t forget your donation). We'll see you at EXPO XI April 14, 15 and 16!

A REQUEST FROM HAROLD TICHENOR

To the woman who made a point of bringing me a lot of Spergen Hill Salem Limestone at EXPO X: Please get in touch with me at my MAPS Directory address; I lost my note of your name. I plan to offer most of that material at EXPO XI (as freebie), if there are any aspiring microfossilisers, and I want them to know where this wonderful stuff came from.

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NOTE: The next Digest will be the EXPO edition. May issue will arrive about mid-May.

TAPE PROGRAMS AVAILABLE

Gil Norris has put together four VHS tape programs which were first released at EXPO X and are still available by mail order. Each program comes with a study guide. The programs available are:

- Arthropods & Crustaceans............34 min
- Brachiopods, Bryozoans, Sponges..44 min
- Cephalopods & Mollusks.............55 min
- Echinoids..........................48 min

The programs may be ordered as stated on separate tapes; or any combination of programs up to a total of 2 hours long may be ordered on one tape. The price is $20 per program for each program ordered on a separate tape. If you want more than one program on one tape, the price is $20 for the first program and $15 for each additional program on that tape. Add $2 per tape for postage. Make checks payable to MAPS and send to:

Gil Norris
2623 34th Avenue Ct.
Rock Island, IL 61201

PLEASE USE THE ORDER FORM (or a reasonable facsimile of it) FOUND ON PAGE 8.

PALEONTOLOGICAL SOCIETY PUBLICATIONS


Make checks to PALEONTOLOGICAL SOCIETY

Order from:
Paleontological Society Publications
Department of Geological Sciences
University of Tennessee
Knoxville, TN 37916

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AN UNUSUAL NEW FOSSIL FROM THE ORDOVICIAN OF UTAH

by John McLeod

703 Pearl St., Boise, ID 83705

One of the greatest unappreciated enigmas of the fossil record is the origin of the major groups of Paleozoic reefbuilding fossils. Bryozoans, corals and stromatoporoids are all well-developed and diverse in Middle Ordovician time, but fossil remains of ancestral forms are frequently rare, poorly preserved and/or of doubtful affinities.

Several years ago while searching Lower Ordovician carbonates of the Ibex Range in Utah, I discovered a new fossil of unknown affinities in a large block of "float". It is approximately an inch and a half long, and is shaped like a horn or tusk. It is clearly a colony, consisting of polygonal tubes which appear to lack internal partitions, or tabulae. And, although partially exfoliated by weathering, it appears to lack an epithica, or outer skin, such as that found on solitary horn corals and some primitive bryozoans.

While the limestone block was found well below the Lower-Middle Ordovician contact, the exact age is unknown. Dr. John Repetski of the U.S. Geological Survey is currently assisting me, analyzing the age of conodont microfossils from the matrix in order to make an accurate age determination.

An early guess as to its affinities? Lichenarid tabulate corals, which may lack tabulae are known from rare specimens from Lower Ordovician rocks; and the size of the tubes is quite comparable to these earliest tabulate corals. But the tusk-shaped colony is unknown from other tabulates. It is hoped that further investigation with longitudinal and transverse thin sections may elucidate the true affinities of this enigmatic fossil. If any MAPS members have seen similar fossils from the Great Basin or elsewhere, I would most welcome any information.

BOOK REVIEW

by S.J. Ciurca, Jr., Rochester, NY


For over fifty years, the New York State Geological Association has met at various colleges throughout New York State. From these colleges numerous field trips have been conducted to important geological sites including many classic fossil sites of interest to paleontologists, stratigraphers, and fossil collectors.

Richard Hamell's Sourcebook to the NYS GA Guidebooks provides easy access to over 300 field trips that cover the geology of most of New York State. The Guidebook lists all authors and institutions involved in the field trips and contains over 4,000 references to the literature used by the authors of the field trips.

