

# THE EARTH SCIENCE NEWS

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EARTH SCIENCE CLUB OF NORTHERN ILLINOIS

-----E S C O N I-----

[WWW.ESCONI.ORG](http://WWW.ESCONI.ORG)

**EARTH SCIENCE CLUB OF NORTHERN ILLINOIS 2010**

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<b>Paleontology</b>	John Good	1891 Windward Lane	Hanover Park, 60133	630-483-2363
<b>Junior</b>	Open			

11/13/09

John Good & Karen Nordquist are delegates to Chicagoland Gems & Minerals Association.  
Mark Kuntz is Show Chairman for 2010.

The aim of the **Earth Science Club of Northern Illinois** is to promote an interest in the Earth Sciences. In addition to the regular General Meeting, study group meetings are held monthly. They are held by groups of **ESCONI** members interested in the studies of Archaeology, Mineralogy, Micromounts, Paleontology, and the Lapidary Arts. There are also study sessions for Junior members to help them learn more about the earth sciences. From time to time field trips are arranged. **ESCONI** has a fine library of books on the earth sciences that are available to members.

We welcome the attendance of all interested persons at any or all sessions. The schedule is printed in this Bulletin (date, time and place of meeting). Specific information is published in this bulletin.

Membership is \$20.00 (which includes the Bulletin) for family membership, or \$50.00 for three years. Dues are payable either at the monthly meetings or by mailing to the **Membership Chair** listed above.

Deadline for Bulletin articles to the editor is the 2<sup>nd</sup> weekend of each month. Articles in this publication may be reprinted if full credit is given the author and **The Earth Science News**. Exchange bulletins may be mailed directly to the Editor.

**ESCONI** website is [www.esconi.org](http://www.esconi.org)  
Web Administrator is Dianna Lord

**February 2010****President's Message**

Well winter is definitely here like it or not. The snow is falling and the temperature is falling, but we have the warmth of our memories to get us through all this. Why not take a few moments and write them down and send them to our Web Administrator Diana Lord. She can then post them to our web site and share them with the world. Let people know about our wonderful hobby and our club where we come to share our love of fossils or minerals or artifacts or jewelry.



There are still fond memories of the 60<sup>th</sup> anniversary party last year and this is a photo from that party showing the past presidents of your club who were in attendance. They are Dick Ade (70-71), Karen Nordquist (01-03 & Current), Jim Fairchild (06-08), Kathy Dedina (89-90), and John Good (04-05). It was a fun evening with lots of goodies and a big cake to celebrate all those years! We hope there will be many more.

Soon things will start to warm up if not in temperature – then in activity. The Burpee PaleoFest weekend will be

coming up in early March and that is always a fun weekend of talks and activities for one and all. That will be followed by Members Nights, March 11 and 12, at the Field Museum for all members. It is easy to join if you are not a member and this is the opportunity to go behind the scenes to see the research that is going on there. The following weekend in March is our own ESCONI Show, March 20 and 21. And finally, there is MAPS the final weekend March 26-28 in Macomb Illinois. So March is fun packed and busy.



Karen Nordquist, President

**Dues are Due**

Please send your check payable to ESCONI for \$20.00 for one year or \$50 for three years to

Eileen Mizerk, Membership  
2094 Windward Lane  
Hanover Park IL 60133-6183

**FEBRUARY 2010 ESCONI EVENTS**

College of DuPage (COD) Building K, Room #131 for most meetings, but note that the room number is subject to change – there will be a note posted on the entrance door.

**General Meeting**  
**8:00 PM Friday Feb 12**

Joel Palka of the Field Museum and University of Illinois at Chicago will give a presentation on Mayan Use of Fossils

**Mineral-Micromount**  
**7:30 PM, Feb 13**

ESCONI members will discuss Florida minerals including phosphates, Tampa Bay coral and sands

**Paleontology**  
**7:30 PM Feb 20**

Karen Nordquist and Irene Brode will discuss their recent trip to Bristol, England for the Society for Vertebrate Paleontology Meeting . Bring your Mazon Creek Mollusk for Photography

**Archaeology**  
**7:30 PM Feb 27**

Stonehenge / Bluehenge. Members will discuss the famed archaeological site in England.

**Junior**

Subject to reorganization.

**ESCONI Field Trips**

See Web Site, [www.esconi.org](http://www.esconi.org), and the notes on a following page details about future field trips in 2010.

**BOARD MEETING**  
**7:30 PM Feb 26**

GROUP	GENERAL	MICRO	PALEO	ARCH	BOARD	JUNIOR
February	12	13	20	27	26	
March	Show 21-22	13	NA	27	26	
April	9	10	17	24	23	
DAY	2 <sup>nd</sup> FRI	2 <sup>nd</sup> SAT	3 <sup>rd</sup> SAT	4 <sup>th</sup> SAT	4 <sup>th</sup> FRI	2 <sup>nd</sup> FRI
TIME	8:00	7:30	7:30	7:30	7:30	7:00

**Burpee Paleofest March 6 and 7, 2010**  
**MAPS National Fossil Expo XXXII March 26-28, 2010**  
**CGMA 34th Annual Show May 29-30, 2010**

## **Future Field Trips for 2010**

As our government passes more laws and insurance stopping the use of BLM land, field trips are becoming harder to find places to collect fossils and minerals. Pay area are becoming more and more popular collecting areas. We need your help to find new or old places to collect for ESCONI. If you know any place please see me or someone on the board including John Good.

