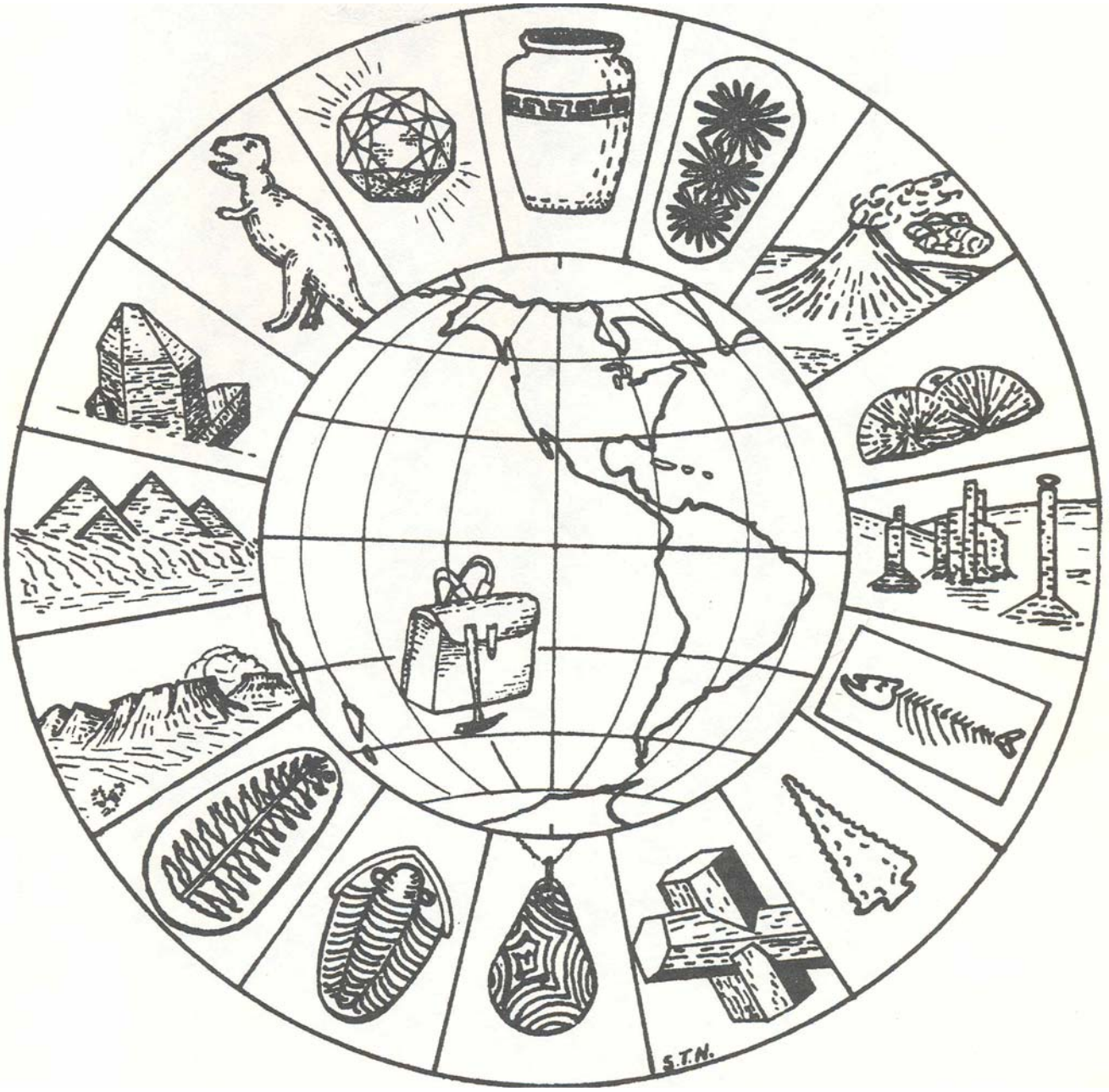
THE EARTH SCIENCE NEWS

Volume 59 April 2008 Number 4



EARTH SCIENCE CLUB OF NORTHERN ILLINOIS

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

WWW.ESCONI.ORG

EARTH SCIENCE CLUB OF NORTHERN ILLINOIS 2008

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

John Good & Karen Nordquist are delegates to Chicagoland Gems & Minerals Association.
Betsy and Floyd Rogers are Show Chair for 2008

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 on the back page (date, time and place of meeting). Specific information is published in this bulletin.

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

Deadline for Bulletin articles to the editor is the 2nd 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
Webmaster is John Good

April 2008 President's Message

The ESCONI annual Spring Show was a great success. We saw many familiar faces visiting us and several new folks came to see what we were all about. It is our pleasure to present dealers who have earned a reputation within our community who also helped make our show such a success. Also, we're very lucky to have such talented demonstrators who are happy to share these talents with interested visitors. The show was a lot of fun for everyone from the members who put it together to all the interested rockhounds who attended.

As you know, a show like that does not happen without a lot of effort and hard work. I'd like to take this opportunity to thank everyone who spent their own time, their own money and a lot of effort to produce our 2008 show. Our volunteers are some of the very best and they make a big difference in the community.

Speaking of such a volunteer, I'd like to mention Joe Kubal, who did a presentation for Webelos Pack 125. He used geodes and sea shells to assist the scouts with their Webelos Geology Activity Badge. I received a very nice letter from the scout leaders thanking ESCONI and Joe for a fabulous job.

The Mid-America Paleontology Society (MAPS) is having their annual fossil expo April 4-6, 2008 at Western Illinois University – Macomb, IL www.midamericapaleo.org
This is billed as the largest fossil-only show and should not be missed if you enjoy seeing and collecting fossils.

Our April speaker will be Scott Elrick and John Nelson. They will present a program entitled, "The Three Hundred Million Year Old Pennsylvanian Forest Found Near Danville, IL."

FIELD TRIPS:

April 5	Jacob's Geodes in Hamilton, Illinois to collect geodes
TBA	Lone Star Quarry

Check the website frequently for updates to our meetings and field trips.

