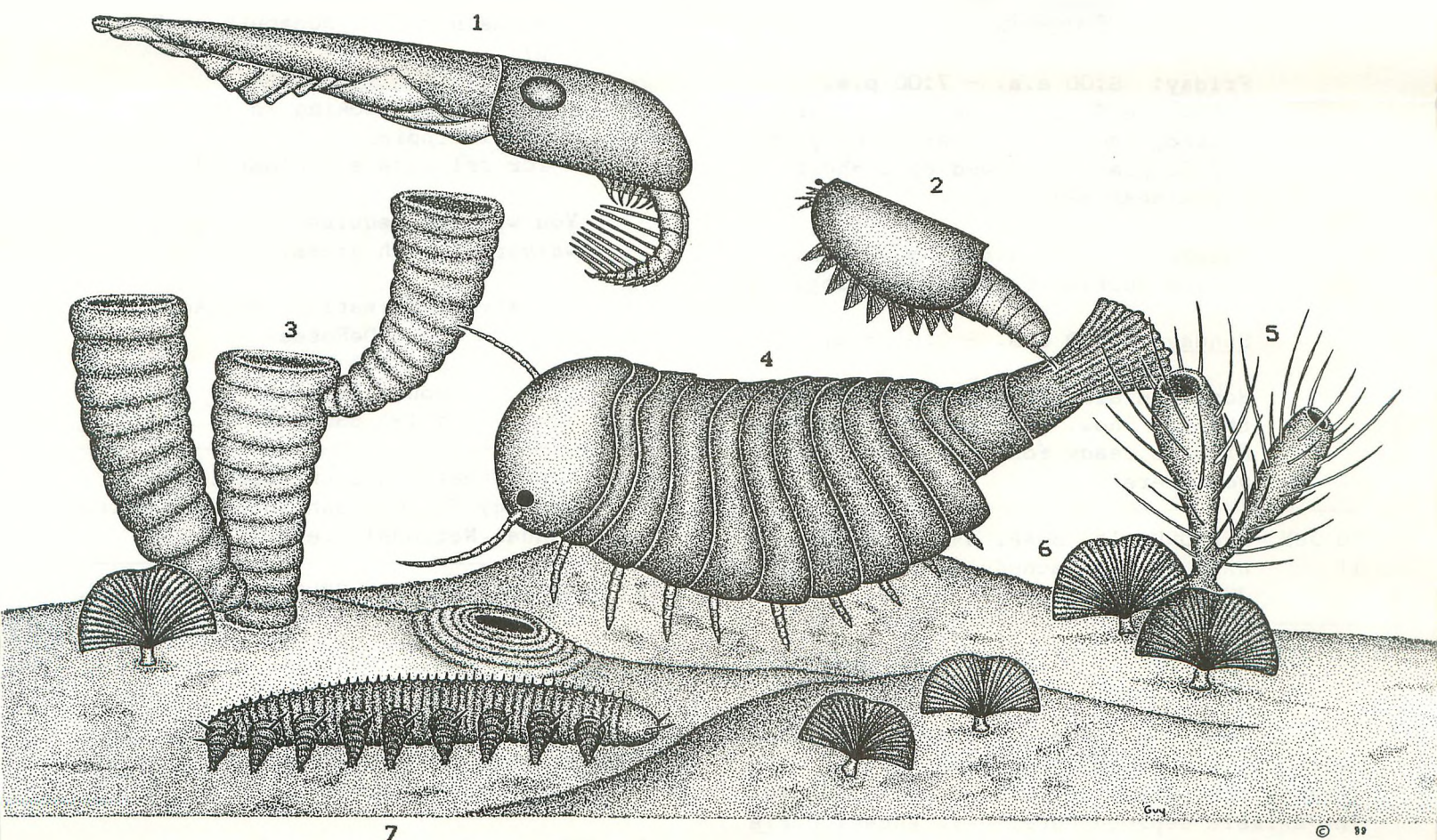


M.A.P.S. *Digest*

Official Publication of
Mid-America Paleontology Society

Volume 11 Number 4
April, 1988



Fauna of the Burgess Shale

MARK YOUR CALENDARS

26 MAR MAPS MEETING--Cedar Valley Rocks & Minerals Show, IBEW Hall, 1211 Wiley Blvd, S.W.
Cedar Rapids, IA

1:00 Board Meeting.

22 APR NATIONAL FOSSIL EXPOSITION X-FISHES
23 Grand Ballroom, Student Union
24 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.)



Friday: 8:00 a.m. - 7:00 p.m.

Keynote Speaker: Prof. Richard Lund, Adelphi U., Garden City, NY
7:30 p.m., followed by a short business meeting.

Saturday: 8:00 a.m. - 5:00 p.m.

Live Auction Saturday evening.

Sunday: 8:00 a.m. - 3:00 p.m.

Hope you are all getting ready for the big Show. All reports indicate EXPO is ready for you! Hope to see you there!

