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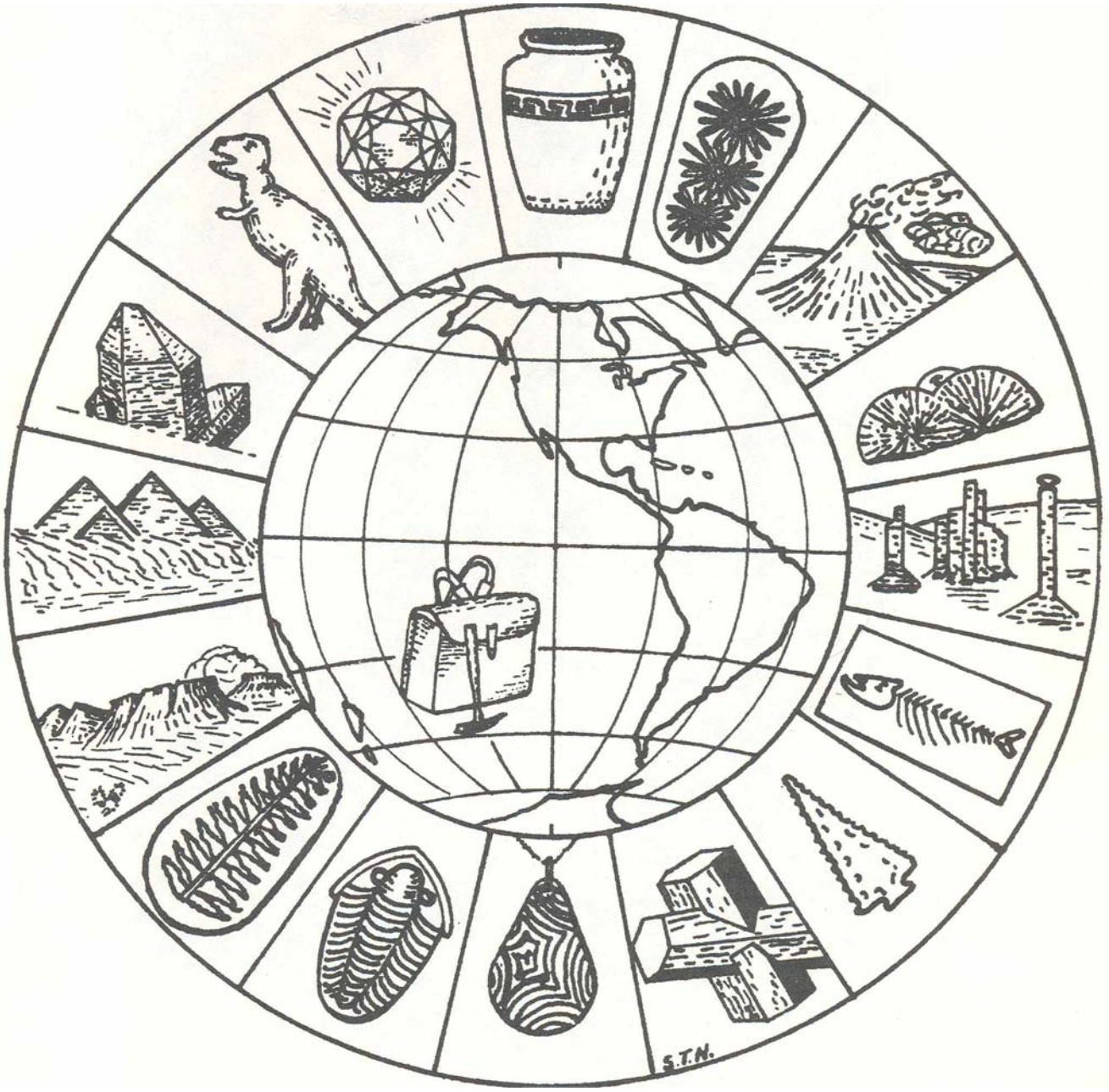

EARTH SCIENCE CLUB OF NORTHERN ILLINOIS

-------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. Mark Kuntz will be the March Show Chairman.

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 annual family membership, or $50.00 for three years. 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.

ESCONI website is www.esconi.org
Webmaster is John Good

April 2009 **President's Message**

Thank you to all who helped make our ESCONI Show a success. It was fun to see everyone enjoy the Show. A big thank you to Mark Kuntz for organizing it and to John Good for helping him put it together. We couldn't have done it without all those who helped like Jim Fairchild and Randy Bultman who got all the cases and materials from the warehouse to the Show and back again. Thanks to all those who lent a hand and helped them with all the heavy lifting. We appreciate Eric Gyllenhaal and Joe Kubal and their work with the Juniors area again this year. Thanks to the demonstrators who were willing to show off their talents also. Thank you to all those who did take the time to put together a case to show off the fossils and artifacts that you have collected or made over the years. I'm sure that they were appreciated by all those that came to our Show.

PaleoFest was a lot of fun also. Thanks to everyone who helped out with the ESCONI table and meeting and greeting there this year. That is always an experience. The talks were good and Baaker never ceases to amaze.

We are looking forward to our speaker this month. Bucky Gates is a dinosaur guy and should have some interesting things to say about hadrosaurs. I first became aware of him on our travels in Utah where he was studying. He then married Lindsey Zanno who is now at the Field Museum and who was working on the Therizinosaurs that we were digging up in Utah. So it is a small world. Come and hear what he has to say.

A reminder – if you haven't paid your dues – the SHOW is a good place to get that done! Be sure to take advantage of that opportunity. And remember the offer of three years for $50 – you can save ten dollars!

Here's hoping that Spring is on the way and winter will soon be long gone!!! And field trips will be starting soon!!