DUES: Please send your 2008 $20.00 dues to Eileen Mizerk, Membership Chairman, 2094 Windward Lane, Hanover Park, IL 60133-6183. If your dues are not received by **April 1**, you will be dropped from the database and no longer receive the bulletins or be allowed to participate in any field trips. If your dues are received later than April 1, you will be place back on the database.

Jim Fairchild, President
jimfairchild@comcast.net
www.esconi.org

APRIL 2008 ESCONI EVENTS

General Meeting **8:00 PM, Friday April 11** **College of DuPage K-131**	Scott Elrick and John Nelson will present a program entitled, "**The Three Hundred Million Year Old Pennsylvanian Forest Found Near Danville, IL**." Visitors are welcome; Refreshments will be served.
Mineral-Micromount **7:30 PM, April 12, 2008** **College of DuPage K-131**	ESCONI members will discuss **Romanian minerals and gem stones.** Visitors are welcome. Refreshments will be served.
Paleontology **7:30 PM, April 19, 2008** **College of DuPage K-131**	"**Sharks III**" will be presented by Tom Williams. Emphasis is on the Cenozoic Time period. Visitors are welcome. Refreshments will be served.
Archaeology **7:30 PM, April 26, 2008** **College of DuPage K-131**	"**Archaeology of the Cahokia and Dixon Mounds**" will be discussed by ESCONI members lead by Bryan Nugent. Visitors are welcome. Refreshments will be served.
Junior **Check Web Site for Schedule**	
ESCONI Field Trips	April 5, as part of MAPS, to collect geodes at Jacobs Geodes at Hamilton, IL. Trips to Lone Star Quarry and others are being planned. Check the web site for details or contact John Good at 630-483-2363 for reservations or e-mail at ESCONI@hotmail.com
BOARD MEETING **7:30 PM, April 25, 2008** **College of DuPage K-131**	

Don't Forget National Fossil Exposition XXX by MAPS
At Western Illinois University in Macomb, Illinois
April 4-6, 2008

See Our Web Site, www.esconi.org, for more details

Thanks for your help at the ESCONI

2008 Gem-Mineral-Fossil Show

The DesPlaines Valley Geological Society 43rd Annual Jewelry, Gem, Fossil, Mineral and Lapidary Arts Show

April 12 Saturday 9:30 AM to 5:00 PM,
April 13 Sunday 10:00 AM to 4:00 PM.
DesPlaines Park District Leisure Center
2222 Birch Street (Just West of River Road Off Touhy Road)
Des Plaines, ILL Free Parking
Admission: Adults $3, Seniors $2, Students with ID $1
Children Under 12 Free When Accompanied by Adult
Includes Kid's Room, Live Demonstrations, Education Exhibits, Food, Door prizes, Raffles, Silent Auction For more Info, Call Lois Zima, 847-298-4653
WWW.DESPLAINESGEOLOGYCLUB.ORG

Chicagoland Gems & Minerals Association
32nd Annual Gem, Jewelry, Fossil and Mineral Show

Memorial Day Weekend 2008
Saturday, May 24: 10 AM— 6 PM
Sunday, May 25: 10 AM—5 PM
Dupage County Fairgrounds
2015 W. Manchester Road
Wheaton, IL

Nationally known dealers Demonstrations Exhibits
Special Displays Silent Auction "Kids Korner"
Adults $5.00 Seniors & Students $3.00 Under 13 Free
Free Parking Food Available

For more info: www.Chicagolandgemshow.org or e-mail: CGMA@sbcglobal.net or call 1-630-377-0197

ESCONI FIELD TRIPS 2008

Field Trip #1 April 5, 2008 - Jacob's Geodes, Hamiliton, Illinois 9:00 A.M. Geodes Meet at 9:00 am at 823 E. County Rd. 1220 in Hamilton, Illinois at Jacob's Geodes. $16 for a full 5-gallon pail. Please call John Good at 630-483-2363 for reservations or e-mail at esconi@hotmail.com

Board Meeting

January 25, 2008

President Jim Fairchild called the meeting to order. Second Vice President Irene Broede reported that she has reserved Room K-131 for all meetings during February, March, April and May. It is a smaller room than K-161. She said that Lisa Sago wanted to know what meetings we had had in K-131 in the past when we were supposed to have met in K-161. Several of the Mineralogy and Archaeology meetings were there according to John. The bill through November has been paid. Recording Secretary Karen Nordquist presented the minutes for the November 30, 2007 Board Meeting. They were approved as amended. Corresponding Secretary Bill Vinikour had nothing to report. Treasurer John Good did not have a Treasurer's Report because of problems with his computer. He did report that he is working on the March Show. Jim reported that we will need to rent a trailer for the Show this year. There will be a work day at the warehouse on Saturday February 23. John Good reported that we have an interested buyer for the set of Earth Science News from the estate of Jean Reynolds.

Under New Business Irene Broede reported on the ESCONI Associates bank balance. The meeting was adjourned.

Respectfully submitted, Karen Nordquist, Recording Secretary

General Meeting

February 8, 2008

President Jim Fairchild welcomed all and passed around the club's Mazon Creek plant book that is available for sale. Introductions of all present were made. John Good then talked about the ESCONI Show on March 15 and 16 with demonstrators, a geode splitter and much more. Cases for collections are available. The show will be in the K commons this year. Randall Bultman said that there will be a work day at the warehouse to prepare for the show on Saturday February 23 at 9:00 am to sort material. Don Cronauer will be one of the demonstrators and said they will have tables and power for those who would like to demonstrate their talents. Set up will be Friday at 3:00 pm. There are eight dealers.

PaleoFest will be March 1 and 2 at Burpee Museum in Rockford. It is their 10th anniversary and ESCONI is sponsoring three of the talks this year, Jim Kirkland of Utah, Phil Currie and Jean Caron of the Burgess Shale. MAPS Expo will be April 4-6 at Macomb Illinois and will be on Mammals this year. It is the largest fossil show in the world and all dealers do need to fill out a tax form this year. John Catalani reported that he is hoping for field trips to Lone Star, St. Paul Quarry for Waldron Shale, Illinois Cement Quarry, possibly Dixon Quarry and others.