10 JUN BEDFORD, IN, SWAP, 4-H Grounds.
11 MAPS meeting scheduled for Sat.,
June 11, 1988, at 2:30 p.m.

28 MAY MAPS FIELD TRIPS to Davenport
29 Cement Buffalo Plant and Kistler Quarry, Monmouth, IL.

Saturday: 10:00--Buffalo, IA

Meet at the Davenport Cement Buffalo Plant just east of Buffalo on Hwy 22.

Bring hard hats and safety glasses.

We will be looking in Cedar Valley Limestone for trilobites. (Doug says there also are a few crinoids and an occasional blastoid plus lots of brachs, etc., in the quarry.)

Sunday: 10:00--Monmouth, IL

Meet at the Kistler Quarry 3-4 miles north of Monmouth on Hwy 67.

We will be looking in Mississippian, Burlington Fm., for crinoids and blastoids.

You will be required to sign a waiver at both sites.

For more information, contact:

Doug DeRosear
Box 125
Donnellson, IA
(319) 835-5521

5 AUG "The Great Dinosaur Caper," the
6 Geology Club of San Antonio's first
7 annual National Field Trip.

1989 APRIL 14, 15, 16--EXPO XI, Macomb, IL

ABOUT THE COVER

This month's cover, drawn by Guy Darrough, Arnold, MO, portrays some of the strange creatures of the Burgess Shale. The animals depicted are: (1) Anomalocaris canadensis, (2) Canadaspis perfecta, (3) the sponge Vauxia sp., (4) Sidneyia

inexpectans, (5) the sponge Pirania sp., (6) the brachiopods Diraphora bellicostata, and (7) Aysheaia pedunculata.

See "Fauna of the Burgess Shale," pages 3-4, for the story.

TAPE PROGRAMS AVAILABLE AT EXPO

Gil Norris has put the finishing touches on the VHS tape programs that will be available at EXPO. He showed the echinoid tape at the March MAPS meeting, and several members commented on how striking it was. The following five programs are available and may be ordered by APRIL 10 for pick-up at EXPO.

<u>NAME</u>	<u>APPROX TIME</u>
Arthropoda & Crustaceana.....	34 min
(trilobites, crabs, eurypterids)	
Sponges.....	23 min
Brachiopoda & Bryozoans.....	21 min
Cephalopoda & 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. Each program comes with a study guide.

The price has been set at \$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 if your order is to be returned by mail.

Send all orders to:

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

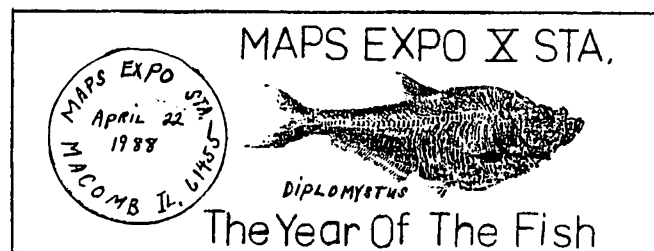
If you want to pick up your order at EXPO, you must order by APRIL 10. You may pay at EXPO and will not have to pay postage.

Those of you who want to have your order returned by mail do not have a deadline but must include a check made payable to MAPS with your order. (Include postage.)

PLEASE USE THE ORDER FORM (or a reasonable facsimile of it) FOUND ON PAGE 10.

SPECIAL POSTAGE CANCEL AVAILABLE AT EXPO

Tony Verdi, Hinckley, OH, has worked very hard and has finally succeeded in getting a special postage cancel for EXPO. The cancel (see fig. below), which features *Diplomystus*, will be available on Friday and Saturday at the show.



Macomb Postmaster Dick Foster will have a postal station open at EXPO from 1-5 on both Friday and Saturday of the show. Tony Verdi will be there with envelopes bearing the club logo and a 1974-issue mineral stamp. The envelopes will be available for \$1 to use for the special cancel and will make great souvenirs. If you do not want to purchase an envelope, just bring your own stamped envelope and have your stamp canceled at the EXPO postal station.

Those of you who will not be attending EXPO but would like a special cancel may obtain one by sending a stamped self-addressed envelope to:

Tom Walsh
501 East 19th Avenue
Coal Valley, IL 61240.

PLEASE NOTE: The envelope must reach Tom before EXPO.

Tony is also still hard at work trying to get the Post Office to issue a fossil stamp. He has now sent 210 letters to 44 states. He writes that he hopes "that many letters are being sent to Washington." We hope many of you are supporting his efforts.

DUES ARE DUE

One last appeal: Please send your dues, made payable to MAPS, before EXPO to:
Treasurer Sharon Sonleitner
4800 Sunset Drive
Fairfax, Iowa 52228

SECRETARY'S MINUTES

March 5, 1988, MAPS Board Meeting,
Augustana College

The meeting was opened by Vice President
Peggy Wallace with 16 members present.

The Secretary's minutes were read and
approved. The Treasurer's balance was
accepted.

Tom Walsh reported 132 tables had been
sold for EXPO. We have only 30 feet left
for special displays.

After a lengthy discussion, it was
decided tapes for one subject will be sold
for \$20.00 plus postage. You may special
order, with the second subject costing only
\$15.00, or a total of \$35.00, on the same
tape. Gil Norris must have special orders
by April 10, 1988, if you want to pick them
up at EXPO.