Karen Nordquist, President

2009 DUES ARE OVERDUE

Please send your check payable to ESCONI for $20.00 for your 2009 renewal dues, or $50.00 for three years to Eileen Mizerk, Membership; 2094 Windward Lane Hanover Park IL 60133-6183

ESCONI FIELD TRIPS 2009 (Tentative)

Field Trip #2 April 4, 2009 - 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

APRIL 2009 ESCONI EVENTS

General Meeting: **8:00pm Friday, April 10** **College of DuPage K-131**	**New Hadrosaur Find and Their Dearing on Cretaceous Land Bridges and Macroevolutionary Trends of the Group** by Bucky Gates, Assistant Professor at Lake Forest College.
Mineral-Micromount **7:30 PM, April 11** **College of DuPage K-131**	**Mineral Oddities in honor of the Tuscon Gem Show 2009** by club members. Bring your mineral oddities.
Paleontology **7:30 PM, April 18** **College of DuPage K-131**	**Silurian Period in Northeastern IL** by Dave Dolak, ESCONI member. He will be focusing on the Thornton quarrey. Bring your Silurian fossils.
Archaeology **7:30 PM, April 25** **College of DuPage K-131**	**Settlers of Williamsburg, Virginia** by Vickie and Lexie Kiamco
Junior	Subject to reorganization.
ESCONI Field Trips	**Field Trip #2: Jacob's Geodes April 4, 2009** See Web Site, www.esconi.org, for details about future field trips in 2009. Contact John Good for comments at 630-483-2363 or ESCONI@hotmail.com
BOARD MEETING **7:30 PM, April 24** **College of DuPage K-131**	Board Meeting

Volunteers Needed!

The Chicago Academy of Sciences (CAS), which operates the Peggy Notebaert Nature Museum in Chicago, is looking for volunteers to help with a fossil taxonomy project. They need individuals with expertise in identifying and verifying Mazon Creek and other local fossils. The Academy has a collection of over 30,000 fossils, many of which have not been shown to the public. Ultimately, it is hoped that the collection, once catalogued, will be available for public viewing on the Internet. This is a great opportunity for our members to assist in a most worthy endeavor. For more information, contact Dawn Roberts, Collection Manager, CAS, Collection Facilities and Office, 4001 North Ravenswood, Chicago, IL 60613, 773-525-2164, droberts@naturemuseum.org.

General Meeting

February 13, 2009

President Karen Nordquist called the meeting to order and welcomed everyone. She gave an overview of upcoming shows including the Orland Park Rock, Fossil, Gem & Mineral Show on March 1 and Burpee Paleofest on March 7 and 8. Karen mentioned that ESCONI is sponsoring one of the speakers for Paleofest – Dr. John Pojeta from the Smithsonian Institute. His presentation is entitled "Amateurs Rock" and concerns the importance of local fossil collectors for paleontology. Joe Kubal stated that the Peggy Notebaert Nature Museum (operated by the Chicago Academy of Science) is in need of volunteers to identify and verify some 30,000 specimens they have in their warehouse. Among these items are Mazon Creek fossils. If interested, you can contact the museum at 773-755-5100 or on its website (http://www.naturemuseum.org). Joe also mentioned that the Morton Arboretum will be having a rocks and minerals display on March 28 and 29. Anyone who wants to display some of their specimens should contact the Morton Arboretum. Joe stated that he gave a presentation at the science fair at Johnson School in Warrenville. Finally, Joe discussed the 12th Annual Illinois Coal Education Conference that will be held at Rend Lake Resort, Whittington, Illinois on June 16-19, 2009. This conference (which also includes a tour of a surface mine, underground mine, and power plant) is free to educators. Contact Linda Dunbar at the Office of Coal Development for further information (217-524-3820 or Linda.Dunbar@illinois.gov) or check out the web site at http://www.illinoiscoal.biz. Deadline for registration is April 15.

Karen then talked about other upcoming events including the MAPS National Fossil Expo XXXI that will be held April 3-5. She then mentioned that ESCONI has its Gem-Mineral-Fossil Show at the College of DuPage on March 14 and 15. March Show Chairman Mark Kuntz provided more information about the show and that he is still looking for additional dealers. He also mentioned that there will be 100+ gingko trees (1.5 to 8 inches tall) and gingko seeds for sale at the show. A lively discussion about the show followed. See the MAPS web site for further information (http://www.midamericapaleo.org).

Upcoming filed trips were then discussed. These included the February 14 trip to the Mayslake Peabody Estate; a May 4 trip to Hamilton, Illinois for geodes; a May 16 trip to Braceville; and a May 17 trip to Braidwood. See our web site (http://www.esconi.org) or the Bulletin for field trip information. Eileen Mizerk (Membership Chair) again stressed that it time to pay dues. Upcoming study group presentations for February were mentioned. Check the web site or Bulletin for study group activities. Dianna Lord. (Webmaster) stated that the revised ESCONI web site is up and running. We will have a table set up at the ESCONI March Show to demonstrate and answer question about the web site.

A mention of the two books that ESCONI has for sale was made. It was also mentioned that the speaker for the General Meeting on April 10 will be Bucky Gates who will address hadrosaur migration.

1st Vice President Rob Sula then introduced the speaker for the evening: Cary Easterday, Northeastern University, Department of Earth Science, Mazon Creek Project.

General Meeting of February 13, 2009, Continued

**From Chasing Butterflies to Mazon Creek to Florissant:
The Life and Research of Samuel Hubbard Scudder (1837 – 1911),
Pioneer in the Study of Recent and Fossil Terrestrial Arthropods**

Cary's presentation focused on providing biographical information on Samuel H. Scudder, a review of his scientific contributions, and the historical significance of his career. Cary began his presentation by showing a slide of several Mazon Creek invertebrate species that were described by Scudder. Over his lifetime, Scudder described 1,885 valid species. These included 1,144 fossil insects, 43 fossil spiders, and 33 fossil millipedes and centipedes. He also described recent animal species including 19 Lepidoptera (mostly butterflies), 6 Odonata (dragonflies and damselflies), and 630 Orthoptera, In Scudder's time, the Orthoptera order included roaches, mantids, walking sticks, termites, and earwigs; as well as grasshoppers, crickets, and katydids that currently make up the order.