GENERAL MEETING—CONTINUED

Richard Rock is working on some also including some trips to Braceville. There will be a trip for geodes included with the MAPS weekend as usual. The Mineralogy Study Group will be talking about Moon Rocks this month. Paleontology will be continuing with their study of sharks. Archaeology will be continuing with their period review with the Woodland period. Rob Sula then introduced our speaker for the evening, Cary Easterday from Northeastern University.

Paleozoic Paleogeoarthropoda Project (P3)
Providing a fresh look at the fossil insects of Mazon Creek

Cary is making this project his life pursuit – the evolution of fossil insects and began this project in 2005. The Mazon Creek fauna has been known since 1864 when the first fossil was named – *Miamia bronsoni*, Dana 1864. And then that fossil went missing. And many insects have been reported since in dozens of journals since then. And Richardson's Guide helped to focus them into common groups. In 1953 he did the last detailed review of museums and private collections.

The purpose of P3 is to better understand the diversity, abundance, geographic distribution and stratigraphic distribution. And beyond that it is to interpret the information to understand the ecology of how the organisms lived and interacted, and their evolution and their environment including the climate, temperatures, precipitation elevation, etc.

There is a lot of synonomy out there that needs to be cleaned up. By visiting museums with collections including the Field, Smithsonian, Pittsburgh, Boston, Yale Peabody, and private collections, he hopes to be able to see what is out there. He will take photos of private collections so he can keep track of them if they are donated. He is starting in North America with plans to expand into Europe then the rest of the world.

He is covering the Paleozoic (542-251 MYA). He defines geoarthropod as a continental arthropod that lives on land or in brackish water. It includes chelicerates, authycarcinoids, myriapods, hexapods and some crustaceans. Paleogeoarthropods then are fossil geoarthropods. Mazon Creek is about 60 miles southwest of Chicago. It covers about 900 square miles and represents an area of shallow sea, shoreline, deltas and coal swamps during the Carboniferous, located near the Equator. It is one of a dozen fossil localities including the Appalachian Basin, Illinois Basin, Canadian Province, Kansas, Oklahoma, Alabama, Colorado, Rhode Island, etc. and is one of the most diverse. An insect is an arthropod that has a body with 6 legs and three body sections, head, thorax and abdomen, antenna, and many have wings. An arachnid has 8 legs, 2 body sections, no antenna and no wings. A myriapod has multiple legs, 2 body sections, antenna and no wings. Why are most fossil insects described based on wings? Most scavengers and bacteria eat the body and wings fall off and are left. The wings are made of tough cuticle and have no meat and are left behind.

GENERAL MEETING—CONTINUED

There have been many people involved in fossil insect collection over the years since the 1860's both professional and private collectors. Cary then gave us a summary of the results he has come up with in P3 to date.

He listed the Orders

Archaeognath (Bristletails or Monura)	(5% of MC)
Zygemtoma or Thysanura (Silverfish)	(1% of MC)
Ephemeroptera (Mayflies)	(2% of MC)
Palaeodictyoptera	(10% of MC)
Megasecoptera	(1% of MC) In Evolving Planet
Draphanopterodea	(2% of MC)
Odonata (Dragonflies, damsel flies)	(1% of MC)
Protothoptera (garbage can)	(6-14 % of MC)
Hypoperlide	(28-36 % of MC) includes Gerrarus
Blattodea	(2% of MC) termites & mantis
Archaeorthoptera	(1% of MC) grasshopper, katydid
Caloneurodec	(1% of MC) rare
Miomoptera	.2% of MC) one specimen
Uncertain	(12% of MC) 3 specimens, large wings

Scudder	Richardson	Present 2007
1 order	7 order	13 order
	32 families	32 families
25 genera	90 genera	103 genera
36 species	137 species	144 species
		561 individual specimens

These are the five most common fossil insect genera at Mazon Creek:

1.	Gererus	52	9%
2.	Eucaenus	44	8%
3.	Proptericus	29	5%
4.	Dasyleptus	26	5%
5.	Eubleptus	10	2%

The most common insect order at Mazon Creek is Hypoperlide. The rarest insect is *Miomoptera* with only one specimen found. By the way the missing holotype of *Miamia bronsoni* has been found at the Smithsonian.

Recommended references:
"Evolution of the Insects" by David Grimaldi and Michael S. Engel
"History of Insects" by A.P. Rasnitsyn and D.L.J. Quicke
"Treatise on Invertebrate Paleontolgy Part R Arthropoda" by F. M. Carpenter

Cary was thanked for his presentation and the meeting was adjourned after much discussion. The photo shows Cary inspecting a Mazon Creek fossil brought in by one of our members.

Respectfully Submitted, Karen Nordquist, Recording Secretary

J

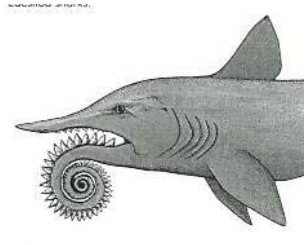
Paleontology Study Group Meeting

John Good, Chairman Date: January 19, 2008

Chairman John Good called the meeting to order and introductions were made by all. The ESCONI Show will be March 15 & 16 and help will be needed. Cases are available. MAPS Expo is April 4-6 and you need a tax number to participate. There will be a field trip for geodes that weekend as usual. John had a sympathy card for Jeanine Mielecki whose mother died this week. PaleoFest at Burpee Museum is March 1 & 2 and ESCONI is sponsoring three of the ten speakers who will be there that weekend. Mineralogy is meeting with Dan Behnke speaking on micromounts. Archeology will be meeting next week on the Woodland Period. There will be no Paleontology Group Meeting in March because of the ESCONI Show. The April meeting will be the final Sharks meeting talking about the Cenozoic. May will be Stratigraphy and September will be Show and Tell. Tom Williams then took over with his continuing saga on sharks.