Badges had to be redone because the
lettering was not the same on the sample.

We will have a postage stamp pictorial
cancelation at EXPO. Everyone is
encouraged to bring a stamped envelope.

MAPS' letter nominating Ernie and Onaby
Hammons for the Strimple award was read.

Program was tapes by Gil since our
speaker could not be here.

Respectfully submitted,
JoAnn Good, Secretary

MAPS MOVIE & SLIDES AVAILABLE FREE

A movie and four slide programs are
available for rental from MAPS--free. MAPS
pays the postage to send them out, and the
renter pays the return postage.

The programs are:

THE FOSSIL STORY--16mm sound movie by
Shell Oil--20 min.
FOSSILS & THE STORY THEY TELL--98
slides--written text only

THE BRACHIOPODS--100 slides--cassette
tape and written text
THE SPONGES--100 slides--cassette tape
and written text
CANADIAN PLANT FOSSILS--84 slides--
cassette tape only

These may be ordered from:

Jim & Sylvia Konecny
3036 Geronimo Road
Prescott, AZ 86301
(602) 445-0077

Allow at least two weeks' notice.

FAUNA OF THE BURGESS SHALE

by Guy Darrough
47 Pomme Manor, Arnold, MO.

Walcott made a famous discovery in 1909
while fossil collecting in the Canadian
Rockies in British Columbia. This find was
of major importance not only because of the
strange and bizarre creatures, such as
those figured on the cover, but also
because most of the soft parts were
preserved as silvery coatings in the shale
layers. Numerous creatures were found that
had no living counterparts and, to this
day, have to be classed under miscellaneous
animals. This remarkable preservation was
brought about by mudslides which dragged
creatures from their habitat to deeper
oxygen-deficient waters, which stopped
decay of the soft tissues.

One of the most common Burgess Shale
animals was Canadaspis perfecta (fig. 2,
cover), a phyllocarid. This animal is
thought to have been a bottom dweller,
using small leaf-shaped structures on its
legs to stir up the bottom sediments,
enabling it to snatch bits of food.

Sidneyia inexpectans (fig. 4) (named
after Walcott's son, Sidney) was also a
bottom feeder and an active predator. Its
gut contents have been found containing
trilobites and hyolithids. Sidneyia shows
a combination of arthropod characteristics
that cannot be grouped with any earlier
life forms.

Anomalocaris canadensis (fig. 1) was the largest predator of this fauna. It grew to a half meter in length, had an elongate body with an arrangement of overlapping lobes on either side of the body, large eyes, two powerful jointed limbs, and a ferocious tooth assemblage. One could imagine trilobites milling about while Anomalocaris, hungrily looming above, undulating its lobes, prepared for lunch.

Aysheesia pedunculata (fig. 7), one of the rarer creatures in the fauna, looked very much like an onychophore and may well be the ancestor to modern millipedes, centipedes, and insects.

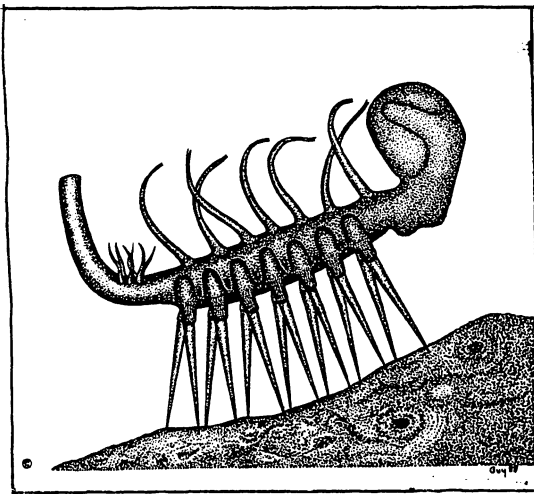


fig. 8. Hallucigenia sparsa

Perhaps the strangest of all was Hallucigenia sparsa (fig. 8, above). This mismatched creature had an elongate body with seven tentacles on the top side, each tentacle ending in a snipper-like structure. Its legs were spines, and the creature must have crept about much like a sea urchin. At the base of its smokestack-like anus was another small group of tentacles. Not much is known about the head.

This, indeed, was an alien world, with the only familiar animals being the sponges, brachiopods, monoplacophorans and algae. (Where were the snails?) Hopefully, as exploration continues, more soft-preservation type faunas will be discovered, but until then the Burgess Shale seems to be the most fantastic.

DINOSAUR EGG MAY CONTAIN EMBRYO

sources: The Rock Island Argus, Feb. 24 & Mar. 4, 1988

sent by: JoAnn Good, Aledo, IL
? Arizona Republic, Mar. 5(?), 1988
sent by Jim & Sylvia Konecny
Prescott, AZ

A 150 million-year-old dinosaur egg found in September, 1987, may contain the fossilized embryo of an allosaurus.

A CAT-scan of the partially collapsed egg revealed a 2 cm long gray area that appears to be an embryo. Enhanced CAT-scan images of the almost intact egg showed a small piece of the egg's shell and a polliwog-like structure inside.