I am planning a field trip to WarField Quarry, near Kemmerer, Wyoming in June of 2010, for fossil fish. Grandson Pete and I collected there in June 2007. We were collecting at about 4,000 feet high. Finding fish was a matter of splitting soft limestone to find the fish. We found over fifty and my largest was eight inches long. We split one piece that had five fish all over three inches long. This is a pay area and you can keep 10 species of fish, any size. The National Monument is nearby and worth a couple of hours of time. I will have more on this when I set the dates. Please let me know if you are interested on going on this field trip.

Richard Rock: Field Trip Chairman

### **Other Future Field Trips**

Jacob Geodes, Hamilton, Illinois—Geodes	March 26, 2010
Braceville—Mazon Creek Fossils	May 2010
Braidwood Boat Trip—Mazon Creek Fossils	May 2010

## **E.S.O.N.I. GEM-MINERAL-FOSSIL Show Saturday-Sunday March 20-21 2010**

**We will need your help with our show. Donations of time, silent auction and live auction material will be appreciated. You can help by demonstrating your lapidary skills or displaying your collection. We will provide space and display cases. Setup will be on Friday afternoon March 19, 2010.**

**More Information is Available on the web site, [www.esconi.org](http://www.esconi.org)**

**Contact Mark Kuntz at (847) 742-9244**

**We will be having a work day at our storage unit on February 6, 2010  
at 9:00 AM**

**Contact Randall Bultman at 815-722-0449 for more details or check  
the web site, [www.esconi.org](http://www.esconi.org)**

## General Meeting

**November 13, 2009**

President Karen Nordquist called the meeting to order and welcomed everyone. She mentioned that tonight is the last regular General Meeting of the year. In December, ESCONI will have its Holiday party (optional dinner at the Greek Islands followed by a PowerPoint presentation of the 60-year history of ESCONI at the College of DuPage). A sign-up sheet was passed around for those wanting to attend the dinner. Karen mentioned that Jeff Anderson has brought in a number of agates that are on display in the back of the room. 1<sup>st</sup> Vice President Rob Sula stated that a speaker has not yet been lined up for January, 2010. For the February 2<sup>nd</sup> General Meeting, Joe Palka will give a presentation on Mayan use of fossils.

A discussion was then held on upcoming shows. Paleofest will possibly be held on March 6 (Note: since the General Meeting, it has been confirmed that Paleofest will be held March 6 and 7). Our ESCONI show will be held on March 20 and 21 (third weekend of the month). The show will be held in the Student Resource Center rather than in K Commons. We will have seven dealers at the show. Help will be needed for the show. MAPS will be held the following week (March 26 thru 28). The Ordovician Period will be the theme of that show. Cards containing information on the MAPS show were available at the meeting.

Field trips were then discussed. On Saturday, January 23, 2010, there will be a behind-the-scenes tour of the Chicago Academy of Sciences Collections Facility. A field trip to the St. Paul Quarry may be possible next year. Lone Star may re-open, so a field trip to that quarry may also be possible. Richard Rock may go to Wyoming in June to collect fossil fish.

A mention was made that it is nearly time to renew ESCONI memberships. Upcoming Study Groups were then discussed. The next group of organisms to be photographed for the Mazon Creek fauna book will be arthropods other than crustaceans. ESCONI books available for purchase were then mentioned.

Tom Williams then introduced the speaker for the evening – Dr. David Malone. Dave is professor and chair of the Department of Geography-Geology at Illinois State University (ISU). He has been at ISU since completing his PhD at the University of Wisconsin in 1994. He teaches courses in structural geology, stratigraphy and field geology.



General Meeting, Nov 13, 2009, Continued

“Exploring for Manto-Style Pb-Zn-Ag Deposits in the  
Forty-Mile Range, East Central Alaska”

Dave began his presentation by mentioning the opportunity he got for a large exploration program in the Aleutians/Alaska Peninsula to look for porphyry and epithermal targets. He followed this with some nice photographs of glaciers and Anchorage and a description of the area where he would be working and who he was working for. Dave then addressed the exploration procedures. These included stream sediment reconnaissance to delineate metal anomalies, existing geologic and geophysical data, geologic and alteration mapping, soil samples, and drilling. Economic finds include areas of >1 million tons of 0.5% copper and a few parts per million of gold. Constraints to working in Alaska include proper clothing (e.g., no cotton or shorts), cost (e.g., about \$10,000 per day for a field party), and technology.

Dave then showed several slides of his work area and a slide of galena (PbS, which is nearly 90% lead). He then detailed the various current and former uses of lead such as batteries, ceramic glazes, ammunition, fishing sinkers, radiation shielding, electrodes, solder, ballast, paint pigment, plumbing, and gas additive. Dave showed a chart plotting the value of lead over the past five years. He then showed a slide of sphalerite (ZnS, which is 40 to 50% zinc). Zinc is used to galvanize steel, used in alloys such as brass and nickel silver, pennies, anode in alkaline batteries, zinc oxide, and a vitamin and nutrient supplement. He then showed trends in the cost of zinc and silver over the past years.

Dave then showed a series of slides covering exploration activities in the Forty-Mile Range area of east-central Alaska near the border with the Yukon Territory. The “major” town in the area is Chicken, Alaska. He then described manto-style ore deposits – basically a bedded ore body. The source of ore within manto deposits is considered to be interformational, from a sedimentary source within an adjacent sedimentary basin, or from ore fluids driven off from a granite intrusive. The transport of Pb-Zn-Ag into the manto deposit position was likely hydrothermal, either a metamorphic solution or hydrothermal solution generated by granitic intrusions. The trap where the ore materials concentrated is typically a coarse-grained or highly reactive sedimentary or metasedimentary unit. Dave showed a map of the world indicating where manto-style deposits occur. This was followed by several geologic figures related to manto-style deposits. A number of slides of Chicken, Alaska, the field camp, field sampling locations, and indications of potential ore deposits followed. This was followed by figures showing sample locations and assay results. Dave ended his talk by showing slides of a few wildlife encounters and panning for gold.