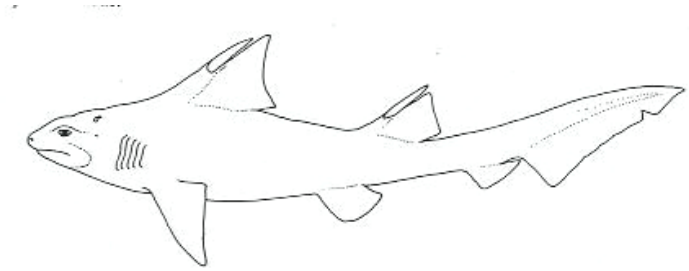
Sharks II

During the Permian there was one great land mass, Pangea with a very dry climate and more limited coastline, which fish and sharks prefer. Sharks started to diversify in the Permian before the big extinction came (or 3 extinctions as some believe). The *Xenocanthus* was the main shark at that time with its eel like body. *Stethacanthus* with its strange head gear was also around. He had some broken *Orthocanthus* teeth to show us from a related shark.



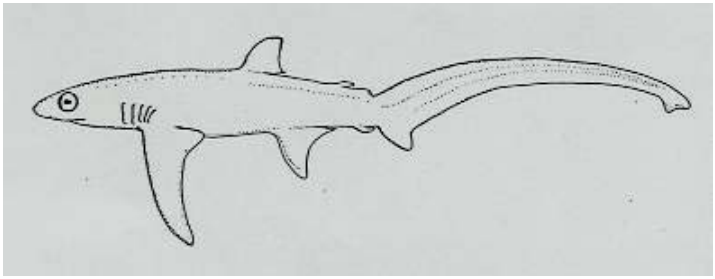
Another interesting shark found all over the world was only known from its tooth whorl – the *Heliocorpion*. No one is sure how it was used. Tom believes that it was outstretched in life and curled up in death (as seen in drawing at left from “The Rise of Fishes”).

After the extinction in the Triassic it was hot and dry with a limited coastline, but the Tethys Sea was beginning to form between Europe and Africa. Pangea was starting to break up. *Xenocanthus* was being replaced by the hybodont (below) sharks with their combination crusher teeth and sharp teeth. A major radiation started and exploded in the Jurassic. There are deposits in the Karoo in South Africa, Kansas, and Russia. Pangea continued to break up with the beginning of the formation of the Atlantic Ocean. The climate became more temperate. It was still arid but a little better. There were some big rivers forming in North America. The Jurassic became lush and hot and wet. There was a big explosion in sharks.



Paleontology Study Group—Continued

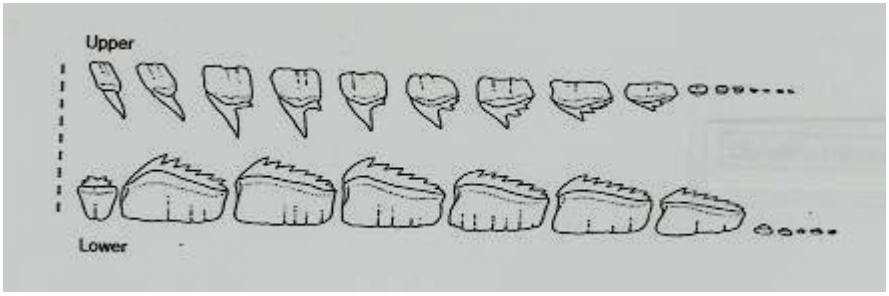
There were many families of skates and rays and sharks during this time. Some of them are of special interest like the thresher sharks that have very long upper tail lobes as seen below. This large tail may have been used for defense.



Another one is the goblin shark (below) with its long thin snout and very long tail.

In North America in the Cretaceous the Rockies were rising and there are several deposits with good shark teeth - Texas, Montana, Arizona, etc. There is also an new site in Poland.

Shark teeth vary within the mouth of the same shark making identification interesting. The teeth below are those of a modern tiger shark and show how they vary on the upper and lower jaws. There are also differences between male and female sharks.



Sharks are fascinating fish and the next session will cover more modern sharks.

Several members had fossils that they brought to the meeting to share. Dave Bergmann had a plate from South Dakota with shark teeth. Irene Broede had some shark teeth from the Manco Shale in Utah.

References:

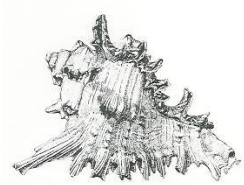
“Collectors Guide to Fossil Sharks & Rays from the Cretaceous of Texas” by Bruce J. Wilton & Roger Farish

“Sharks” by A. Mojetta

“Fossil Collectors Guidebook to the North Sulphur River” by the Dallas Paleontological Society, Summer 2001

The meeting was adjourned for refreshments and further discussion.

Respectfully submitted, Karen Nordquist, Secretary

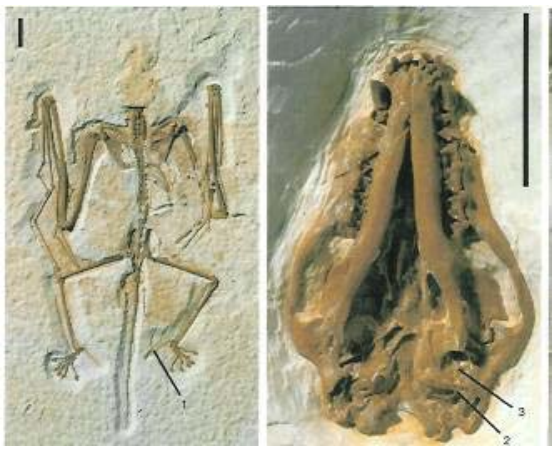


Karen's Komments

Giant Cretaceous Frog from Madagascar – *Beelzebufo*

It has taken 15 years to put the pieces together and name this fascinating creature from Madagascar. There are 75 incomplete fossils now and it is a frog – a giant frog that has been named "armored devil toad" or *Beelzebufo ampinga*. The female was 16 inches long and about 10 pounds while the male was smaller. The goliath frog in West Africa grows to about a foot long and can weigh 7 pounds and there was another extinct frog about 20 MYA in South America that may have been this big. *Beelzebufo* lived 70 MYA and was a long way from South America where its closest living relatives now live. These are the Pac-Man frogs with their wide mouths, big stomachs and voracious appetites, hence their names after the video game. Since no relatives have yet been found in Africa it is suggested that they traveled through Antarctica to arrive in Madagascar. (Krause in Proc **Natl Acad of Sci**)

Flight First for Early Bat from Wyoming - *Omychonycteris*



The bat *Icaronycteris* in Evolving Planet in the Field Museum is not the earliest bat any more. There is now a new one that is taking that place and it is named *Omychonyctens finneyi* from the Greek 'omycho' for clawed and 'nycteris' for bat. The species name is to honor the collector of the holotype, Bonnie Finney. It is important because it is answering the question what came first flight or echolocation – and the answer is flight. It is known from a holotype part and counterpart that is nearly complete articulated skeleton including the skull found in 2003 at the Finney Quarry. The photos show the holotype, dorsal view on the left and the skull in ventral view on the right (scale bars = 1 cm.).