"The polliwog image looks very lifelike, much more so than on the unenhanced film," said Brent Harker of Brigham Young University. But it would require cracking the egg to be sure and that "would destroy it. We're not going to do that," Harker said.

The egg was found at the Cleveland Lloyd quarry, about 135 miles southeast of Salt Lake City. Its age was placed at between 146 million and 152 million years by potassium-argon dating, according to Wade Miller, also of Brigham Young U.

"It's possible it's the oldest. I don't know of one older," said Miller. "Most all dinosaur eggs I'm aware of are many tens of millions of years younger."

The egg, which researchers hope was laid by an allosaurus, a carnivorous dinosaur that weighed up to 4 tons, is 4 inches long and about the size of a human fist. The apparent embryo, according to Miller, is "only about one month old," and researchers may never be able to determine whether it is an allosaurus.

The egg has a major significance for researchers, Miller said, "because so little is known about these dinosaurs. Comparing it with other eggs will show us the changes in the structure of shells over time. The more information we can get, the more we can answer."

TREE-CLIMBING HORSESHOE CRABS

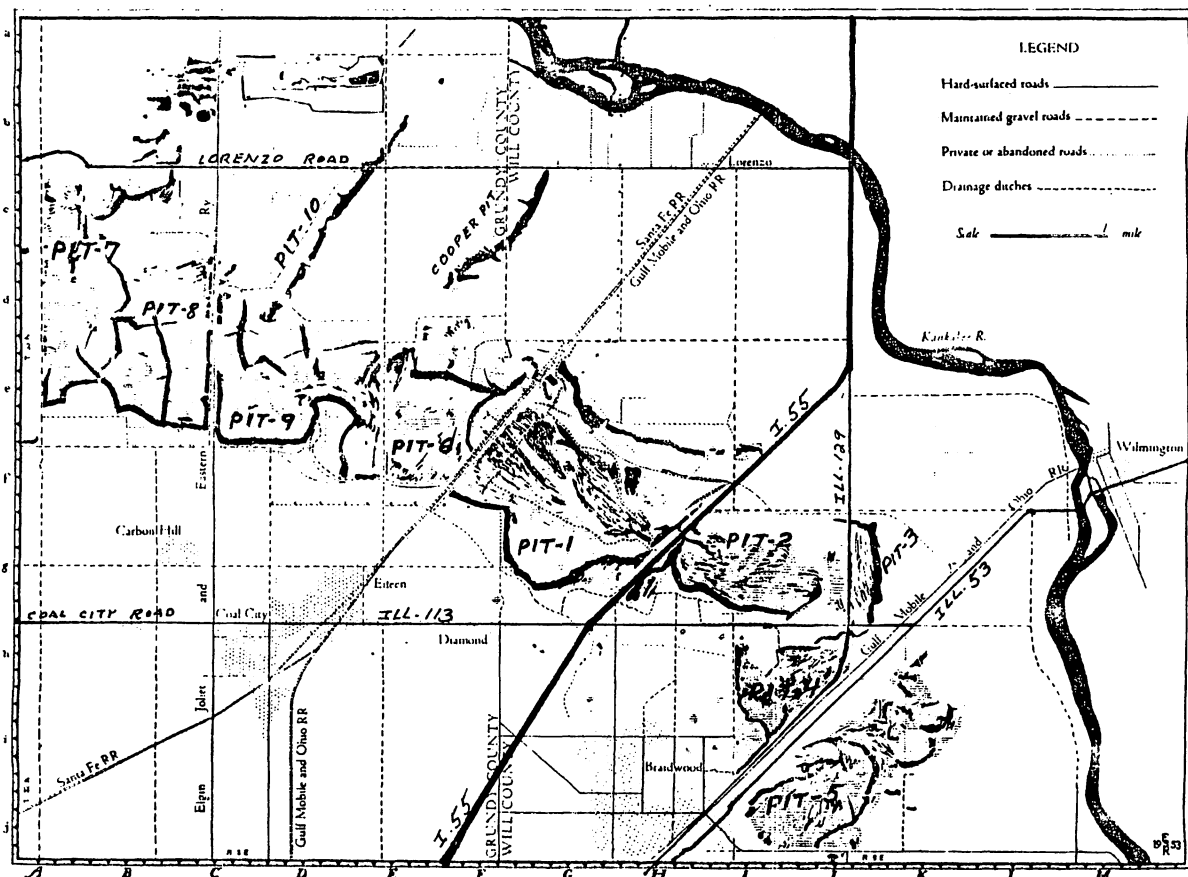
by Jim Konecny
3036 Geranimo Road
Prescott, AZ 86301

In the October, 1987, issue of the *MAPS Digest* my friend Don Auler commented on the published report that the horseshoe crab found in the Braidwood, Illinois, area was a terrestrial animal¹ and the apparent ridicule of the idea. I would like to make some additional comments concerning this theory.