Following the well-received presentation, Rob Sula presented Dave with an honorarium. After a series of questions and answers, the meeting was adjourned with thanks to Dave for his entertaining presentation. Refreshments were served. Dave remained to answer further questions. Jeff’s agates also attracted a lot of interest following the presentation.

Respectively Submitted, William S. Vinikour, Recording Secretary

### November Meeting Visitor – Jeffrey Anderson and his Agates

Jeff Anderson was in town in November and attended both the General and Mineralogy meetings as part of a visit with his ESCONI friends. He brought some samples of his wonderful agate collection with him to share with us. He has been collecting for many years and has gained quite a reputation for his beautiful collection, a portion of which is shown below. He now has his own rock shop focusing on agates as well as a web site. The photo included below shows Jeff on the right and his father.



## Mineral study group—January 9, 2010

The meeting was opened by Kathy Dedina. The February program assignments were reviewed—Jim Daly phosphates, Kathy Dedina Tampa Bay coral, Jeff Lord sands and John Good fossils. March's topic is radioactive minerals. Tonight's program featured the DVD on the Keweenaw National Historic Park. This park is a cooperative venture with local museums and historic sites associated with the long span of copper mining from the native Indians to the mining giants. The Porcupine Mountain Wilderness State Park and Fort Wilkins State Park are part of the historic park. Old Victoria and the Hanka Homestead Museum give an insight into life of early miners. Buildings from the Quincy Mine and the Calumet and Hecla Mine are included. Other museums and tours are also noted.. No DVD on Copper Country would be complete without a stop at the Seamen Museum which houses the best collection of specimens from the Upper Peninsula. Sheila and Dave Bergmann brought in the DVD.

The geode splitter was again used to open Keokuk geodes. The splitter is a soil pipe cutter that works very well at opening geodes. Most geodes opened this was crack in half rather than shattering which is common with the hammer and chisel method. Several members had fun working the splitter. Kathy Dedina had 2 Trancas geodes from Mexico that contained "wormy" looking quartz and quartz scepters. Dave Bergmann had a Keokuk geode with filiform pyrite.

Kathy Dedina and Diane Lord provided refreshments.

## The Giant's Causeway: Geologic Wonder of the World

By  
Joseph D. Kubal

**Introduction:** For the final selection in my trilogy of articles developed from my trip to Ireland, I wish to introduce readers to a geological marvel that I actually did not encounter in my travels. Located in the country of Northern Ireland, on the seaside, is an intriguing array of 40,000 mostly hexagonal, basaltic columns dubbed "The Giant's Causeway." The tops of the columns form stepping stones that lead from the cliff foot and disappear under the sea. Most of the columns are six-sided, although there are also some with four, five, seven and eight sides. The tallest are about 36 feet high, and the solidified lava in the cliffs is about 100 feet thick in places. *Note: The information contained within the Geology and Mythology sections below appear verbatim from the Wikipedia entry on "The Giant's Causeway."*

**Geology:** The Causeway was formed when some 50 to 60 million years ago, during the Paleogene period, County Antrim was subject to intense volcanic activity, when highly fluid molten basalt intruded through chalk beds to form an extensive lava plateau. As the lava cooled rapidly, contraction occurred. While contraction in the vertical direction reduced the flow thickness (without fracturing), horizontal contraction could only be accommodated by cracking throughout the flow. The size of the columns is primarily determined by the speed at which lava from a volcanic eruption cools. The extensive fracture network produced the distinctive columns seen today. The basalts were originally part of a great volcanic plateau called the Thulean Plateau which formed during the Paleogene period.

## The Giant's Causeway: Geologic Wonder of the World—Continued

**Mythology:** Legend has it that the Irish warrior Fionn mac Cumhaill (Finn McCool) built the causeway to walk to Scotland to fight his Scottish counterpart Benandonner. One version of the legend tells that Fionn fell asleep before he got to Scotland. When he did not arrive, the much larger Benandonner crossed the bridge looking for him. To protect Fionn, his wife Oonagh laid a blanket over him so he could pretend that he was actually their baby son. In a variation, Fionn fled after seeing Benandonner's great bulk, and asked his wife to disguise him as the baby. In both versions, when Benandonner saw the size of the 'infant', he assumed the alleged father, Fionn, must be gigantic indeed. Therefore, Benandonner fled home in terror, ripping up the Causeway in case he was followed by Fionn.

Another variation is that Oonagh painted a rock shaped like a steak and gave it to Benandonner, whilst giving the baby (Fionn) a normal steak. When Benandonner saw that the baby was able to eat it so easily, he ran away, tearing up the causeway.

The "causeway" legend corresponds with geological history in as much as there are similar basalt formations (a part of the same ancient lava flow) at the site of Fingal's Cave on the isle of Staffa in Scotland.

**Other related features:** Although not a common occurrence, hexagonal basaltic column collections are not rare. Devil's Tower in Wyoming, the Devil's Postpile in California and Prisms Basalticos in Mexico are North American examples of this unique phenomenon.

**Closing Notes:** Perhaps, someday, if I visit the "Emerald Isle" again, I will get a chance to hike this geologic attraction in the flesh.