Scudder's fascination with nature began when his family moved from Boston to a 30-acre estate in Roxbury, Massachusetts. This fascination was not necessarily shared by his family. For example, when he was 10, he became excited about a fungi-covered stick that he found. However, his father thought it was a "dirty stick" and tossed it in the fire. From 1853 to 1857, he attended William College and graduated at the top of his class with an AB degree. Six weeks into his studies, he found a case of butterflies and did not realize that such beautiful creatures existed near where he lived. He immediately started to collect insects, and during his junior year dedicated himself to the study of insects. From 1858 to 1862, he attended the Lawrence Scientific School of Harvard University and finished his BS degree.

From 1859 to 1870, he established his career at the Boston Society of Natural History where he was Curator of Entomology, Recording Secretary, Custodian, and Librarian. He held all four positions from 1864 to 1870. In 1863, he became a founding member of The Appalachian Mountain Club and its journal *Appalachia*. From 1858 to 1872, he published a number of papers. Scudder's initial works were on recent insects. His first paper on fossil insects was published in 1864. He first wrote about fossil invertebrates from New Brunswick and Mazon Creek; and then started writing about fossil invertebrates from the Green River and Florissant in 1870.

Scudder was the General Secretary of the American Association for the Advancement of Science (AAAS), the first editor of *Science*, and the vice president of the AAAS in 1894. From 1880 to 1887 he was President of the Boston Society of Natural History; and from 1886 to 1892 was a paleontologist for the U.S. Geological Survey. In 1874, he became the founder of the Cambridge Entomology Club and its journal *Psyche*.

Among the significant works he published between 1873 to 1896 were: *Systematic Review of Our Present Knowledge of Fossil Insects, Including Myriapods and Arachnids*; *The Butterflies of the Eastern United States and Canada with Reference to New England* (in 3 volumes); *The Fossil Insects of North America with Notes on Some European Species* (in2 volumes); *Index to the Known Fossil Insects of the World, Including Myriapods and Arachnids*; and *Revision of the American Fossil Cockroaches with Descriptions of New Forms*.

In his personal life he got married in 1867 and in 1869 his only child, a son, was born. His wife died in 1872. After his son graduated from Harvard Medical School, he worked during a severe epidemic in Boston, contracted tuberculosis and died suddenly in 1896.

General Meeting of February 13, 2009, Continued

In the same year, Samuel Scudder developed symptoms of paralysis agitans (a condition similar to Parkinson's disease). After his son's death, Scudder never recovered his health or spirit. Nevertheless, he published several works on the Orthoptera between 1897 and 1902. He died at home in Cambridge, Massachusetts, in 1911 at the age of 74.

Over his 44 year career, he published 791 papers. While many were systematic papers, he also published on a wide variety of topics including general entomology, biogeography, insect behavior, economic entomology, insect songs, and insect regeneration.

Following the well-received presentation, Rob Sula presented Cary Easterday with an honorarium. Following a series of questions and answers, the meeting was adjourned with thanks to Cary for a highly entertaining presentation on the founder of American paleoentomology. Refreshments were served.

Respectively Submitted, William S. Vinikour, Recording Secretary

BOARD MEETING
January 23, 2009

President Karen Nordquist called the meeting to order. 1st Vice President Rob Sula reported that Cary Easterday would be our speaker at the February General Meeting. He will be giving a presentation on the life of Samuel H. Scudder. There will be no General Meeting in March. Speakers for the General Meetings in April and May could include Bucky Gates and Lindsey Zanno, respectively. 2nd Vice President Irene Broede announced that all meetings through April will be in Room K-131, except for the General Meeting on February 13 and Board Meeting on February 27. Both of these meetings will be held in Room K-161. She mentioned that ESCONI received a thank you gift (assorted snacks) from the college in appreciation for the room rental fees we have paid over the last year. Irene also mentioned that the contract for the March Show was signed and mailed in November and that payments for November room rentals were mailed on December 10. The December room rental bill has not been received, possibly because our liaison with the college has been on sick leave.

The minutes from the October 24, 2008 Board Meeting were reviewed and approved, as amended. Treasurer John Good is looking into the potential use of QuickBook for Not-for-Profit Organizations. Librarian Andy Jansen reported that no books have been checked out of the ESCONI library. John Good mentioned that ESCONI member Tom Williams has made a suggestion that we obtain a copy of the paleontology textbook written by Dr. Bailey of Western Illinois University for our library. It was voted on and approved with the caveat that Andy can spend up to $100 to obtain a copy of the book. On-line ESCONI book sales have been averaging about one per month, including sales to foreign countries such as Taiwan. On a side note, John mentioned that our Curator, Randall Bultman, has a broken arm, but he should start to attend meetings again in February.

Board Meeting of January 23, 2009, Continued

John Good reported on upcoming field trips. The first trip of the year will be to the Mayslake Peabody Estate in Oak Brook, Illinois. There will be an April 4 field trip to Hamilton, Illinois for geodes. Other tentative field trips are to Braceville on May 16 and to Braidwood on May 17. Suggestions for other field trip destinations are needed. Howard Svoboda (Circulation) presented circulation data for 2008. He stated that our annual mailing permit fee will be going up from $175 to $180.

Eileen Mizerk (Membership) reported that as of January 8, ESCONI had 222 family memberships and that 230 labels for the Bulletin were printed. She stated that she has been receiving lots of dues payments and that several members have been taking advantage of the new 3-year membership deal.

March Show Chairman Mark Kuntz mentioned that Blackberry has been added to the dealer list. We now have six dealers for the Show. Mark stated that he will be contacting other fossil dealers to see if they are interested in coming to the Show. Rob Sula said that he would assist in this effort. If an additional fossil dealer cannot be contracted, Rib River Fossils would be interested in paying for additional tables. Mark mentioned that the biggest problem in obtaining the number and types of dealers we would like for our Show is the conflict with other shows that are held during the same weekend. To that end, Mark suggested that our Show should be moved to the last weekend in March. A lively discussion was held on this topic. While there was general agreement that this would be desirable, the continuing problem we have is being able to reserve the space well in advance of when it is needed. Also, Palm Sunday falls on the 4th weekend of March in 2010. However, it was not believed that this would be a problem in having a successful Show. It was therefore agreed that we would try and hold the 2010 March Show on the 4th weekend of March, and that the 3rd weekend would be the fall back weekend. Irene Broede said she will contact the college liaison about March show dates.

