

PARTNERS IN PALEONTOLOGY: SUCCESSFUL SYNERGIES AND COLLABORATIONS BETWEEN AMATEURS AND PROFESSIONALS

illustrated by the University of Iowa Paleontology Repository,
the Mid America Paleontology Society, and
the Black Hawk Gem and Mineral Society

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UI Paleontology Repository

Jim Preslicka (MAPS)
Tom Blume (BHGMS)

University of Iowa Paleontology Repository

Established 1855

Over 1 million specimens
>30,000 type/cited specimens

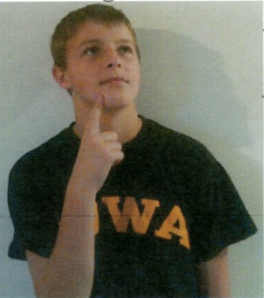
Acronym: SUI

Staff: 1 Full-time permanent Collections Manager





FOR HELPING ME SEE MY FUTURE



Tiffany,
Thank you for letting
me come and work
with you at the museum.
I look forward to
working with you again.
Shirley E.



Iowa State Fair Exhibit



Cedar Rapids Science Center exhibit
created by
Iowa Geological & Water Survey





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EXPOSITION



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NEWS & EVENTS

Expo 36

Sharpless Auctions Facility, IOWA CITY, IA
Dates & Topic announced for EXPO 2014

[MAPS Digest - Detailed Expo information](#)

[MAPS Expo Flyer](#)

The theme for Expo 2014 will be the **Mississippian Period**, and the show will run from

Friday, April 4th to Sunday, April 6th, 2014.

The keynote speaker will be Forest Gahn, his Talk title is TBA

The MAPS EXPO Show will be held April 4-6, 2014, at the Sharpless Auction facility just north of I-80 at Exit 249. The Pre-Show will occupy the Travelodge south of I-80 at Exit 246 on North Dodge Street about 3 mi from Sharpless Auctions. Both venues are located in Iowa City, Iowa. More information on both shows appears below:

Upcoming Events

NATIONAL
FOSSIL
EXPOSITION

Sharpless Auctions
Iowa City, IA

APRIL 4-6, 2014

36

The MAPS Fossil Expo. is the largest show in the world
that exhibits fossils exclusively. [Learn More »](#)

MAPS is one of the few strictly fossil clubs in the country.

David Brenzel talking to MAPS members about the Tarkio Valley Giant Ground Sloths Project



About MAPS

See Also: [MAPS Governing Board](#)

MAPS is one of the few strictly fossil clubs in the country. It is for the novice/beginner who wants to know more about these treasures from the past; it is for the old-timers who have so much expertise and knowledge to share with the rest of us; and it is for all those who fall in-between who share our love of fossils.

A major benefit of joining maps is the vigorous trading of fossils that occurs between members from different parts of the world. Many members also send give-away fossils to school teachers for use in their classrooms.

MAPS joins with other clubs to sponsor several [field trips](#) per year to some local quarries. There we collect wonderful Devonian trilobites, huge nautiloids, the occasional perfect crinoid and many species of brachiopods and other interesting fossils. Of course after each trip we all gather together to swap stories and show off our great finds of the day!



[MAPS Expo](#) is the largest fossils-only show in the world.

We do not discuss rocks, minerals, crystals or lapidary. Our desire and aim is that *MAPS* develop into a semiprofessional society that will make a real contribution to the collecting, the study, the preparation, the identification, and the display of fossils.

**Anyone, anywhere who is interested
in fossils is eligible for membership in *MAPS*.**

MAPS has sponsored the [National Fossil Exposition](#) since 1979. The *EXPO* is held in early spring with fossil enthusiasts converging from all across the nation as well as from Canada and a few overseas countries. It is the place for fossil lovers to be.

MAPS EXPO



NATIONAL FOSSIL EXPO 32



WORKSHOPS



Saturday, March 27th



10am **"Laura the Hypacrosaurus"**

Don Johnson, Eastern Iowa Paleontology Project.
Learn about Don's favorite group of dinosaurs, the duckbills. See and touch some of the fossil bones of Iowa's Celebrity Dinosaur, 'Laura, the Kid Dinosaur.'



11am **"Track'em down and Dig'em up"**

Bill Desmarais.
Interactive, hands-on program about expeditions to Alberta, Canada, to work on dinosaur footprint trackways and to dig for bones at the famous Barnum Brown *Albertosaurus* site.



1pm **"Life & Times in the Ordovician"**

John Catalani.
John is an avid cephalopod collector, having spent many happy years studying nautiloid cephalopods from the Platteville Group rocks in Illinois.