So, as they say in olde Eire, "may the road rise up to meet you; may the wind always be at your back; may the sun shine warm upon your face and rains fall soft upon your fields; and until we meet again; may God hold you in the palm of His hand."

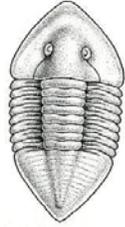
Basaltic Hexagons at  
Giant's Causeway



Columns Along  
the Seafont



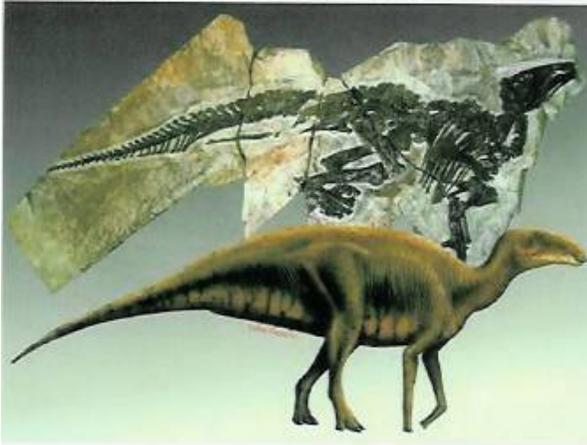
Photos obtained through AOL image search.



## Karen's Komments



### New Italian Hadrosaur – *Tethyshodros* or “Antonio”



This new dinosaur is noteworthy for several reasons. It is only the second dinosaur species to be named from Italy. It is the most complete medium to large sized dinosaur to be found in Europe. It is one of the most complete dinosaur skeletons in the world. It shows what close relatives of duck-billed dinosaurs looked like. It has been named *Tethyshodros insularis* which means “island dweller hadrosaurid dinosaur of Tethys” because he was found on what was an island in the Tethys as it existed 70 MYA. It is very complete except for the tip of the tail and measures about 13 feet long which is small for a hadrosaur. The sutures are barely visible and

the centra and neural arches are fused indicating that it is not a juvenile. It has a longer relative skull than most hadrosaurs. It has some primitive and derived features. It has only two replacement teeth where most hadrosaurids have three or more. It has 11 cervical verts compared to 12 and about 8 sacral verts compared to 9 to 12 verts. The hand is down to three digits with the loss of the first and last digits and the foot has a loss of the first toe. The tibia is longer than the femur indicating cursorial abilities. There are also many preserved tendons on the tail. The small size of this animal may have been due to island dwarfism since it probably lived on an island the size of Cuba today. The bones of other specimens found with it are also smaller than average. It is most likely that its ancestors came from Asia into Italy and Europe. Over time tectonic changes closed up the Alpine mountain chains and formed the islands including the one where Antonio lived. The dinosaurs could then island hop. (Dalla Vecchia in **JVP** Vol. 29/4 2009)

### New Meat Eating Dino Found at Ghost Ranch – *Tawa hallae*



Ghost Ranch is famous as the site of many skeletons of *Coelophysis* dinosaurs that have been known for some time. Now the Hayden Quarry (213 MYA) which is nearby but a little lower stratigraphically is proving to be very interesting as well with several new species being found within it. It is located within the Petrified Forest Member of the Chinle Formation. The first bones were found in 2004 and full scale excavation

## Karens Komments, Continued



was undertaken in 2006. The team included Randall Irmis of the Utah Museum of Natural History and Nate Smith of the Field Museum among others. They found the bones of several specimens; the type skeleton is a juvenile that is about 6 feet long and about 28 inches tall at the hips. They named it *Tawa* after the Hopi word for the Puebloan sun god. It has features that are a mix of coelophysoid and herrerasaurid and they believe that it migrated from South America rather than evolving from a local ancestor. There are also features that are found in neither of them. It has serrated teeth and had cervical pleuricoels. At Ghost Ranch, they found fossils from a dinosaur that is related to *Coelophysis* and another fossil that is related to *Herrerasaurus*, which is from South America. For this to have happened there must not have been major physical barriers like large mountain ranges during the Late Triassic to keep them from moving freely. However, then you would expect that sauropodomorphs and ornithiscians would have moved as well. So climate may have been the limiting factor. Artwork is by Jorge Gonzalez. (Irmis et al in **Science** Dec 11, 2009)



### New Early Prosauropod Found in Africa – *Aardonyx*

Adam Yates and Matt Bonnan have found the bones of two dinosaurs at Spion Kop in the central province of Free State in South Africa's huge Karoo Basin. Here it is common to find the bones of *Massospondylus*, but in 2006 they were finding new bones- bigger bones. In eleven weeks over the years since they have found some 300 bones in



an area over 20 feet long and 9 feet wide. They now have three new dinosaurs the fangs of a new theropod. The first they have named *Aardonyx celestae* for earth claw and Adam's wife Celeste, a preparator. The claws were some of the first bones found and they were embedded in concrete-like stone that were difficult to remove. They have two specimens of *Aardonyx*, the smaller of which is about 7 years old that is 23 feet long and 6 feet high. An adult would have been about 50 feet long and would have weighed about half a ton. It had a large belly and chest and ate a lot of vegetation. The bones of the forearm were interlocked to help support the weight of the animal when it dropped down onto all fours. It also had flat feet that had large claws that pushed its weight to the inside of the foot that gave it more stability. That is a characteristic of sauropods. Looking at the skull, they found that it lacked the sheets of jaw-connecting tissue that would be expected if it had cheeks. Thus it strikes a blow to those who would expect it to have had cheeks as an ancestor to sauropods. (Yates et al in **Proc of Roy Soc B**)