A discussion was also held concerning set-up times for the Show. Some dealers would like to start setting up before 3:00 pm on Friday. While this is not objectionable to Board members, our contract with the college sets a set-up time for 3:00 pm; therefore, an earlier time cannot be guaranteed. Further discussions were held about room organization for dealers, display cases, book sales, and so forth. John Good mentioned that new Show flyers are ready. He will be sending about 50 copies to each dealer. Jim Fairchild (Recording Secretary) stated that a work day at the warehouse will be needed before the Show. Irene Broede reported on ESCONI Associates.

After the meeting was adjourned, Dianna Lord gave a demonstration of the updated ESCONI web site to the Board members. This included a discussion on how to maneuver through the site; how to post announcements, articles, and photographs; copyright issues; and editing/revising links to other sites. All Board members were enthusiastic about the revised web site and are looking forward to the switchover that should occur shortly. Once active, the URL for the site will still be http://www.esconi.org.

Respectfully submitted, William S. Vinikour, Recording Secretary

Paleontology Study Group Meeting

John Good, Chairman Date: February 21, 2009

Chairman John Good called the meeting to order and introductions were made around the room. John mentioned the ESCONI Show coming up March 14 and 15 and asked for help. We need more cases and material to fill two Paleo Group cases. PaleoFest at Burpee in Rockford is coming up March 7 and 8 and should be a good show. Richard Rock mentioned field trips to Braceville on May 16 and a boat trip on May 17 and he had sign up lists for them. He is working of possible trips to Canada, Indiana, and others. There will be a MAPS geode trip and John Catalani is working on a St. Paul trip. John Catalani mentioned the MAPS EXPO on April 3-5 in Macomb Illinois that is highlighting Crinoids this year. It is the largest fossil shown in the world. PRI will be there this year and will be selling books.

The March Paleontology Group Program will be "The Ordovician" with John Catalani. Bring your fossils! In April we will do the Silurian and talk about cataloguing your fossils. Randall Bultman will be working at the warehouse on February 28 to get ready for the Show from 9:00 am until done and all who can help are welcome. **Chris Cozart** then began the program for the evening.

Mazon Creek
A Window into Time

Chris gave a very nice overview of the Mazon Creel fauna and flora with its hundreds of animals and plants. It is a world famous Lagerstatten, the second most famous after the Burgess Shale. It is dated to 290 Million Years Ago in the Middle Pennsylvanian and is well known because it preserves soft parts of many creatures. It covers all areas including fresh water, marine and brackish water with its findings preserved in siderite concretions. It has been collected since the 1840's.

It gives a good picture of the life at that time when the area was near the equator. The Mazon Creek sediments were deposited on the edge of a low lying delta that wandered over a 600 mile delta that faced east to west. Most of the fossils were on a belt 50 miles wide paralleling the Illinois River from Will to LaSalle County. There are three major areas included the Braidwood flora of the lowland forest, the Braidwood fauna with the lowland animals, and the Essex fauna with the estuary and marine animals.

Chris shared with us many photos of the wide range of the flora and fauna of Mazon Creek which included cycopods, horsetails, spore ferns, seed ferns and conifers. Among the fauna were insects, spiders, millipedes, amphibians, jellyfish, arthropods, crustaceans, fish, and, of course, Tully Monsters. It was a wonderful array of fossils that gave a very good picture of what life was like back then. He then opened the floor to discussion.

Many other members had brought fossils for comments and identification.
Joan Bledig had several that she had collected at Greer Earth Moving School. They included *Pecopteris*, *Cyclopteris*, *Annularia*, *Calamitis*, a lycopod, and *Cardaicarpus*.

Paleontology Study Group February 12, 2009, Continued

Nate Rock had several fossils including a shrimp-like arthropod, a *Cyclopteris*, and several indeterminate fossils.

Bob Beadle had some nice pyritized bark.

Dave Dolak had a shrimp and a horseshoe crab with a very long tail.

Rich Kerrill had a jellyfish, a clam and some artifacts (spikes) from Braceville.

Bob Masek had some large plant fossils (photo below right) from Cinder Ridge (Pit 15) and a large complete Tully Monster (photo below left), a large scale from a lung fish and a coprolite.

The meeting was adjourned for refreshments and more discussion.

Respectfully submitted, Karen Nordquist, Secretary

April – Diamond

(Alternate gem – Rock Crystal)

By Lavergne R. Novak

Diamond is the hardest substance known and the stone most desired in the modern world. The name comes either from the Greek *adamas*, meaning "invincible" or from the Latin *adamare*, meaning "to fall in love." Both words aptly describe this beautiful stone. The diamond has the simplest structure of all gems, being pure crystallized carbon. Its beauty lies in its wonderful ability to refract and disperse light. Diamonds are found in many colors: white, yellow, blue, green, even red. The Russian crown jewels, if they still exist, are said to contain a large red diamond, the rarest of all.

India and Brazil were the major source of diamonds until 1867. In that year a group of children in South Africa found a pretty stone that turned out to be a diamond weighing 22 1/2 carats. It set off a "diamond rush" that equaled the California gold rush and which eventually made South Africa the major source of diamonds. In the first thirty years of mining operations in South Africa, more than 7 ½ tons of diamonds were unearthed. In order to keep the market from being flooded, which would force prices down, production and supply are tightly controlled.

Until the 15th century, diamonds were used only as rough stones. Because of their hardness, no way to cut or polish them was known. Moses is said to have used a rough diamond to cut the other eleven stones for Aaron's breastplate. Some of the older myths are, therefore, based on the shape of the uncut diamonds. A triangular stone would cause quarrels among friends. A four-sided stone would cause terror to the wearer. A five-sided stone was to be avoided at all costs because it meant death. Unlike other stones, which were ground to powder and taken internally, diamond dust was believed to be fatal if swallowed. Still another myth said the diamond would break the teeth if put in the mouth and rupture the intestines if swallowed. At last a myth that seems to be based on reality!