There is a referred specimen in a private collection with a cast at the American Museum. It is dated at 52.5 MYA. It has large claws on wing digits I, II, and III and small claws on digits IV and V. It is a medium sized bat but is larger than most other known Eocene bats. But it is important that compared to other Eocene taxa it has a relatively small cochlea indicating that it did not have echolocation. It also has a long calcar on its ankle (number 1 on the left photo) indicating that it had a broad tail membrane attached there.

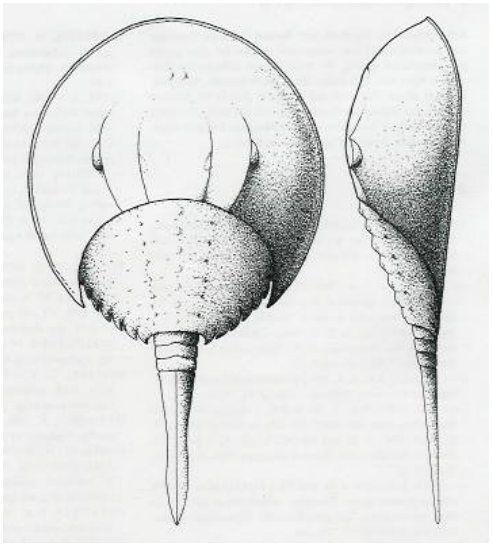
Karens Komments, Continued

A calcar was not found on *Icaronycteris*. This bat is capable of powered flight based on its hand, the shape of its rib cage the robust clavicle, and the keeled sternum. With the low aspect ratio wings and relatively short and small wingtips its flight style might have been similar to that of the extant mouse tailed bat which is an undulating flight style with fluttering alternating with gliding. This fossil also indicates that claws on digits III through V were lost after flight evolved. Elongation of the limb bones evolved and higher aspect ratio wings evolved as time went on. The dentition suggests that *Onychonycteris* was insectivorous like other bats in the Eocene, probably using vision, hearing and smell to find its prey. Because both of these fossils had damaged skulls it is not clear how big the eyes were so that it could be determined if they were nocturnal. (Simmons et al in **Nature** Vol. 451 2/14/08)

New Small Pterosaur Found in China – *Nemicolopterus*

This small sparrow sized pterosaur has been named *Nemicolopterus crypticus* and was found in northeastern China. An artists rendering is at left by Michael Skrepnick. It lived about 120 MYA and its name means 'hidden flying forest dweller'. The fossil is nearly complete and is nearly adult because portions of its skull are not fully fused. It is toothless and probably lived on insects in the gymnosperm forest during the Early Cretaceous. It had a wingspan of about 25 cm or 10 inches. The toe bones are long and curved indicating that it was a tree dweller rather than a ground dweller. (Wang et al in **Proc Natl Acad Sci**)

Oldest Horseshoe Crab Found in Canada – *Lunataspis*



A complete articulated exoskeleton of a new horseshoe crab has been found in the Late Ordovician Konservat-Lagerstatten deposits in Manitoba Canada. It has been named *Lunataspis aurora* after the Latin 'luna' for moon and the Greek 'aspis' for shield. The species name is after the Latin 'aurora' for dawn for the Roman goddess. It has a large crescent prosomal shield with lateral compound eyes on weak ridges that are on low cardiac lobes. It has a keeled lanceolate telson. It has a broad mesosoma of six or seven fused segments with a narrow metasoma of three reduced segments. It extends the xiphosurid body plan into the Late Ordovician at a nearshore location during chelicerate evolution. Reconstruction is from the article and is about 50 mm or about 2 inches long. (Rudkin et al in **Paleontology** Vol. 51/1 2008)

Karen Nordquist, Paleontolgy

Cahokia Mounds by D. C. Cronauer

The Cahokia Mounds State Historical Site is an interesting area to visit and learn about past Native American history. This site is located about 8 miles east of St. Louis, MO near Collinsville, IL. It is readily accessible by several interstate highways. The overall site covers about 2200 acres, and there is a great Interpretive Center that provides a description of the area, history, and collection of recovered artifacts.

The site supported a village of about 10,000 to 30,000 which was built between 900 and 1200 AD. The population apparently peaked thereafter during the Mississippian Period, and it was essentially gone by 1600 or so. In fact, when the European settlers arrived, none of the local natives knew who had lived there. It was called “Cahokia” because that was the name of a local town.

The current historical site covers 2200 acres, but it appeared to have been much larger during its peak. The natives built a sizeable number of mounds. There were at least 120 and today only 80 remain. These mounds were of various shapes including conical (often burial), effigy, platform (for structures), ridge top, and the likes. The major mound is named “Monk’s Mound” after the monks who first occupied the site. This mound covers about 16 acres (about 1040 ft long by 800 ft wide), is 100 feet high, and has four terraces. Apparently there was a 105 ft by 48 ft structure on the top terrace during the Indian occupation. In addition, it is estimated that about 22 million cubic feet of earth made up the original mound; this represents about 100 men working non-stop carrying baskets of dirt for 50 years. Obviously, there was a strong organization and a driving force to carry out such a construction.

It is interesting that the large mound was surrounded by several stockade walls over time, and at least one of the smaller mounds (designated “72”) was a burial site with obvious human sacrifices.

The following are pictures of the site.

For more information on Cahokia Mounds and Dixon Mounds, attend the April 26, 2008 Archaeology Meeting hosted by Bryan Nugent.

Micromounting Techniques

Jim Daly

We've spoken in the past about why people micromount. This program will be more about how than why. I'll try to touch on various techniques, but with more emphasis on how I mount. Remember, there's no right or wrong way- just what works best for you. One of the things I enjoy most about micromount symposia is learning about how others mount.