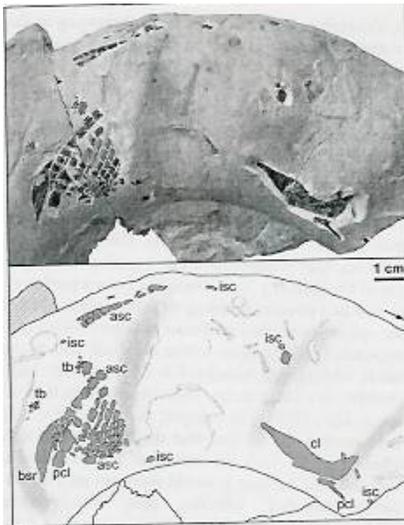
### Ancient Beavers Did Not Eat Trees

The giant beaver *Castoroides ohioensis* ranged over North America during the end of the last ice age. It would have weighed between 60 and 100 kg (132 – 220 pounds). A study done by Catherine Yansa of Michigan State University and Peter Jacobs of University of Wisconsin-Whitewater indicate what these large creatures were eating.

## Karens Komments, Continued

They lived about 14,500 years ago based on carbon dating. The pollen and plant fossils collected with them indicate that it was a cold and marshy environment with very few trees around. When the composition of the beaver teeth were studied, the ratio of carbon-13 to carbon-12 isotopes fell outside the range that would be expected for a creature that was eating trees like beavers do today. It suggests that beavers then were eating aquatic plants like hippos do. As the ice age lifted forests crowded out the wetlands making the environment more conducive to modern beavers that prefer trees. (Perkins in **Science News** 11/21/09)

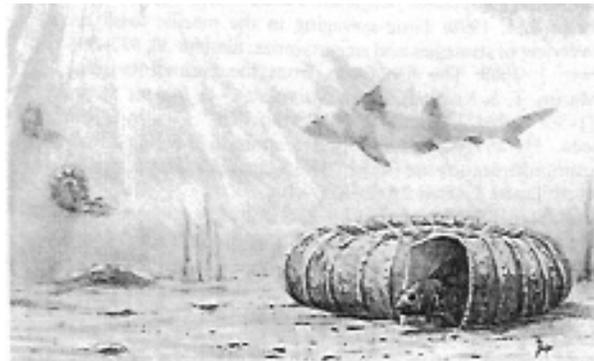
### Fossil Shows Ammonite-Fish Association in Late Jurassic



Fish are known to occupy large dead shells for shelter or nesting especially when there is little other shelter around. There are also schools of small fishes found in the shells of huge inoceramids from the Cretaceous Niobrara Formation. But the occupation of ammonites is rarely seen in the fossil record. Now a fish has been found preserved within the body chamber of an ammonite in the Upper Jurassic of the lower Kimmeridgian in western France. They have also found many invertebrates including bivalves, gastropods, arthropods, fish, sharks, turtles, pterosaurs, ichthyosaurs and thalattosauroids. It was a relatively deep and calm environment because even some of the spines on the urchins were well preserved.

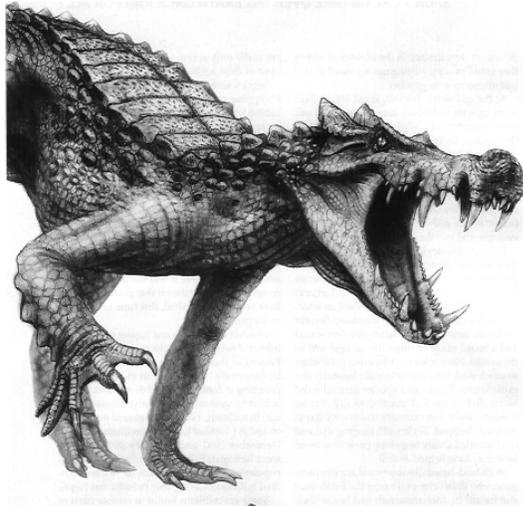
The fossil itself is an internal mold of the body chamber complete with several worm burrows preserved in negative relief. The fish is in

three patches of scales and toothed bones along the body mold. Based on the bones and scales present a tentative identification is made as a Macrosemiidae. It may be *Macrosemius rostratus*. The fact that it is partially disarticulated suggests that burial was progressive rather than sudden. It is unlikely that it was washed into the shell because there are no other fossilized elements along with the fish and because it was such a low energy environment for a fish carcass to have ended up inside it was unlikely. It is also thought that ammonites did not eat fish so that this would not be stomach contents of the ammonite. If it were it should contain fragments of other animals that were the normal prey of ammonites. This fish is estimated to have been about 220 mm (8.7 inches) long and 75 mm (2.95 inches) deep with the dorsal fin raised and 50 mm (2.0 inches). The size of the ammonite is 71 mm (2.8 inches) which is just right for this little fish.



The drawing by Alain Beneteau shows his impression of the empty shell occupied by a macrosemiid fish with a hybodont shark nearby. (Vullo et al in **Lethaia** Vol 42 2009)

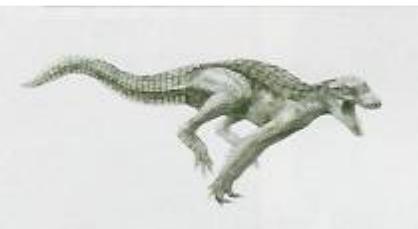
## Karens Komments, Continued

Croc Diversity in Africa

Cruratarsans, animals that include all croc relatives have been around for some 240 MY but modern crocs have only been around for about 80 MY. During the Triassic they radiated into many different forms from small to large until the end of the Triassic when most were wiped out. They had to compete with large swimming predators such as plesiosaurs in the ocean but found their place in rivers and swamps. They survived the K-T event perhaps due to their living in freshwater habitats and being able to live for long periods without food. Many of the more diverse forms with the long legs died out leaving the short legged more squat bodied forms that we are more familiar with.