The Talmud claims the brilliance of the diamond varies with the innocence or guilt of anyone accused of crime. The Greeks wore diamonds to neutralize poison, quiet delirium, subdue violence, resolve worries, and strengthen the bonds of love. In medieval times the diamond was worn as an amulet to protect the wearer from plague and sorcery and to inspire heroic actions.

The modern diamond is seen as a symbol of purity, innocence, and virtue. It is, therefore, the stone of almost universal choice for engagement rings as a token of everlasting love.

(This is a birthstone series. Text was first printed by the Lizzadro Museum. Picture from W Magazine 10/9/07 was added.)

Mayslake Field Trip & Pizza Party Summary

By: Joseph D. Kubal and Carl Strang

On Saturday, February 14, 2009, twenty ESCONI members got the chance to explore the elegant Mayslake Peabody Estate in Oak Brook, IL; to hear a lecture on northeastern Illinois prehistory; and to mingle and socialize during a pizza-catered luncheon. This winter field trip was held at the mansion that is currently owned by the Forest Preserve District of DuPage County.

Part 1: A Little History, A Little Architecture

The main building was built between 1919 and 1921 by Francis Stuyvesant Peabody. Mr. Peabody was a coal mining magnate that founded the world-renowned Peabody Energy Company now based in St. Louis, MO. He also was a national figure in Democratic politics, an avid sportsman, and a collector of Robert Louis Stevenson manuscripts.

The 39-room mansion is a National Registry of Landmarks designated property, which is undergoing significant renovation. This historic "Gilded Age" house was designed by noted architect, Benjamin Marshall and is an outstanding example of the Tudor Revival style. Tudor Revival homes have "steeply-pitched gable roofs, red brick masonry walls with stone trim, stucco cladding, groups of tall, narrow windows decorating half-timbering, and large, elaborate ornamental chimneys … and had a strong association with country houses that date back centuries."

Inside, the house is much more eclectic in style. Materials used in the woodwork of the house include birch, English oak, silvered oak, and walnut. Concrete, marble, wood and tile are used for flooring. Four types of marble were used in the floor: 1) gray Tennessee or Appalachian marble quarried near Knoxville, 2) white marble with gray veining (possibly Vermont Danby), 3) green marble (possibly Vermont Windham), and 4) white Carrara. "Italian Carrara marble, quarried since Ancient Rome, is a world renowned marble famously employed by Michelangelo and other Renaissance sculptors."

Many interesting stories (too many to relate here) were shared with us about Mr. Peabody and his family from the infamous haunting of the estate (unofficially) to the mysterious secret staircase. Another tale highlighted a world record-breaking jumping horse named Great Heart (which was also a premium brand of coal Peabody mined that fueled Admiral Byrd's third expedition to Antarctica.) Much more could be written, but to get the full story, you need to make a visit yourself to Mayslake. More information on the estate and current events is available at http://mayslakepeabody.com/content/

Part 2: Significant Events in Northeast Illinois Prehistory

During lunch, Carl Strang, a Forest Preserve naturalist reviewed the prehistory of northern Illinois. The following are some notes Carl gleaned from his presentation.

Overall theme: thanks to the long period of time this place has existed, and the changes, often catastrophic, that have occurred, practically every kind of environment has been here at some point. Some highlights:

Mayslake Field Trip of February 14, 2009, Continued

- Time of coral reefs and the laying down of our bedrock (450-400 million years ago). The Niagara Formation Silurian dolomite is buried beneath glacial deposits in most places locally, but can be seen at the surface in places such as the Bruce Peninsula in Ontario.
- Coal forests, a time of mosses, ferns, club mosses, tree ferns, seed ferns and giant horsetails (300 million years ago) as well as the first terrestrial animals. Connection to Mayslake and to its builder, coal tycoon Francis Stuyvesant Peabody.
- Dinosaurs were here, but we can't say much about them as no Illinois fossils have been found. The nearest is a hadrosaur discovered just across the Mississippi River in Missouri.
- Continental glaciers and their aftermath, tundra, northern forest, deciduous forest, prairie (1.6 million years ago to present)

People were here from the time of the glacier's departure to the present day. For most of that period they were hunter-gatherers whose top weapon was the spear thrower.

Local glacial deposits are largely composed of a clay that was produced when the Lake Michigan lobe of the continental glacier ground up the Devonian shale that is the bedrock under that lake. Embedded in the clay are stones, most of which are local dolomite and chert, but some of which are various rocks carried by the glacier from Canada. The Lake Michigan lobe originated in south Hudson Bay, crossing the extreme southeast corner of Lake Superior and the tip of Michigan's Upper Peninsula on its way here. The history of that part of Canada, more than 2 billion years' worth, produced many kinds of rock, including metamorphic varieties such as schist and gneiss, and igneous rocks such as basalt and granite. Any of these found locally had their origin in Canada.

In the tundra zone closest to the glacier as its edge melted slowly back north, animals included such species as woolly mammoths, caribou and musk oxen. Beyond the relatively narrow tundra zone was a northern forest that was home to species such as mastodons, giant beavers, moose, stag moose, and wolves.

Among the species whose remains have been found in DuPage County are the woolly mammoth (most of the skeleton of the Blackwell mammoth can be viewed in the Visitor Center at Fullersburg Woods) and mastodon. Molars and some bones of a mastodon were found at Pratts Wayne Woods Forest Preserve a few years ago, and during the last two summers there have been digs there conducted jointly by the Forest Preserve District and the Field Museum of Natural History. In the first summer many small pieces of tusk and bone were found. Last summer the dig uncovered several buried trees from the mastodon's time, as well as two black spruce cones (the black spruce is a northern species no longer found here). So far, primary participants in the dig have been teachers and high school students, with shorter-term opportunities provided for a wider segment of the public (including ESCONI members). A demonstration dig event will be held the weekend of August 1-2, 2009, but formal excavation of new ground is on hold until the Forest Preserve District can find a new scientific partner.