Allow me to lay some groundwork first. The animal life of the Mazon Creek Area has been assigned to two distinct faunal assemblages: the Essex fauna (marine) and the Braidwood fauna (terrestrial).² Most of the strip mines of the Coal City-Braidwood area were operated by the Peabody Coal Company, and for identification purposes they numbered the various pits--1 to 16 (see map on right). For easier recognition, local collectors assigned pet names to some of the pit locations. There were also some spoil heaps from early shaft mines in the area. Most of these are located south of the Coal City Road. Other strip mines

that have been collected are located near the towns of Morris and Ottawa. The original collecting location at Mazon Creek, just south of Morris, must also be mentioned here. Generally, the Essex fauna is restricted to Pit 11, the shaft mines, Ottawa, and one small pit (Chowder Flats) near Morris. The rest of the area was assigned to the Braidwood fauna. Naturally, some locations were more productive than others. Because I lived only a thirty-five minute drive from the strip mines, it was only natural that I

Cartography by Eugene S. Richardson, Jr.



STRIP MINES OF THE MAZON CREEK AREA

Pit 11 is located about three miles south of Pit 5.
Morris is located about five miles northwest of Pit 7.

spent much time thoroughly investigating all of the locations-- thirteen years to be exact.

Now, let us get to the "tree-climbing" horseshoe crab. To begin with, tree-climbing crabs, though unusual, do exist in some of today's tropics. If crabs can climb trees today, they could certainly climb trees in the forests of the Pennsylvanian period.

The author of the published professional report based his contention on the fact that most of the horseshoe crabs found in the Mazon Creek Area have been found in the Braidwood fauna locations (fig.1, below). Ninety percent of the material found at these locations is composed of various plants: ferns, scale-bark trees, scouring rushes, etc. The small amount of animal life in these locations is composed of insects, spiders, millipedes, small tube-building worms, and a few shrimps, clams and ostracods. However, the most abundant animal is the horseshoe crab. It should be noted that the few aquatic forms are freshwater species.

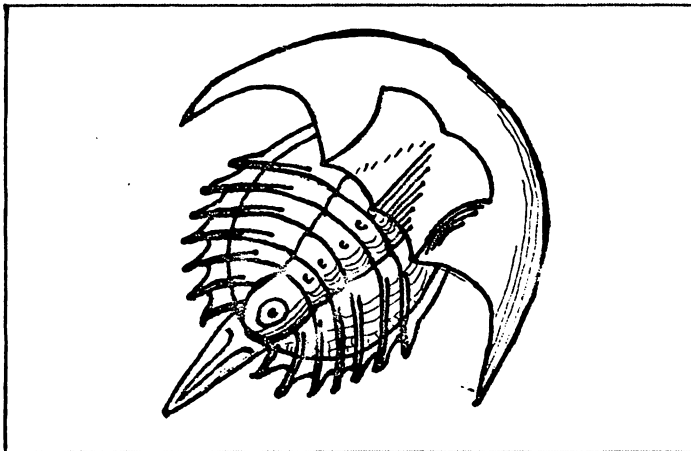


fig. 1. Horseshoe crab Euproops danae, found in the Braidwood area. (Drawn by the author's wife, Sylvia Konecny, whom Jim describes as his chief assistant.)

The Essex fauna locations are a completely different story. Here the plant to animal ratio is reversed. My experience finds that seventy-five percent of the material found is animal life. These are mainly marine and brackish forms: shrimps,

worms, clams, sea cucumbers, jelly-fish, and tully monsters. Numerous other animals are found, but not in abundance. The horseshoe crabs (fig. 2, below) are a definite minority. The few plants that are collected are small and fragmented, not like the large complete leaves and fronds from the Braidwood locations.

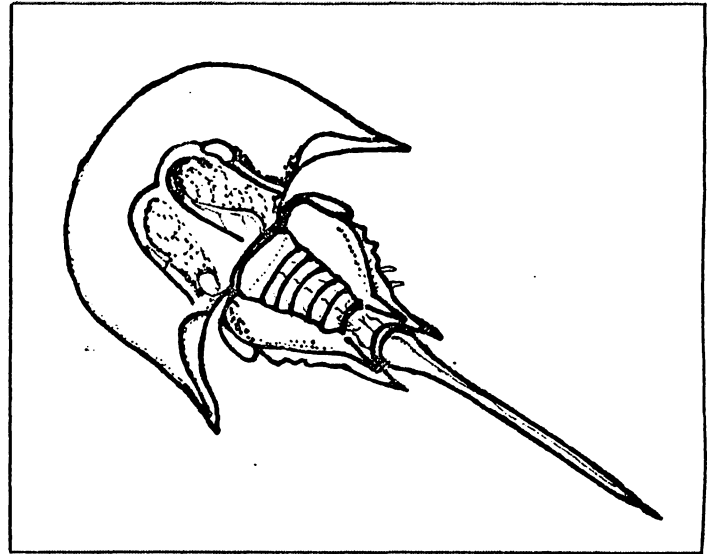


fig. 2. Horseshoe crab Palaeolimulus sp., found in the Essex area. (Drawn by Sylvia Konecny.)