Paul Sereno's work in the Sahara of Africa has uncovered some interesting fossil crocs that show a diversity of forms that lived there. A large one at 20 feet long was Boarcroc which is pictured above (drawn by Todd Marshall). It had an armored snout with three sets of fangs with forward facing eyes which gave it very good vision. Its full name is *Kaprosuchus saharicus* and it was found in Niger and it looked sort of like a warhog. Ratcroc was a small three foot long croc named *Ariripesuchus rattoides* that was found in Morocco. It had a pair of buckteeth in its lower jaw and probably ate grubs and plants after it dug them up.

*Laganosuchus thaumastos* was PancakeCroc and was found in Niger and Morocco. It was another large croc at 20 feet long with a three foot long head that was shaped like a flat pancake with spike shaped teeth on slender jaws. Sereno believes that it would sit for hours with its jaws open and wait patiently for prey to enter the jaws when it would snap them shut on the unsuspecting prey. They also found new fossils of previously named species. One is *Anatosuchus minor* or Duckcroc which was found in Niger. It is a three foot long croc that ate fish, frogs and grubs with a snout that had a broad snout and a Pinocchio-like nose. It probably used the snout to root around in the shallow water for prey. Its closest relative is in Madagascar.



And then there is Dogcroc or *Araripesuchus wegneri* from Niger that was also about three feet long (pictured at left). It was also a plant and grub eater with a soft dog-like nose. They had long legs and could move fairly fast to escape predators. This variety of crocs were in Africa 110 to 95 MYA and covered a range of niches, some of them were even eating dinosaurs. And some of their relatives are still around today.

(White in **National Geographic** Nov. 2009)

Karen Nordquist, Paleontolog



# E.S.C.O.N.I. GEM-MINERAL- FOSSIL SHOW COLLEGE OF DUPAGE

**Saturday March 20, 2010 10 A.M. to 5 P.M.**  
**Sunday March 21, 2010 10 A.M. to 4 P.M.**

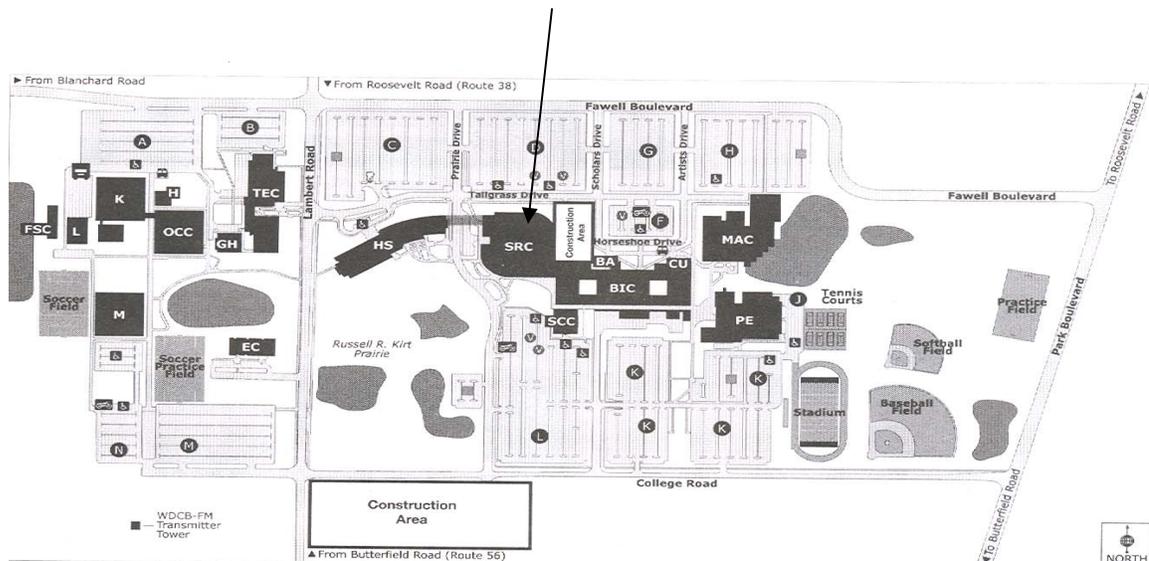
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**THE FIELD AND LIZZADRO MUSEUM DISPLAYS**

**KIDDIE KORNER SRC 2800 DEMONSTRATIONS**



# PaleoFest

PRESENTED BY THE BURPEE MUSEUM  
March 6 & 7, 2010

Festival Admission: \$6 per person, Burpee Members are FREE! Admission includes the Dino-Blast Passport activities. Coupons and reciprocal memberships are not valid March 6 & 7.

See Web Site for Fees for Dinner & Lecture Saturday night, lectures on Saturday and Sunday, workshops and artist studio.