After the presentation and cheesecake, ESCONI members were invited to look at a wide variety of rock and fossil specimens, including the mastodon molars that had been found at Pratt Wayne Woods Forest Preserve.

Archaeology
Study Group
Meeting
February 28, 2009

Bryan Nugent introduced the speakers Vicki and Lexie Kiamco whose presentation follows. Afterwords, Bryan discussed the topic for the Archaeology Study Group case for the March 2009 Show. Members came up with suggestions for items they will bring.

Otzi the Iceman

By Vickie and Lexie Kiamco

He was a copper age man found between Austria and Italy by Helmut and Erika Simon in September 1991. They came across the body by accident on September 19th on the way back to the Similaun Mountain Hut. Helmut took a picture of the body, though his wife told him not to as she found it very disturbing to take a picture of a corpse. They stopped in the lodge and reported the body to the caretaker.

At first each country wanted the other to retrieve the body. Several bodies from modern times had turned up recently with the melting of the glacier. Two days after the discovery two famous mountain climbers looked at the body, (Hans Kammerlander and Reinhold Messner). Messner guessed that the body died 500 years ago.

Two days after that on Sept. 23, Rainer Henn from the Institute of Forensic Medicine at the University of Innsbruck went to retrieve the body with the Austrian Mountain Rescue team. Otzi and his possessions suffered extremely bad damage while they tried to get him out. They used a jackhammer and pickaxes to get at him, putting a hole in his left hip. He also suffered broken ribs and vertebrae. They broke his arm when they forced his body into a coffin. Many people were allowed to touch the body and even take pieces of his clothing for souvenirs.

The next day Konrad Spindler from the Institute of Pre- and Protohistory of the University of Innsbruck looked at the body and estimated a very old age. 4,000 years old. (He based his estimate on the ax which he thought was made of bronze.) From being thawed and everyone having touched him, Otzi's body was deteriorating and developing a green fungus. They needed to refreeze him.

Archaeologists went to the site for the first time. They were not able to do much before the winter storms. They would go back in the summer of 1992 and excavate the site. Otzi's body was not torn apart by the glacier because it was located in a ravine. It is likely the body moved from time to time with the freezing and thawing of the glacier as he and his possessions were found many meters apart.

Otzi's carbon test indicated he was even older than Spindler thought. The tests indicated that he was between 5,000 and 5,300 years old. They also discovered that his ax was made of almost pure copper.

Otzi the Iceman, Continued

Austria and Italy began to fight over who Otzi belonged to. Looking through old treaties between Austria and Italy, they discovered that Otzi laid 92m inside the Italian border, therefore he belonged to Italy.

The Iceman remained for another 6 years at the University of Innsbruck while they built a museum for him in South Tyrol, where he is now on display to the public.

His clothing is on display too. His clothing includes a grass cloak, hide coat, leggings, belt, loincloth, and a bear fur hat. No woven materials where used only tanned leather and some grass.

They believe Otzi was 5'3" tall and between 42 and 45 years old when he died. They think his eyes were blue and his hair was brown. He weighed about 110 lbs. when he died. His mummy weighs 29 lbs.

In x-ray test a small black dot came up on the screen in his right shoulder blade. When they took a closer look, they found an arrowhead. It matched a small tear on his coat. He also had a cut on his thumb that went all the way to the bone. He had head trauma and bruises and cuts on this hands, wrists, and chest.

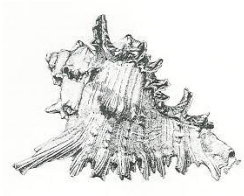
DNA analysis revealed traces of blood from four other people on his gear:

- One from his knife.
- Two from the same arrowhead.
- And one from his coat.

There has been a lot of speculation on who Otzi was and how he died.

After her presentation, Lexi answered questions
Lexie also talked about his last meal, consisting of unleavened bread made of einkorn wheat, one of the few domesticated grains in the Iceman's part of the world and meat.
Also, Otzi was heavily tattooed which many people believe was related to acupuncture.
She also discussed Otzi's clothing and equipment. He was well equipped for survival in the Alps, with leggings, loincloth and jacket made of the hide of deer and goat, and a cape made of grass and bast.

Scientific American 2005
WWW.pbs.org/wgbh/nova/icemummies/iceman.html

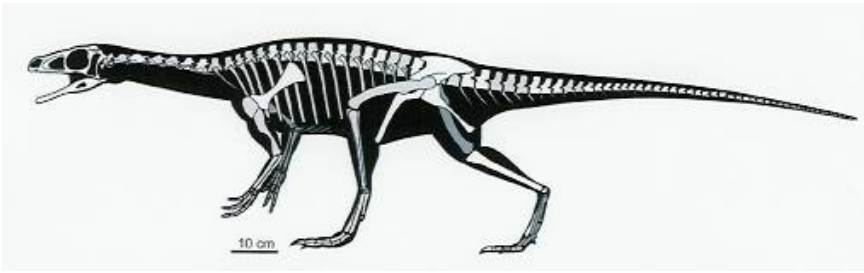


Karen's Komments

Giant Snake Found in Colombia and Climate Implications – *Titanoboa*

Today the largest snakes are found in the tropics of South America and Asia where the warm temperatures allow them to grow bigger due to poikilothermy (animals whose internal temperature varies with ambient temperature). Now over 184 vertebrae from 28 snakes have been found from the Cerrejon Formation (58-60 MY old) in northeastern Colombia that are telling a very interesting story. It has been named *Titanoboa cerrejonensis* from the Greek "Titan" for giant meaning giant boa from Cerrejon. The photo above shows many of these bones. One of them, a, is the type specimen and is compared to a comparable modern vertebrae to its right from *Boa*. The estimated size of the snake would be 13 meters (42.7 ft.) and it would have weighed about 1,135 kg. (2,297 pounds or 1.25 tons). The modern *Boa* might reach about 6 meters in length (19.7 ft.). At this size *Titanoboa* would have required a temperature of 30 – 34 degrees C to survive. It was found in a depositional environment of coastal plains with large scale river systems in a wet tropical rainforest with other fossils including turtles, crocodiles and dipnoan fishes. It is an interesting way to estimate the climate of long ago which is sometimes done by studying the plant life also. (Head et al. in **Nature** Vol. 457 2/5/09)