All serious fossil collectors need this Sourcebook.
Genus Derbyia

Derbyias belong to Superfamily DAVIDSONIACEA and are found world-wide in the Carboniferous and Permian Periods. They are medium- to large-sized fossils with a roughly semicircular shape. They have narrow costellae which increase by division as they go from posterior to anterior. The space between these radial costellae is flat. Concentric growth lines in close order are evident in varying prominence on the shell surface. The brachial valve is more convex than the pedicle valve, and the latter has a large interarea almost perpendicular to the hinge. In the center of the interarea is the pseudodethyrium. Internally, the pedicle valve teeth and the brachial valve sockets interlock and stabilize the hinge. A median ridge or septum is also found in the pedicle valve and serves as an important identification feature. The lobed cardinal process of the brachial valve provides another means for identification.

Derbyias ciscoensis
Dunbar and Condra
Upper Pennsylvanian Period
Virgilian Series (Cisco in Texas)
Thrifty Group

Medium-sized, Derbyias ciscoensis measures about 4 cm long, 4.5 cm wide and 2.7 cm thick. The biconvex shape, sometimes distorted, is ornamented with angular, radial costellae, and the space between them is equal to costellae width. The pedicle valve deltidium bears a median depressed line. Dunbar and Condra described this fossil in 1932 from specimens found between 7 and 15 miles northeast of Cisco, Texas.

Genus Teguliferina

These rather bizarre brachiopods belong to Superfamily STROPHALOSIACEA and have a geologial range from the Pennsylvanian through the Permian Periods. They have the typical convex pedicle valve and flat brachial valve of the suborder but the pedicle valve has evolved in a cone-like shape. The brachial valve is extended posteriorly into a tongue which articulates in a notch near the apex of the pedicle valve. There is no cardinal area. Ornamentation of the pedicle valve is tubular spines open at the outer end and used for attachment.

Teguliferina armata
(Girty)
Upper Pennsylvanian Period
Missourian Series (Canyon in Texas)
Gaptank Formation

I like to think of this genus as the brachiopods' answer to the rudists, the reef-building clams. They are small, cone-shaped shells measuring 1.5 cm wide and 2.5 cm high. The brachial valve is nearly flat and serves like a trap door. The edge or brim of the cone-shaped valve had a row of tooth-like spines. Shells were cemented to the substratum by the initial point of the shell growth or by a tangle of spines. These remarkable shells are found in West Texas near the Glass Mountains, an area famous for silicified Permian brachiopods.

REFERENCES:

PALEONTOLOGICAL COLLECTING IN KANSAS


For the past few years, commercial fossil collecting has been a subject of growing interest and concern, both nationally and locally. In 1987, the National Academy of Sciences (NAS) produced a major report recommending policies for paleontological collecting... In general, the report recommends that uniform policies be developed toward fossil collecting on state and federal lands, and that commercial collecting on public lands be regulated.

In Kansas, concern has been focused primarily in the western part of the state, where large vertebrate fossils...are regularly removed from...the Niobrara formation. Fossils have been removed from the Niobrara for more than 100 years; many have gone to museums throughout Kansas and the world. However, prices for fossils have apparently begun escalating, bringing more commercial fossil collectors (some from Kansas, some from out-of-state) to western Kansas. According to some reports, an increasing number of those fossils now go into private collections.

With increasing interest in commercial fossil collecting came a concomitant increase in concern among local landowners and Kansas residents about commercial collecting, the prices being paid for fossils and the ultimate disposition of the fossils... It should be made clear that none of the concern expressed about collecting was related to casual collectors, such as rockhounds and students, or professional paleontologists...

Problems with commercial collecting centered around the unauthorized collecting of large vertebrate fossils from private property; appropriate compensation for landowners with fossils on their property; the exportation of Kansas fossils outside of the country; and the alteration of fossils for use as art objects...

The consensus developed that regulation of private land would be difficult and perhaps counterproductive. However, participants felt that commercial collectors (not casual or scientific collectors) should be licensed by the appropriate state agency, and that there should be appropriate fees for the license and appropriate penalties for unlicensed collectors. Such a licensing procedure might be helpful in discouraging unauthorized collecting on private land, and would provide additional penalties for unlicensed collectors...