My experience shows a twenty-to-one ratio of horseshoe crabs in the Braidwood locations over the Essex locations. Word from other collectors brings the same ratio. Some friends have never found a horseshoe crab in the Essex locations. Johnson and Richardson² also noted the abundance of Xiphosurans (horseshoe crabs) in the Braidwood fauna and their rarity in the Essex fauna. It is noteworthy to add that the horseshoe crabs that I found in the Braidwood fauna areas are all of the genus Euproops (fig. 1); the ones from the Essex fauna locations are of the genus Palaeolimulus (fig. 2). Notes from other collectors have provided the same results. No doubt these two genera preferred different environments.

Does all of this prove that the horseshoe crabs climbed trees? Indisputable evidence shows that most of the horseshoe crabs are found in the richly abundant plant location. Also, they are the most

abundant animal form found in these locations. The evidence is circumstantial. They could have climbed trees in search of certain food as some of today's crabs do. They could have climbed trees to lay their eggs. They may just have been foraging in the decaying plant material on the swamp forest floor.

I am neither supporting nor condemning the idea of tree-climbing horseshoe crabs. I am merely trying to point out that it is a definite possibility. What were the horseshoe crabs doing among all of these plants? Is further evidence needed to prove the point? What do you think?

REFERENCES

1. Fisher, Daniel C. "Evidence for Subairial Activity of *Euproops danae*." MAZON CREEK FOSSILS, edited by Matthew H. Nitecki, 1979
2. Johnson, Ralph Gordon and Richardson, Eugene S., Jr. "A remarkable Pennsylvanian Fauna from the Mazon Creek Area, Illinois." The Journal of Geology, vol. 74, no. 5, part I (Sept., 1966).

EUBLEPTUS DANIELSI (PALAEODICTYOPTERA)

A Carboniferous winged insect from
the Francis Creek Shale, Illinois,
(Middle Pennsylvanian)

by Paul Harris

874 Circle Drive, Mountain Home, AR 72653

I found a specimen of *Eubleptus danieli* (fig. 1, right) in 1964 while I was hunting fossils in the Peabody Coal Company's Mine Pit 11. The insect is in an ironstone concretion from the Francis Creek Shale of the Middle Pennsylvanian, Illinois. There are two halves to the concretion, and when they are placed together in their naturally formed position, they measure 7cm in diameter, and are approximately 1.7cm thick in the center. When I found the concretion, the two halves came apart quite easily without my having to exert pressure on them.

When I found time, I took the specimen to the Field Museum in Chicago, and the late Dr. Eugene S. Richardson, formerly Curator of Invertebrate Paleontology at the Museum, had the specimen prepared for me. First, the overlying rock matrix was removed with a small pneumatic drill and a compressed air gun. This method is quite effective for revealing areas of an insect's body, especially wing tips, antennae, and legs that are found beneath the bedding plane.

When the specimen was fully prepared, it received a temporary home in the Field Museum for two years. Because of the excellent preservation of the entire insect, Dr. Frank Carpenter requested the use of the specimen, along with several more belonging to a number of other amateur collectors, for research at the Museum of Comparative Zoology at Harvard University. It remained there for three years before arriving back to its place in my collection of Mazon Creek fossils.

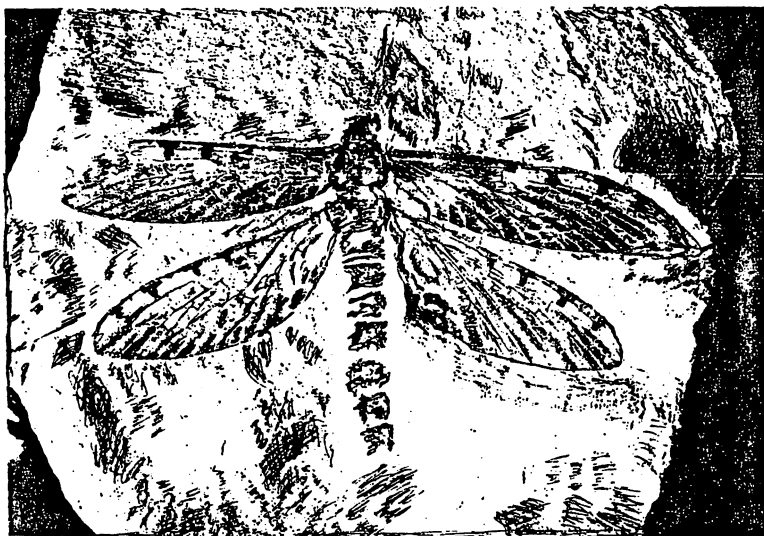


fig.1

Eubleptus danieli

Order: Palaeodictyoptera

Family: Eubleptidae Handlirsh

Paul Harris took a picture of this specimen with his camera, made a black and white photo copy of the camera picture, and touched it up with a fine-point pen using black ink.

The name Palaeodictyoptera is from the Greek, and can be broken up as follows: paleo, ancient; dictyo, net; and pteran, wing--referring to the wings of the Order of insects that have many-branched veins, with a meshwork of tiny veins between them.

These Carboniferous insects had two pairs of wings (front and back) that could not be folded back over the body but, instead, remained locked in the outspread position. The branching design of various veins in the wings forms a number of patterns, each distinctive to a species.