Basal Sauropod Found in Argentina – *Panphagia*



The early evolution of the groups of the dinosaurs is important and this is another early entrant into the picture. This one is from the early Late Triassic Carnian Ischigualasto Formation dated to 228 MYA where *Herrerasaurus* and *Eoraptor* have been found. In 2006 an incomplete partially disarticulated skeleton of a primitive sauropodomorph dinosaur was found. It has been named *Panphagia protos* from the Greek" pan" for all and "phagein" for to eat for its inferred omnivorous diet, because it appears to be transitional between carnivory and herbivory. The species name is from the Greek "protos" for first because of its basal position. The specimen is an immature individual (open skull sutures) estimated at 1.3 meters (4.3 ft.) long.

Karen's Komments, Continued

The bones are hollow like *Eoraptor* and it is similar in size and proportion to *Eoraptor*, but it is slightly larger and more elongated. There are only teeth in the dentary and the teeth in the front have interesting eminences on the front and backs. The teeth in the back are more leaf shaped. There are also similarities with *Saturnalia*, a basal sauropod found in the Carnian Upper Santa Maria of Brazil which is considered to be at the same time period. But the skull of *Saturnalia* is not well known so comparisons are difficult. (Martinez & Alcocer in **PlosOne** Vol 4/2 Feb 2009)

Spookfish Uses Mirrors to See

There have been all kinds of interesting evolutionary specialists that have developed over the years, but here is a new one. The brownsnout spookfish which grows to about 10 cm (3.9 in.) long in the tropical deep sea waters has eyes with two parts to keep an eye on things both above it and below it. It uses conventional lenses to look above itself but instead of using a lens to detect the dimmer light from below it uses mirrors. It focuses the small flashes of light on tiny reflective crystals that beam a high contrast image onto its retina. The mirrors catch more light than a lens would because it would absorb some of the photons. It is so clever that scientists are surprised that no other vertebrates have tried it. (Douglas et al in **Current Biology**, 1/2009)

Karen Nordquist, Paleontology

MINERALOGY/MICROMOUNT

February 14, 2009

Kathy Dedina welcomed everyone to the meeting.

The future meetings are scheduled as follows:
April 11, 2009 - Mineral Oddities as per the Tucson 2009 Show
May 9, 2009 - Fluorescent Minerals
June 13, 2009 - Geodes, Illinois and Beyond

The members contributed mineral specimens for display at the ESCONI March 2009 show. The topic will be Illinois Minerals. The rest of the program consisted of e two following video presentations from the video from the Wonderful World of Agates Show in 2008 at the Weis Earth Science Museum, Wisconsin:

Collecting Fairburn agates in South Dakota and Nebraska
Mining agates in the U.S. and Mexico

Local Calendar of Events

The DesPlaines Valley Geological Society 44th Annual Jewelry, Gem, Fossil, Mineral and Lapidary Arts Show

April 18 Saturday 9:30 AM to 5:00 PM,
April 19 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

Morton Arboretum Education

N433 - Across our Continental Divide (NEW)
May 9, 2009 Dave Dolak, Columbia College
Did you know that Northern Illinois sits astride an important continental divide? The North/South divide that separates waters of the Great Lakes from those of the Mississippi River is central to the natural and human history of Chicago and the Midwest. In this field trip, trace the geology, environmental, and economic history of the Chicago River and Des Plaines River corridor. Learn how the glacial geology of the Ice Age determined crucial transportation corridors explored by early Voyageurs and later developed into the I&M Canal, Sanitary and Ship Canal, and railroads. Visits to the Chicago Portage National Historic Landmark, Palos Hills, the rock canyon at Camp Sagawau, and Lockport will be included. Please bring a lunch and water and dress to be outdoors. We'll be meeting at Thornhill for an introductory session, and then traveling by bus to the different sites.
Activity level: moderately strenuous hiking, Naturalist Certificate Elective (8 hours)
DATE START TIME END TIME
5/9/2009, Sat 8:00AM 5:00PM
Member Fee $89.00, Non Member Fee $112.00
Location Thornhill Education Center 630-719-2468

Field Museum Education: The Aztec World Lecture Series

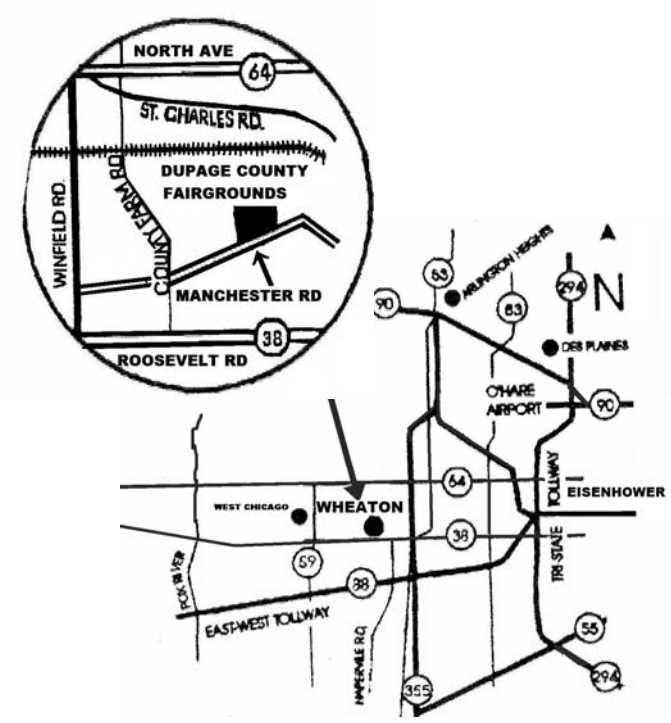
Presented by The Field Museum and Northwestern University

Thursday, April 9, 2009; 6 p.m.
Elizabeth M. Brumfiel, "The Aztecs and the Origins of Gender Inequality"
Thursday, April 16, 2009; 6 p.m.
David Carrasco, "Imagining a Place for Aztlan: Chicanismo and the Aztecs in Art and Resistance"
Pre-registration suggested—call 312.665.7400.
Lecture: Adult Pre-Registration Not Required
$9, $8 students/educators, $5 members
West Entrance Montgomery Ward Hall, Ground Level

33rd ANNUAL SHOW

Chicagoland Gems & Minerals Association (CGMA)

BEADS - CRYSTALS - GEMS
JEWELRY - FOSSILS - MINERALS



Save The Date !