2pm **"Stump the Experts - Fossil IDs"**

Charles Newsom, University of Iowa.
If Charles can't identify your fossil, he will find someone who can! He will also give general tips on ID-ing your fossils.



3pm **"How do I Organize My Fossil Collection?"**

Tiffany Adrain, U. Iowa Paleontology Repository.
See how museums care for their fossil collections, and get some tips for looking after yours. Topics include storage, organization, protection from pests and disasters, and collection records.

VISIT THE INFORMATION DESK FOR MORE DETAILS

Fossil Expo is sponsored by the Mid America Paleontology Society (MAPS) www.midamericapaleo.org

NATIONAL FOSSIL EXPO 34

TONIGHT!

KEYNOTE ADDRESS

"Geologic Secrets of Illinois' Fossil Rain Forest"



by Scott Elrick

Illinois State Geological Survey

Friday, March 30th at 5.15 pm.

VISIT THE INFORMATION DESK FOR MORE DETAILS

Fossil Expo is sponsored by the Mid America Paleontology Society (MAPS) www.midamericapaleo.org
A LOVE OF FOSSILS BRINGS US TOGETHER



MILLIE & SAM'S FOSSIL HUNT

FIND A FOSSIL AND TAKE IT HOME FOR FREE

– IF YOU CAN IDENTIFY IT!

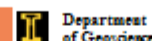


Department of Earth & Environmental Sciences

Fossils kindly supplied by the Mid-America Paleontology Society



FOSSILS FROM IOWA



Department of Geoscience

1. Fish teeth
Devonian fish had armored plates in their skin, and most had a bony shield covering their head.



3. Crinoids

Also known as sea lilies, these animals are attached to the sea floor by a stem made of little discs (columnals). At the top of the stem is a cup (calyx) with arms (filters food from the water).



6. Brachiopods
These sea shells are rare today, but millions of years ago they were everywhere! Fossil brachiopods are very common in limestone rocks.



8. Invertebrates
Distinct animals that once flourished, invertebrates could roll themselves up when danger threatened.



10. Strophomena
Distinct relatives of crinoids, the cup (theca) was attached to the sea floor by a thin stem.



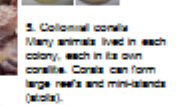
2. Shells from cephalopods
Like the modern-day Nautilus, these were active swimmers, and scavenged and preyed on small animals. Some shells are straight, others coiled.



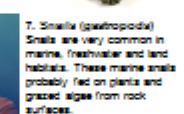
See the Devonian Reef (pictured above) at the Museum of Natural History, Klatskanie Hall, University of Iowa campus, Iowa City. The fossils shown are from the Department of Geoscience, Paleontology Repository.



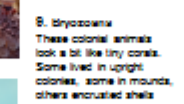
5. Colonial corals
Many animals lived in each colony, each in its own corallite. Corals can form large reefs and mini-islands (atolls).



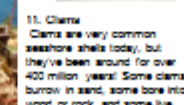
4. Horn corals
A single animal lived inside each horn-like structure.



7. Snails (gastropods)
Snails are very common in marine, freshwater and land habitats. These marine snails probably fed on plants and grasses from rock surfaces.



9. Bryozoans
These colonial animals look a bit like tiny corals. Some lived in upright colonies, some in mounds, others encrusted shells and pebbles.



11. Clams
Clams are very common seashore shells today, but they've been around for over 400 million years! Some clams burrow in sand, some bore into wood or rock, and some live attached to the sea floor by threads.





MILLIE AND SAM'S FOSSIL HUNT



University of Iowa Paleontology Repository
Mid-America Paleontology Society

MILLIE AND SAM'S FOSSIL HUNT



University of Iowa Paleontology
Mid-America Paleontology Society

Brachiopods

Brachiopods have two shells, and look a bit like bivalves (clams) at first glance. However, they are not related to bivalves (the soft parts are different). Brachiopods are still living today, on the seafloor, either attached to the sea bed or resting freely in the surface, some burrow into the sediment. There are two major groups of brachiopods, *articulate* and *inarticulate*. Articulate brachiopod shells interlock with tooth and socket structures. Their shells are more robust and so they are more common as fossils. Articulate brachiopods are divided into groups according to their features. The common groups in the Midwest include *spiriferids*, *strophomenids*, *rhynchonellids*, *orthids* and *pentamerids*.