WOODRIDGE MAN FINDS RARE FOSSIL

source: Luhman, Jennifer. Suburban Life Graphic, Downers Grove, IL, Feb. 20, 1988

sent by: JoAnn Good, Alledo, IL

Mike Madsen of Woodridge, Illinois, is credited with the discovery of a unique fossil insect from Pit 11 in the Francis Creek Shale, a coal mine strip in the Braidwood-Morris area. Madsen discovered the specimen during a field trip with his high school students four or five years ago. He was opening concretions found by his students and saved several of the plant and insect fossils. The imprint of the insect, resembling a modern-day dragon fly with a wing span of about one and one-half inches, was imbedded in one of the concretions.

Named the Eubleptus maculosus, the specimen had remained unidentified for several years. It wasn't until a scientist at the Field Museum in Chicago suggested sending the specimen to Dr. Frank Carpenter, a Harvard University professor specializing in insect paleontology, that Madsen learned that he had made a rare find. After careful study, Carpenter informed Madsen that the fossil represented a new species and gave it its name. He also added that he will be reporting his results in an upcoming science publication.

Although Madsen will not receive any fame or fortune for his discovery, he is thrilled just to know that he contributed something to the world of science. "It was very exciting to find an absolutely unique

Several specimens of the Palaeodictyoptera have been found in the Mazon Creek area. The ironstone nodules occurring in this area are the most important source of Carboniferous insects in North America.

REFERENCE:

Carpenter, Frank M. "Studies on North American Carboniferous Insects." 7. "The Structure and Relationships of Eubleptus Danielsi (Palaeodictyoptera)." A Journal of Entomology. Reprint from Psyche. v. 90, no.1-2, 1983.

fossil like this," said Madsen.

MAPS NOMINATES THE HAMMONSES FOR STRIMPLE AWARD

For the first time MAPS has submitted a nomination for the Harrell Strimple Award. The names of Ernest and Onaby Hammons, Petersburg, Tennessee, were advanced to the selection committee in late February. Larry Wiedman has contacted the professional community for support for the nomination.

Mr. and Mrs. Hammons found MAPS at the second EXPO and impressed many people there both with the material they presented and with the vibrant and generous people they were. The Hammonses entertain professors and their geology students, high school science classes, and collectors from all parts of the country.

The Hammonses have donated fossils to many colleges, most of them small: Middle Tennessee State U., Murfreesboro; The University of Iowa, Iowa City; Monroe Community College, Rochester, NY; Bradley U., Peoria, IL; Western Illinois U., Macomb; Converse College, Spartanburg, SC; Monmouth College, Monmouth, IL; and Emory U., Atlanta, GA. They have collected and contributed to the scientific community new and rare species of Cystoids and Medusae, an Alga, a Crinoid, and a Blastoid. They have also directly influenced two young geology students.

It is sometimes difficult to decide which is better--the incredible specimens the Hammonses lead one to find or the incredible Hammonses.

ADVERTISING SECTION

(See next page for advertising information)

WANTED: Microfossils (Vertebrate or Invertebrate). Washed or unsorted soil containing the fossils. NO MARL! Must include geologic information and State where found. Request a very small sample for perusal, your price per pound, including postage. Send to: Bertie M. O'Connor
Box 102, San Gabriel, CA 91778.

WANTED: Articulated sections of Dinosaurs.

Gerard Becker (312)623-5444
5075 Darlene Ct.
Gurnee, IL 60031

BOOK REVIEW

by N. Gary Lane
Dept. of Geology

Indiana University, Bloomington, IN 47405

1986. P. Arduini and B. Teruzzi (U.S. Editor, S. Hornstein, Amer. Mus. Nat. History). Simon and Schuster's Guide to Fossils. A Fireside Book, Simon and Schuster, Inc. Soft Cover, \$12.95.

If you should happen to find a specimen of Archaeopteryx or Tyrannosaurus in your backyard, you can use this book to identify the specimen. The book is not a field guide, but rather a collection of really fine color photographs of a wide range of fossil specimens, in convenient pocketbook format. The authors are Italian, and the book was first published in Italian as Fossili with A. Mondadori as editor. The English language translation is by Simon and Schuster.

The Introduction of the book consists of very brief sections on preservation, taphonomy, evolution, biostratigraphy, paleoecology, paleogeography and preparation of specimens, all on 11 pages, including illustrations. This is followed by a Classification section with plants, animals and trace fossils. The plant and animal kingdoms include organisms normally now included in the Kingdoms Monera (cyanobacteria) and Protista (foraminifera). Groups are characterized at the phylum, and important class, level. The section is well-illustrated with photographs and line drawings.

The body of the book consists of two color photographs of fossil genera on each right-hand page, with classification, description, stratigraphic and geographic distribution, and notes for the two genera on the facing, left-hand pages. The sizes of specimens are given, and the oldest and youngest occurrences are noted. Symbols identify the age of the specimen to Era as well as 4 major environments of occurrence.

A total of 260 genera are included, beginning with Precambrian fossil algae and ending with Cenozoic mammals. A total of 16 genera in the plant kingdom are covered. The remainder are animals (or protists).