The first thing we have to do is get the specimen down to a manageable size by removing excess (but not all) matrix, preferably to fit into the box we've chosen as "standard". Don't ever destroy a good specimen by force-fitting it to a particular size box, though. Just get a bigger box.

When starting with a large piece, which I often do with self-collected material, the first step is the old reliable hammer and chisel A very large hydraulic splitter, like some use to open geodes, would be even better. I don't have one- they aren't cheap.

Once the piece is down to about golfball size, a small hand-operated trimmer is used. Mine was made by Andy Hay. It's a good idea to use the trimmer inside a bag to keep from losing pieces.

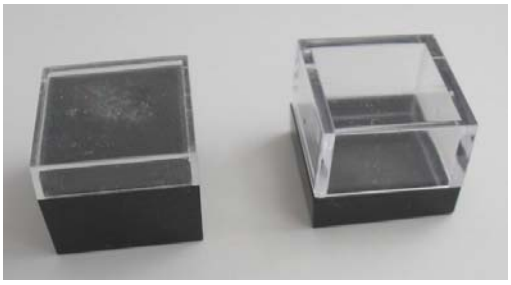
Further trimming can be done with diagonal wire cutters, or if the specimen is very delicate, a diamond saw in a rotary tool.

Don't cut all the way through a piece, or the part you aren't holding could fly across the room. Stop just before you complete the cut, and then break it with the diagonals. Whenever practical, it's desirable to wind up with a flat surface on what will be the bottom of the specimen.

Micromounting Techniques—Continued

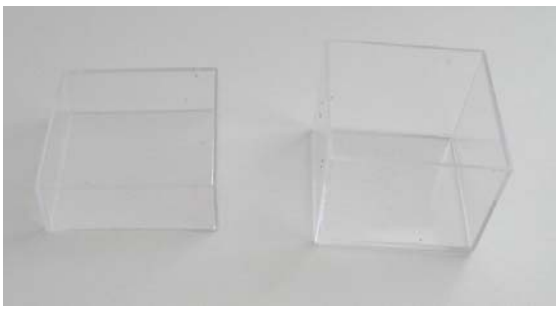
Next we need a box.
Most micromounters in North America use a 7/8” plastic box.
Some use an all-clear box with a black paper liner. This enables you to slide the liner out to view all sides of the specimen.

Others use a box with a black bottom and a clear top. Some then paint the inside of the black part with a flat black paint to cut down on reflections from the box, and improve glue adhesion to the box. This method affords the most protection, but makes it hard to see the sides of the specimen.



Others, including myself, prefer the reverse box. I mount on the thin part, which is black, and cover with the deep part, which is clear. I can then see all sides of the specimen, and it is still protected when the box is closed.

I rough up the inside of the black base with a carborundum cylinder in my rotary tool to get good glue adhesion.



In Europe they use a slightly larger box made of a thinner, more flexible plastic. We usually refer to it as a “Euro” box.

Micromounting Techniques—Continued

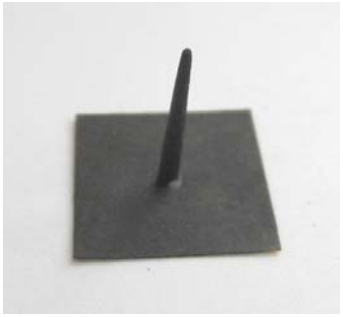
Now we fasten the specimen to a pedestal. The idea is to get all specimens at the same height in the box, usually just under the top. There are many materials that can and have been used for pedestals.

Probably the most commonly used pedestals are blackened corks. The best sizes are 00RL, 000RL and 0000RL. You can buy them black, or buy natural and blacken them yourself. Either slosh them in India ink, drain and dry, or make a bed of pins sticking up through a sheet of corrugated cardboard. Impale the corks on the pins, and spray with flat black enamel paint. Do it outdoors, or inside a box.

For specimens a little larger than would go on a 00RL cork, I like to use pencil erasers. I got a box of them from Dorothy Auler at one time. These can be blackened the same as corks. They cut to length cleaner than corks, but only come in one size.

Square cross-section balsa wood also works well. This can be blackened with a permanent marker. It's available in a wide range of sizes from most hobby shops.

For very small specimens, like single crystals, toothpicks are a good choice. It's best to blacken them with a marker, cut to the desired length, and glue to a piece of black cardboard the size of the box you will use.



Pins can also be used for small specimens. Stick them up through a square of black cardboard.

I've seen and heard of a lot of different materials used for pedestals, some fairly exotic: thorns, pig bristles, etc. Whatever works- be creative!

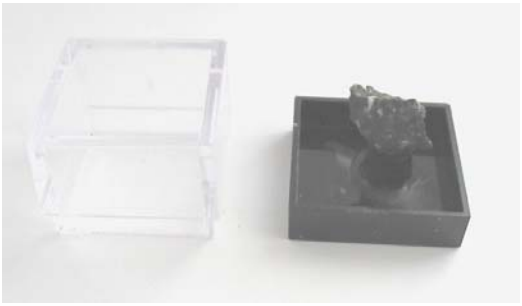
Now let's talk about the glue to use.
Some people use (styrene) model cement. It dries too fast and makes too permanent a bond for my taste.
I prefer a white glue, like Elmer's It dries slow enough to allow me to correct my mistakes, and can be softened with hot water. Elmer's School Glue is soluble even after it dries.

For very small specimens, John Ade used to use gum tragacanth, which is completely invisible when it dries.

Micromounting Techniques—Continued

There are those who use “tack” to mount specimens. Technically, that’s not a “micromount”, since it isn’t a permanent mount. I’ve used it on a few specimens that were too large to fit any pedestal at all in the box. I also use it for temporary mounts, such a trade stock. If you use tack, be sure to test it. Some tack will bleed plasticizer with time, making a real mess. Put a piece between two pieces of typing paper or tissue paper. Set it in a warm place for a few days. (I use the top of my computer monitor). If thre’s any tendency to bleed, you’ll see it.

After the glue has dried from cementing the specimen to the pedestal, cut the pedestal to the correct length if necessary. Use a template made by cutting one side off a micro box. You can then glue the pedestal into the box.