Cyrtospirifer (spiriferid)



Despuumaria (spiriferid)



Platyrachella (spiriferid)



Lepidocyclus (rhynchonellid)



Schizophoria (orthid)



Hebertella (orthid)



Pionodema (orthid)



Flatystrophia (orthid)



Sowerbyella (strophomenid)



Douvillaria (strophomenid)



Strophomena (strophomenid)



Strophomena (inside of shell)



Devonian brachiopods include the butterfly-shaped spiriferids with wide hinge lines and pointed, wing-like margins. Rhynchonellid brachiopods look like little nuts with ridges and a zig-zag commissure (the line where the shells close together). Thousands of internal molds of *Pentamerus* brachiopods can be found in the Hopkinton Fm (Silurian), preserved in life position. They look like pigs' feet! Look for brachiopod shells that have other fossils encrusting them.



MILLIE AND SAM'S FOSSIL HUNT



University of Iowa Paleontology Repository
Mid-America Paleontology Society

Collection Labels

Fill in a label to cut out and keep with the fossil. You can photocopy these pages if you need more labels, or you can make your own. We've filled out the first one for you as an example.

Millie and Sam's Collection Catalogue No. <u>1</u> Identification <u>brachiopod</u> Locality No. <u>1</u> Notes <u>a perfect brachiopod</u> <u>found by Millie</u>	Collection Catalogue No. _____ Identification _____ Locality No. _____ Notes _____	Collection Catalogue No. _____ Identification _____ Locality No. _____ Notes _____
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Iowa's Devonian Fossil Gorge

Exposed 1993



Iowa's Devonian Fossil Gorge

Re-exposed 2008!



Iowa Geological and Water Survey staff inspecting the freshly exposed surface at the Gorge in 2008



MAPS members remove selected specimens from the Gorge for preparation



Devonian Fossil Gorge crinoid (new species?)
collected after 2008 floods



Possible new genus of crinoid discovered in the
Gorge in 1993



Independence Quarries Project with members of
the Black Hawk Gem and Mineral Society



Denise & Randy Reed
Glen Rocca
Mike Powelka
Charles Newsom

Tom Blume
David Malm
Marv Houg
Jim Preslicka

WCF COURIER .COM
THE CEDAR VALLEY'S HOMEPAGE

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Breaking News Weather delays and cancellations for the Cedar Valley

Hot Topics Waterloo budget • Deere Foundry • Animal Control • Bible • IH SAA ruling • Bias case • Bill tracker • C

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Fossil hunter to discuss Iowa's ancient tropical seaway at annual show

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COURTESY PHOTO
The eastern wall of the Buchanan County quarry site is riddled with karst features — caves, caverns and sinkholes caused by ancient groundwater — then filled with black shale deposits when sea once again covered the area. Fossils, including cephalopods, have been revealed here.

April 07, 2013 5:00 pm • By Melody Parker 0 Comments

WATERLOO, Iowa — On any clear, cold day or sweltering summer afternoon, Iowa's farm fields seem to stretch into infinity. Now close your eyes and imagine it as ocean-front property.

It's a vision Jim Preslicka from the Mid-American Paleontology Society loves to conjure for audiences interested in geology and paleontology like those who will be attending next Sunday's Black Hawk Gem and Mineral Society show at the Waterloo Center for the Arts.



Independence Quarries Project
All collection, preparation, curation, research,
and outreach carried out by society members

- 13 species of cephalopod - the most diverse cephalopod fauna known from the Devonian of Iowa
- fish, bivalves, brachiopods, corals, sponges, gastropods, trilobites, and conulariids
- Iowa's oldest known ammonoid cephalopod, *Tornoceras iowaense*

Independence Quarries Project
Placoderm arthrodire fish plate



Independence Quarries Project
Cephalopods



Independence Quarries Project
Oncocerid nautiloids, Brooks Hardground Bed



Independence Quarries Project

Tornoceras iowaense



Independence Quarries Project
Tetranodoceras sp. "type a"





Independence Quarries Project
Tetranodoceras sp. "type b"

Independence Quarries Project
Undescribed oncocerid



Independence Quarries Project
Tylodiscoceras — or is it?



Crossman Collection Curation Project
Mid-America Paleontology Society



Crossman Collection Curation Project
Mid-America Paleontology Society



Crossman Collection Curation Project
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Crossman Collection Curation Project
Mid-America Paleontology Society

Crossman Collection Curation Project
Mid-America Paleontology Society



East road cut by the Festina
near Ft. Atkinson
" " " 9-25-81

Excellent unpropped
Porocninus w/ stem
Maquoketa
Ft. Atkinson Mn.
Road cut Festina IA

Specimen
#2
1/18/2014

C





THANK YOU!