The following recommendations were then made: 1) the recommendations made in the NAS report should be made state policy; 2) quarrying for fossils on state-owned land by commercial collectors should require a permit from the appropriate state agency. The decision on awarding such a permit should be made in consultation with the Kansas Geological Survey; 3) commercial fossil collectors should be licensed by an appropriate state agency, with fees for the license and penalties for unlicensed collectors; and 4) efforts should be made to take advantage of the educational and historical value of Kansas fossils. Efforts should be made to keep important Kansas fossils in state museums or universities...

[The above recommendations resulted from a meeting involving primarily paleontologists paleontologists and educators from around Kansas; the following conclusion was drawn from that and a later public meeting. ed.]

First, there is a problem with commercial collection in Kansas. Fossils are apparently removed without landowner knowledge, and sold with little or no recompense to landowners. Apparently, much of the problem is from out-of-state commercial collectors. Second, there is no problem with casual fossil collecting by students or rockhounds, or with research collecting by professional paleontologists and institutions. Third, the guidelines developed in the [NAS] report and in the meeting of Kansas paleontologists are generally useful and should be instituted. Fourth, as best we can determine, fossils currently have no special protection under the law. To help stem their unauthorized removal from private or public property, it might be advisable to develop statutory protection, and make their theft a felony or misdemeanor.
Ed Lauginiger, a biology teacher in Sharon Hill, PA, sent me a copy of his latest publication with a note to let you know that it may be obtained FREE by writing and asking for the following:

Special Pub. #18
Cret. Fossils from the C&D Canal
by Ed Lauginiger

Send requests to:
Delaware Geo. Survey
University of Delaware
Newark, Del. 19716

Ed’s Cretaceous Fossils from the Chesapeake and Delaware Canal is a comprehensive 57-page soft-bound guide for students and collectors. The book contains chapters on the requirements for and types of fossilization, the geology of the canal, the classification of fossils (with illustrations), and collecting localities in the area (including a chart of which fossils are found in the different formations). It also has an extensive Bibliography and nine plates of fossils. It would be a valuable guide for those collecting in the area and a source of information for other collectors not in the area.

UNIVERSITY OF TENNESSEE STUDIES IN GEOLOGY AVAILABLE

University of Tennessee Studies in Geology publishes subjects of general geologic interest plus more detailed treatments and field guides relating to the geology of the Southern Appalachians. Short course notes for the annual Short Courses of the Paleontological Society are published as a part of this series.

Professor Thomas W. Broadhead, The University of Tennessee, Knoxville, sent the following list of publications, which may be of interest to MAPS members:


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Prices are postpaid, 4th class domestic mail; overseas orders must add $1.50 per copy for surface mail. Payment of institutional purchase order must accompany order and be made payable to Department of Geological Sciences, Univ. of Tennessee, Knoxville, TN 37996-1410.

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ADVERTISING SECTION

FOSSILS/MINERALS/ZIPLOCK
BAGS/BABY DINOSAUR MODELS.
Pyritized Ammonites: $5-$10.
List $2.00. Double refund on 1st order over $20.00.
StratoGraphics, 63 Knoll Top Dr., Rochester, N.Y. 14623.

PALEO IMPRESSIONS
Fine Fossil Specimens
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1989 SHOW SCHEDULE
- Lewiston, ID April 1-2
- Eugene, OR May 6-7
- Coeur d'Alene, ID May 13-14
- Cincinnati, OH May 20-21
- Portland, OR June 8-11
- Sheridan, WY June 23-25
- Cortez, CO July 8-9
- Durango, CO July 14-16
- Colorado Springs, CO July 22-23
- Buena Vista, CO August 11-13
- Grand Junction, CO August 18-20
- Canby, OR September 2-4
- Denver, CO September 13-17
- Walla Walla, WA October 6-8

"WELL, YOU SEE, I WAS BITTEN BY THIS CEPHALOPOD..."