The next step is labeling the micromount. Once more, there are probably as many styles of label as there are micromounters (or maybe more- I’ve made changes over the years). The only information you really need on a label is species, locality, and a specimen number that refers to your collection catalog. I highly recommend putting a label on both the bottom and the top of the box.

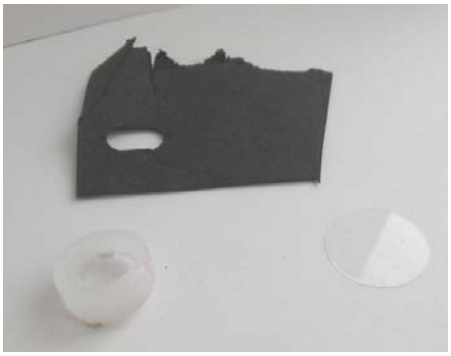
Now all that’s left to do is catalog and store the mount.
Cataloging is another whole subject. We won’t try to cover it here. You can use index cards, a computer program, or whatever works for you.

Micromounting Techniques—Continued

For storage, I like the AFC-1 box from Althor. Each one holds 50 micro boxes, and you can read the labels through the clear box. I prefer to store my mounts chronologically (by ID number). Some file alphabetically, but that requires constant rearrangement whenever new specimens are added.

Finally, there are a couple of special cases to be dealt with:
How do you mount a specimen that's a powder? I simply put the powder into a gelatin capsule, and mount the capsule in a box like I would any other specimen. It isn't particularly elegant, but it works.

If you want to get fancy, you can use the method I use for water-soluble and hygroscopic minerals.
For this kind of mount, you need plastic tubing slightly smaller in outside diameter than the inside of your box, microscope cover glasses of about the same diameter as the tubing, and black paper. Cut a circle of black paper the same size as a cover glass, and glue the paper to a cover glass. Cut a section of tubing about ¼ to 3/8". Make the cuts at right angles to the tubing, and smooth. Glue the cover glass with the black paper to one end of the tubing segment. Place the specimen inside the tubing, secured with tack if necessary. Then glue another cover glass on the open end of the tubing. This can then be mounted in a micro box, using a pedestal to get the top close to the top of the box.



Local Calendar of Events

BURPEE MUSEUM EVENTS

Saturday, April 12 1.00 – 2.30 pm Burpee Explorers – Solving Dinosaur Mysteries: The Raptor Killing Machine:
A hands-on workshop program for children ages 6 – 10.

How did Raptors differ from Jane, Burpee's Theropod dinosaur, and Homer, Burpee's Ceratopsian dinosaur? Just how big were Raptor claws? Get up close as you study a Dromaeosuaurus skeleton and cast a claw to take home, along with lots of cool information. Kids must be accompanied by an adult to assist with cast making.
Pre-registration and payment required. Call 815-965-3433 ext 1020 to register
Fee: members, $13 per participant. public, $18 per participant.

2008 Family Fossil Field Trips:
Join us on a fossil-hunting field trip! Enjoy a day prospecting for fossils in a local quarry with Burpee Museum paleontologists. You get to keep what you find. All ages and skill levels welcome.
All Family Fossil Field Trips (FFFT) are on Saturdays from 1:00-4:00pm
COST: $8/members $12/non-members
Pre-payment is required. We will send you directions and site specific information about one week before the FFFT you register for.
Museum members registration is open now. Open registration begins March 15, 2008
2008 Dates are as follows: Sat, April 12; Sat, April 25; Sat, May 10; Sat, June 21; Sat, July 12; Sat, Aug 23; Sat, Sept 6; and Sat, Sept 20.

Burpee Museum would like to thank Rockford Blacktop, St. Mary's Quarry and Lone Star Quarry for allowing us to utilize their fabulous quarries around the Stateline area.