The illustrated specimens include both North American and European examples. The chosen examples range from extremely common fossils--Atrypa, for example--to rare taxa found only in large museum collections. The color photographs, which are the heart of the book, include some from major American museums, but the majority are from private European collections, including those of the authors. There is an illustrated glossary of anatomical terms and a generic index at the back of the book.

The color photographs are excellent. I personally collect any books I can find with color pictures of fossils. There aren't too many of them. The pictures can be copied inexpensively if you have a 35mm camera and a macro lens. One copy for your own personal use is permitted under copyright law. I use slides made in this way in my paleontology lectures.

This book will not be especially useful for identification purposes because closely similar fossils are not included. If you happen to have a specimen of one of the illustrated genera, then the book will provide some useful information. Some of the more interesting specimens included in the book include a variety of specimens from the Ediacaran fauna (the oldest known Braidwood faunas), Illinois, as well as fine material from well-known European sites, including Solenhofen.

For the price I think this is a really good book to have in your library. If it isn't available in your local book store, I am sure the store can order it for you.

Please ADD the Following NEW MEMBERS to Your Directory:

Dr. Terry Berkland
Geology Dept
Central Mo. State Univ.
Warrensburg, MO 64093

Major P. & Mary Cornett
23584 LeBoat
Novi MI 48050

T. Patrick Dwyer
49 Killlean Park
Albany, NY 12205
518-463-0848

Teacher--Director of Botanical Garden. Will trade. Interested in Vertebrate, Plant (esp. Petrified Wood), Arthropods, Echinodermata, & Cephalopoda. Has for trade Petrified Wood & small amounts of other fossils. Wants to meet kindred spirits, to learn more, and to collect and exchange fossils.

Charles Fellers
4213 W. Culver
Phoenix, AZ 85009
602-272-4450

Special Science director for Isaac School District. Interested in all areas of paleontology. Would like list of books available and to purchase crinoids, leaves, sponges, sea urchins, terataspia grandis, mesothyre oceanis, stylonurus excelsior, dragon fly, bottom-dwelling graptolites, anything from coelophysis, early birds, ginkgo leaves, lycopods. Wants to learn more about fossils and add to his collection.

Fred H. Lindberg
136 S. Washington
Casper, WY 82601
307-237-4550

Psychologist. Will trade. Interested in all fossils. Has for trade Green River Fish, White River Mammal Material, Wyoming Ammonites. Member National Co. Rockhounds.

Methaniel Ludlum
c/o What On Earth
6262 Bugch Blvd.
Columbus, OH 43229
614-436-1458

Retail Sales--Natural History Objects. Will trade sometimes. Major interest Vertebrate Paleontology. Wants to get in contact with other collectors of vertebrate fossils and further his collection.

Charles Oldham
7405 West Hwy 22
Crestwood, KY 40014
502-241-8755 (home)
502-364-2320 (work)

Environmental Engineering Geologist. Will trade. Major interest Invertebrate Fossils of Paleozoic; however, will trade for anything. Has for trade Invertebrate Fossils, Penn. Plant Fossils of KY, Micro-fossils, old books & literature, maps--"you name--I got it or can get it." Member KY Geological Society of KY. Wants to learn from, meet, and trade with other members.

John Perancevic
520 Oak Street
South Milwaukee, WI 53172
414-762-7478

Mail Clerk. Will trade. Major interest Invertebrate Fossils from all periods. Has for trade Silurian Fossils of all types. Member Wisconsin Geological Society, Milwaukee. Interested in field trips, collecting and studying of fossils.

Diane M. Schumacher
305 East Rawson Avenue
Oak Creek, WI 53154

Executive Secretary. Will not trade. Wants to broaden knowledge of fossils by meeting other collectors and to receive information from newsletter.

Please Note the Following CHANGES OF ADDRESS and CORRECTIONS:

Larry Decina
DVPS, Vice President, Librarian
719 Windermere Ave.
Drexel Hill, PA 19026

Interested in Trilobites, Ammonites, Sharks' Teeth, Dinosaur Material. Has for trade Sharks' Teeth, Miocene Material from MD and NC, St. Clair, PA Fern Fossils.

Keith E. Dopson
6601 Duffield Dr.
Dallas, TX 75248
250-6820

Glenn F. Rockers
209 W. 17th St.
Hays, KS 67601

Pierre Gonin
40 Boucher
Hull, Quebec
CANADA J8Y-6G3
tr 819-770-0568

Trilobite Collector. Will buy, sell and trade. Collects Canadian trilobites. Has for trade fossil fishes from Europe and Lebanon. Also trilobites from Canada and Morocco. Wants to make contact with other collectors.

Mike Manning
3615 E. St. Rt. 55
Troy, OH 45373

David A. Pauli
4701 Grammar Ave.
Metairie, LA 70001-3303

Den & Patricia Zimmerman
2309 Oak Tree Dr.
Fairfield, OH 45014-3939

Ronald C. Meyer
1545 Patton Cir. #E
Boulder, CO 80303-1228

Jean-Guy Pellerin
2284 Delormier St.
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Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

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MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). September, October, May, July, and August meetings are scheduled field trips. The June meeting is in conjunction with the Bedford, Indiana Swap. 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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