**Saturday night Dinner & Lecture:** Dr. Philip Currie, University of Alberta  
**Komodo dragons, intercontinental theropods and the centenary of Barnum Brown's discovery of the Albertosaurus bonebed.**

### Saturday Lectures:

10:30-11:30am Andrew Milner, **History, Geology and Paleontology: St. George Dinosaur Discovery Site at Johnson Farm, Utah**

12:00-1:00pm Steve Brusatte, **Changing views of Tyrannosaur Evolution: Raptorex, Alioramus, and other new fossils**

2:00-3:00pm Eva Koppelhus Ph. D., **Palynology and Paleobotany from the Albertosaurus Bonebed, Dry Island Park**

3:30-4:30pm Jason Head Ph.D., **Narrow Fellows in the Rock: Ecological and Climatic Inferences from the Fossil Record of Snakes**

### Sunday Lectures:

10:30-11:30am Ashley Morhardt, **Did Dinosaurs Flash Crocodile Smiles?**

12:00-1:00pm Dan Gebo, Ph.D., **Darwin, Fossil Primates, and Primate Evolution.**

2:00-3:00pm Reed Scherer, Ph.D., **What can a teeny-tiny fossil teach us about a big bad ice sheet? The history and future of the West Antarctic Ice Sheet**

3:30-4:30pm John Catalani, **Nautiloids of the Ordovician Sea**

### Workshops and Classes

HANDS ON FUN- Three fossil-themed workshops will be offered Saturday and Sunday for an adult working with one or more children. Recommended for children over five.

New Classes: Childrens Lecture- Saturday, March 6, 3:30-4:30pm

Dr. Mathew Bonnan presents: **Dinosaurs Up Close, for children of all ages. Don't miss this interactive presentation, space is limited.**

### Artist Studio- Sunday, March 7 11:00am-12:30pm

Each participant will receive and complete an art project under instruction. For Jr High and older. Quantities and space are limited.

Order Paleofest 2010 Tickets: call 815-965-3433 or visit [www.burpee.org](http://www.burpee.org)

## Local Calendar of Events

### LIZZADRO MUSEUM OF LAPIDARY ART

#### February 6 “Rock & Mineral Identification”

Learn how to make a basic mineral test kit. Hands on identification procedures include observation skills and hardness tests. All materials are provided.

Activity – Ages 8 yrs. to Adult

75 minutes - 10:30 a.m. and 1:00 p.m.

Admission: \$5.00 per person, Museum Members \$3.00.

Reservations Required: (630) 833-1616

#### February 20, 2010 “Dinosaur Discoveries”

Children become dinosaur detectives with “Paleontologist Illinois Bones” to learn about the world of dinosaurs. Fossils and props are used to create an awareness of the dinosaurs special characteristics. Live animals show how dinosaurs are related to animals living today.

Interactive Lecture - Ages 4 yrs. to Adult 50 minutes - 2:00 p.m.

Admission: \$4 per person, Museum Members \$2.

Reservations Recommended (630) 833-1616



#### Elgin Public Museum

**Friday, February 12 Science Night - Geology**  
**6:00 - 8:00 p.m.; \$2 per person, members free**

Curious about the natural world around you? Bring your family to Elgin Public Museum’s Science Night! Different stations will be set up around the Museum for kids and adults to conduct experiments, experience demonstrations and partake in discussions about this month’s topic: Geology!



**The Nature of Diamonds October 23, 2009—March 28, 2010**

From its geological origins to its place in art, history and literature, no other gem has captured the world’s imagination quite like diamonds. Born from billions of years of crushing force, diamonds have served as both an emblem of romance and strength. Examine the unique properties of diamonds and explore the gem in its natural state as you journey along from mine to dealer. Through ancient manuscripts, compelling multimedia and evocative exhibitory, explore the many facets of diamonds and be dazzled by these breathtaking pieces. Highlights will include pieces by Fulco di Vedura, Cartier, Boucheron, and works from Tiffany & Co. designed by Frank Gehry and Elsa Peretti.

# MAPS

Mid America Paleontology Society

<http://www.midamericapaleo.org>

## National Fossil Expo XXXII

Buy, sell, and swap Fossils exclusively

March 26, 27, and 28 2009

Western Hall, Western Ill. University, Macomb, IL

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

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

Sun 8:00 a.m.-12:00 p.m.

Free Admission Entire Show

Friday Evening Program: Ordovician Period

Dr. Robert Frey 7:00 pm

Saturday Evening Live Auction approx. 7:30 pm  
(after Business Meeting, which starts at 7:00 pm)

Silent Auctions Friday through Saturday afternoon

Contact Show Chairman: Thomas Williams

2122 14th Street Peru, IL 61354 [paleotom234@dishmail.net](mailto:paleotom234@dishmail.net)

815-223-9638

Assistant Chairman and Table Registration: Steve Holley

30795 N. Norris Blacktop Farmington, IL 61531 [lfossil@hotmail.com](mailto:lfossil@hotmail.com)

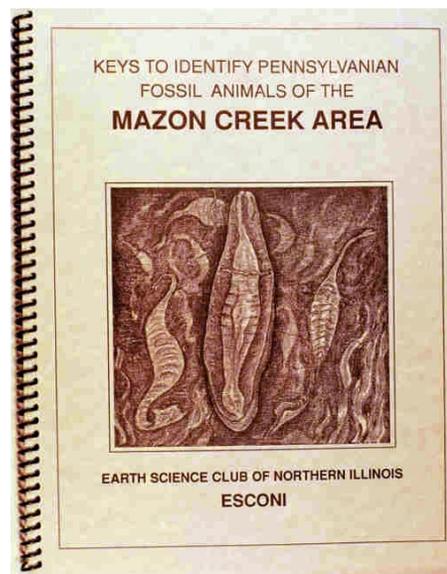
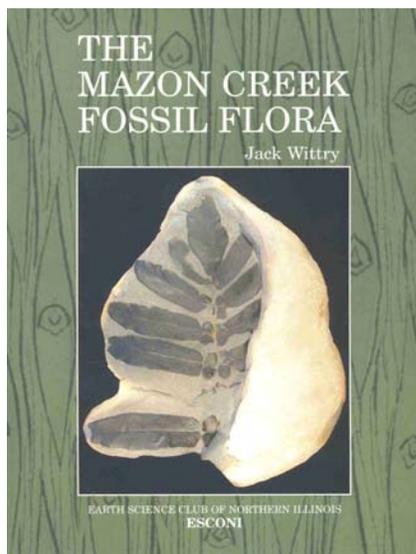
309-231-8861