NEW PUBLICATION AVAILABLE

Memoir 44 -- Contributions to paleozoic paleontology and stratigraphy in honor of Rousseau H. Flower, compiled by D.L. Wolberg, 1988, 415 pp., 192 figs.

The volume contains 25 contributions by 37 authors from around the world. It covers a variety of Paleozoic invertebrates, stratigraphy, and paleogeography. The memoir contains 100 line drawings and 92 halftone illustrations, most of them full-page composites. Cost is $30 plus $3 to cover postage and handling. Orders are tax exempt. It is available from:

NM Bureau of Mines & Mineral Resources
Campus Station
Socorro, NM 87801

"WELL, YOU SEE, I WAS BITTEN BY THIS CEPHALOPOD..."

from: Dry Dredgers Bulletin, Department of Geology, Univ. of Cincinnati, Cincinnati, OH, Greg Hand, ed.

Tetanus from a fossil: It's not impossible, according to a report making the rounds of mineralogical publications (lately in Fort Hamilton Gems via Hy Grader, Stonebruisers, Scribe, and Chip & Lick). Rocks can hold spores that become activated after years of dormancy once they come into contact with human or animal blood. Is your tetanus immunization up-to-date? Booster shots are now good for up to five years.
Please ADD the Following NEW MEMBERS to Your Directory:

George Aldred
Retired. Will trade. Interested in all fossils. Member Lawrence Co. Rock Club, Bedford, IN.
340 Willow
Elkhart, IN 46516

Paul Bokesch
Analyst. Will trade. Major interest invertebrate fossils. Has for trade micr. Member ESCONI (Downers Grove, IL) & CAPS (Lisle, IL).
340 Chloric Rd
Shawano, WI 54166

Paul Bres
Staff, US Congress. Will trade. Vertebrates, Plants. Has for trade fossils from Ohio area. Member Calvert Marine Museum, Salomons, MD
38 Cherry Hill Road, NE
Albuquerque, NM 87111

Daniel P. Freet
Geologist/manager for educational supply company. Unable to trade at this time. Major interest primarily invertebrates, but also vertebrates. Wants to further her education in paleontology by meeting/corresponding with knowledgeable persons as well as making contacts for sources for specimens for schools.
216 Cherry Hills Road, NE
Albuquerque, NM 87111

Cynthia A. Kram
Retired. Interested in education and field trip opportunities.
P.O. Box 761
Butte, MT 59703

Vincent P. O'Donnell
Q.C. Engineer. Will trade. Major interest general. Has for trade Cincinnati Fossils. Member Dry Dredgers, Cincinnati, OH. Wants information and education.
P.O. Box 1300
Media, PA 19063

Lee & Lydia Robertson
Draughtsmen. Will trade. Major interest Echinoids—all geol. time ages + recent ones. Has for trade some echinoids. Member The Fossil Collectors Association of Australasia. Wants to be associated with people who are interested in fossils—echinoids in particular. Would like to obtain information about echinoids for study purposes.
38 Willow Pass
Elgin, IL 60123

Steven Sherritt
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___More than one pgm/one tape ($20/1st pgm., $15 ea. addtl. program)
___Mail Order (Add postage—$2/tape)
___Payment made payable to MAPS enclosed
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Cincinnati, OH 45240

Donald P. Specht
Limit: 2 hours.
320571 Arrowmaker Pass
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217 Hutchings Rd.
Rochester, NY 14624

Cynthia Kram
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2623 34th Avenue Ct.
Rock Island, IL 61201
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 $10.00 per household. Institution or Library fee is $25.00. Overseas fee is $10.00 with Surface Mailing of DIGESTS OR $25.00 with Air Mailing of DIGESTS.

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). October & May meetings are scheduled field trips. The June meeting is in conjunction with the Bedford, Indiana, Swap. A picnic is held in August. November through April meetings are scheduled for 2 p.m. in the Science Building, Augustana College, Rock Island, Illinois. One annual International Fossil Exposition is held in the Spring.

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

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1st Vice President: Blane D. (Pappe) Phillips, 2758 J St. S.W., Cedar Rapids, IA 52404
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