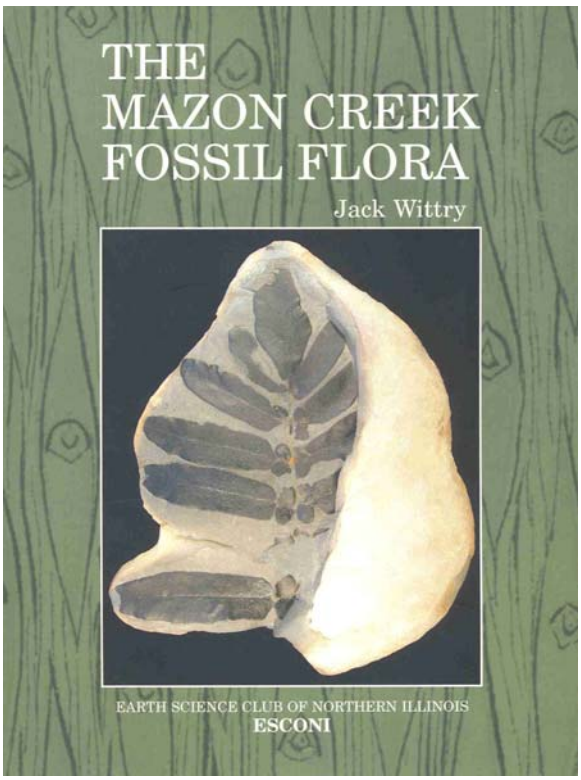
FIELD MUSEUM EVENTS

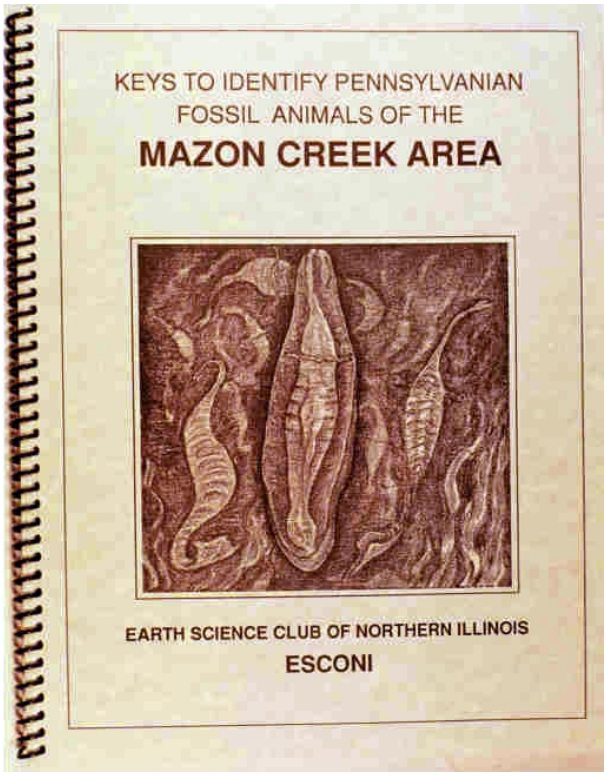
National Geographic Reports: The Challenge of Climate Change
Executive Editor, *National Geographic* **Dennis Dimick**
In a sweeping visual journey, Dimick will bring to the stage the highlights of both *National Geographic's* features and the most recent scientific reports documenting climate change, and explore what we as communities and individuals can do to reverse the trends.
Tuesday, April 15 Classroom Connections, 5pm – 7pm Lecture Presentation, 7:30pm
Boxed dinner included.

Educator Workshop: Smarter Solutions for a Changing Planet
Take the challenge and explore new ways in which we, as communities and individuals, can work to reverse the climate changes documented in recent scientific reports.

The National Geographic Live! Professional Development Series is produced in collaboration with The Geographic Society of Chicago and The Field Museum.
Saturday, April 12, 8am – 4pm Light breakfast and boxed lunch included.
K-12, Earn 30 CPDUs, 2 CPS Lane Credit, 1 -2 National-Louis Graduate Credit
(additional $120 fee per credit hour)
Fees: $60, members $48 Pre-Registration Required (312) 665-7400

ESCONI Books





The Mazon Creek Fossil Flora by Jack Wittry
313 color pictures, 113 taxa, 145 drawings
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Keys to Identify Pennsylvanian Fossil Animal of the Mazon Creek Area
125 Pages, 212 Black and White Drawings
$12.00, $5 to Ship

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Bolingbrook, 60440
630-739-7721
esconibooks@aol.com

2008 ESCONI CALENDAR

Revised 12/02/07

GROUP	GENR'L MGTS.	MICRO Mineral	PALEO	ARCH	BOARD	JUNIOR
January	11	12	19	26	25	
February	8	9	16	23	22	
March	15-16 SHOW	8	X	22	28	
April	11	12	19	26	25	
May	9	10	17	24	30	
June	13	14	X	X	X	
July	X	X	X	X	X	
August	X	X	X	X	22	
September	12	13	20	27	26	
October	10 ?	11	18	25	24	
November	14	8	15	22	X	
December	7 HOLIDAY	6	X	X	X	
DAY	**2nd FRI**	**2nd SAT**	**3rd SAT**	**4th SAT**	**4th FRI**	**2nd FRI**
TIME	8:00	7:30	7:30	7:30	7:30	7:00

Dates are subject to change: see Bulletin.

College of DuPage (COD) Building K, Room #161 for most meetings, but note that the room number is subject to change – there will be a note posted on the entrance door.

ESCONI Show March 15-16 in **Commons Room** of Building K.

The Flea Market is under consideration.

No scheduled meetings for Lapidary; contact Don Cronauer for information. (Lapidary may meet in Room #162, Arts Center if there is sufficient interest)

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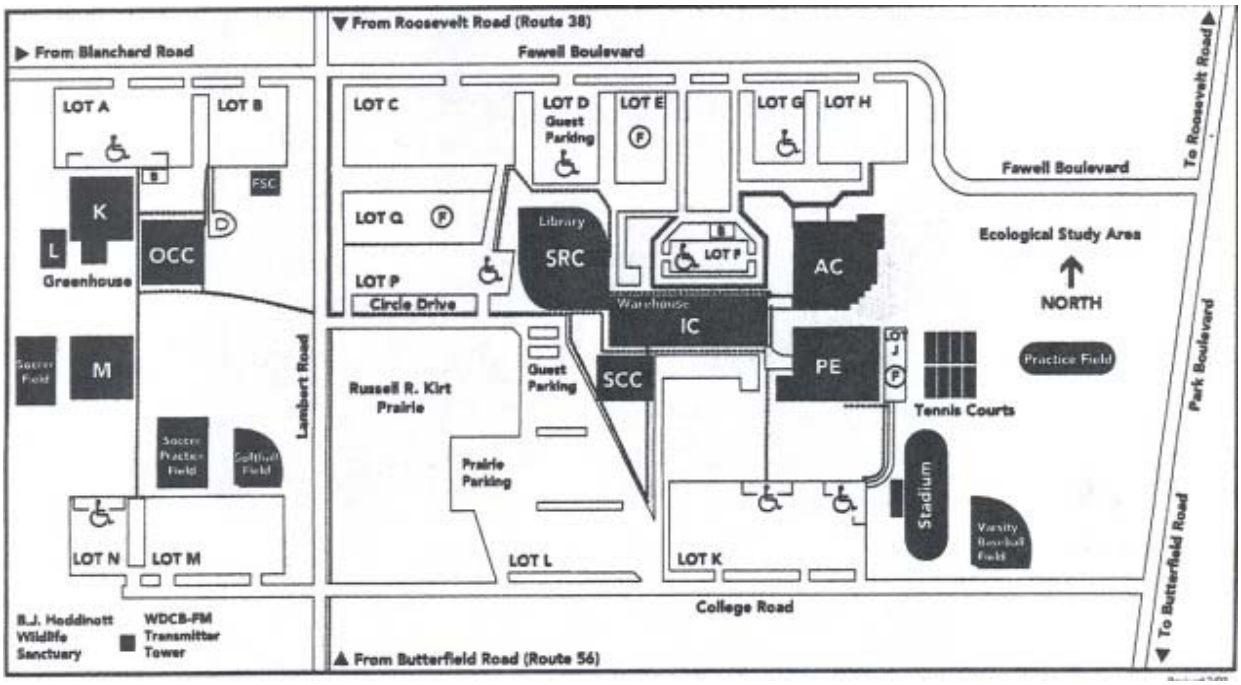

SEND EXCHANGE BULLETINS TO
Don Cronauer; 6S180 Cape Road; Naperville, IL 60540