Western Illinois is located in Macomb, Illinois, just west of Illinois Highway 67. Western Hall is located on University Drive, which intersects Highway 67 on the north side of town. For individuals wishing to fly in, nearby airports are located in Peoria, Moline, and Bloomington, Illinois. Amtrak (Illinois Zephyr and Carl Sandburg) services Macomb.

### ESCONI'S Next Book Undertaking!

ESCONI first published *Keys to Identify Pennsylvanian Fossil Animals of the Mazon Creek Area* in 1989. With the success of the publication of *The Mazon Creek Fossil Flora*, it is time to consider updating our twenty-year-old publication of *Keys to Identify Pennsylvanian Fossil Animals of the Mazon Creek Area*. Jim Fairchild, Jack Wittry, Rob Sula, Chris Cozart, and John Catalani have come together with a goal to produce a quality publication that could complement *The Mazon Creek Fossil Flora*. In this updated version, the publication will not only utilize existing illustrations, but will also include photos to represent this diverse fauna. One difference is that the flora book presents major revisions to the classification of Mazon Creek plants, requiring museum specimens to be pictured. The new fauna book, will not present major revisions to species which will allow us to picture specimens from private collections. This provides all Mazon collecting ESCONI members with an opportunity to be a part of this new publication. We envision that each species will be represented by photos of one exceptional specimen and two typical specimens. By doing this we hope to show the reader examples of fossils that are representative of those they are attempting to identify.

On September 19th, we began by examining Mazon jelly fish fossils at the first paleo meeting. Then, on October 17th, we will cover the worms. We'll keep updates in the bulletin as the book evolves so examine your Mazon Creek collections over the next few months and consider any possibilities you may have to contribute to the new book. Any questions? Contact Jim Fairchild at 630-497-6278



**The Mazon Creek Fossil Flora** by Jack Wittry  
313 color pictures, 113 taxa, 145 drawings  
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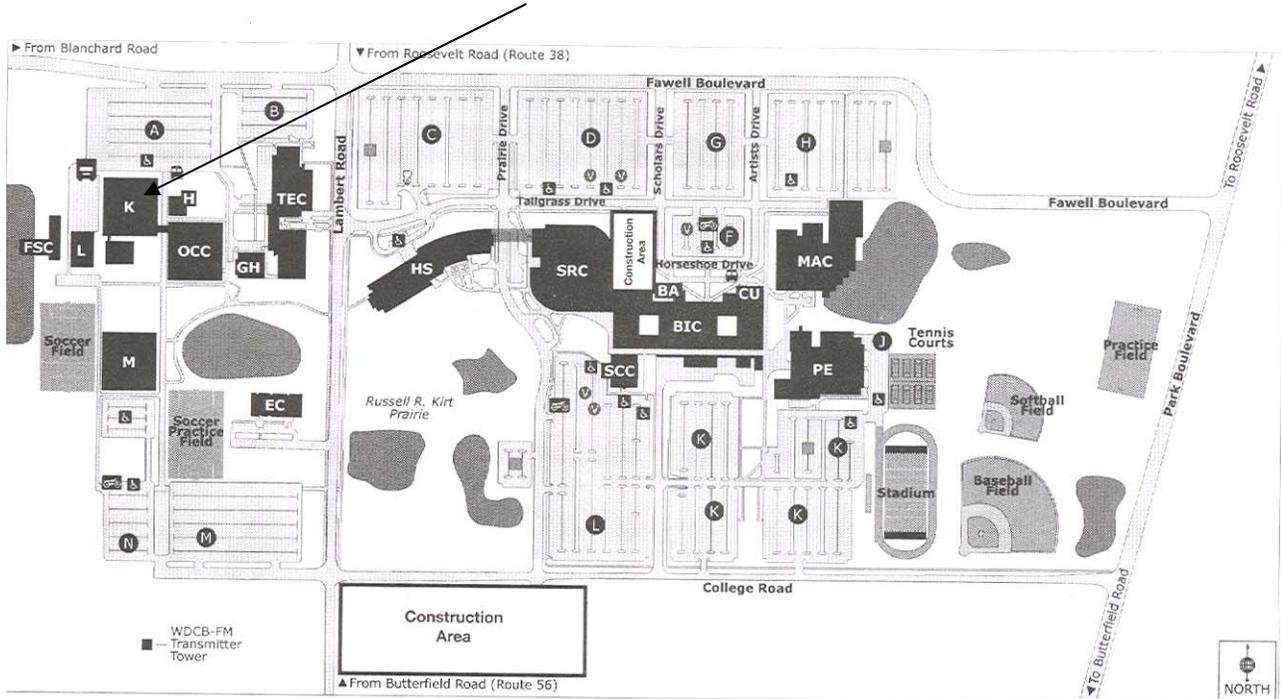
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