Memorial Day Weekend
Saturday, May 23, 2009 10 AM - 6 PM
Sunday, May 24, 2009 10 AM - 5 PM

Dupage County Fairgrounds
2015 W. Manchester Road
Wheaton, IL

20+ Nationally Known Dealers: Details on Back

Exhibits:

Silent Auctions:

Children's Activities:

Adults - $5.00
Seniors - $3.00
Students - $3.00
Children(Under 13) - FREE!
Service Personnel w/ID - FREE!

FREE PARKING
INDOORS - AIR CONDITIONED - FOOD AVAILABLE
CAMPING AVAILABLE - Call

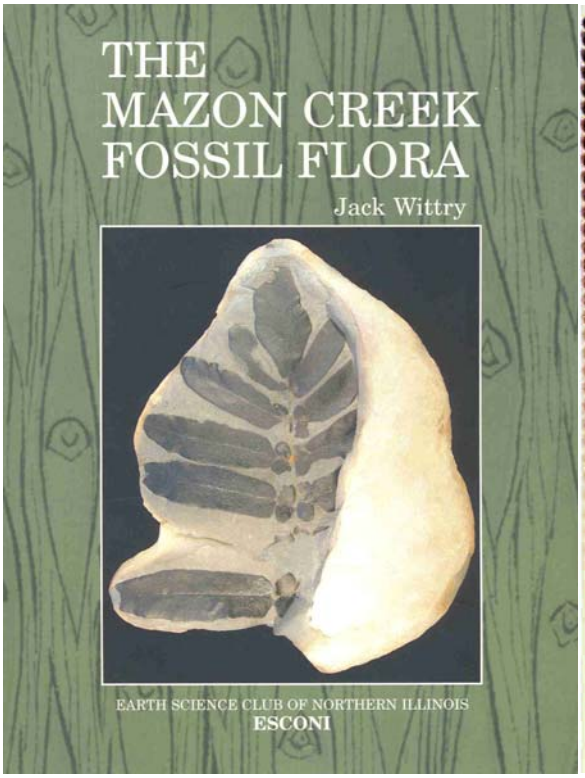
CALL 630-377-0197 EMAIL cgma@sbcglobal.net WEBSITE www.chicagolandgemshow.org

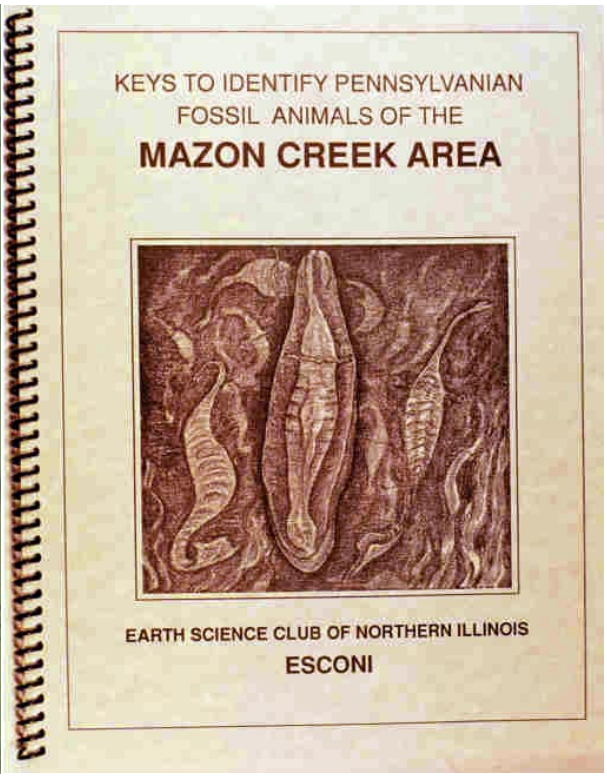
Illinois State Geological Survey Field Trips Spring 2009

Geology of the Mackinaw River Watershed, Mclean, Woodford and Tazewell Counties, Illinois. April 18 and May 2,2009

Advance Registration Required. Each field trip is limited to the first 150 registrants. Registration is $10.00 per person (Children 12 and younger are free). You can register about 2 months in advance by telephone (217-333-4747) or online (www.isgs.illinois,.edu)

ESCONI Books





The Mazon Creek Fossil Flora by Jack Wittry
313 color pictures, 113 taxa, 145 drawings
$65 hard covers for ESCONI Members
$35 soft and $6 to ship
Make check out to
ESCONI Associates

Keys to Identify Pennsylvanian Fossil Animal of the Mazon Creek Area
125 Pages, 212 Black and White Drawings
$12.00, $5 to Ship

Andrew Jansen
2 Langford Ct.
Bolingbrook, 60440
630-739-7721
esconibooks@aol.com

2009 ESCONI CALENDAR

Revised 01/19/2009

GROUP	GENERAL MTGS.	MICRO Mineral	PALEO	ARCH	BOARD	JUNIOR
January	9	10	17	24	23	
February	13	14	21	28	27	
March	14-15 Show	X	21	28	27	
April	10 Good Fri	11	18	25	24	
May	8	9	16	23	22	
June	12	13	X	X	X	
July	X	X	X	X	X	
August	X	X	X	X	28	
September	11	12	19	26	25	
October	9	10	17	24	23	
November	13	14	21	28	Dec 4	
December	TBD	12	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 #131 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 14-15 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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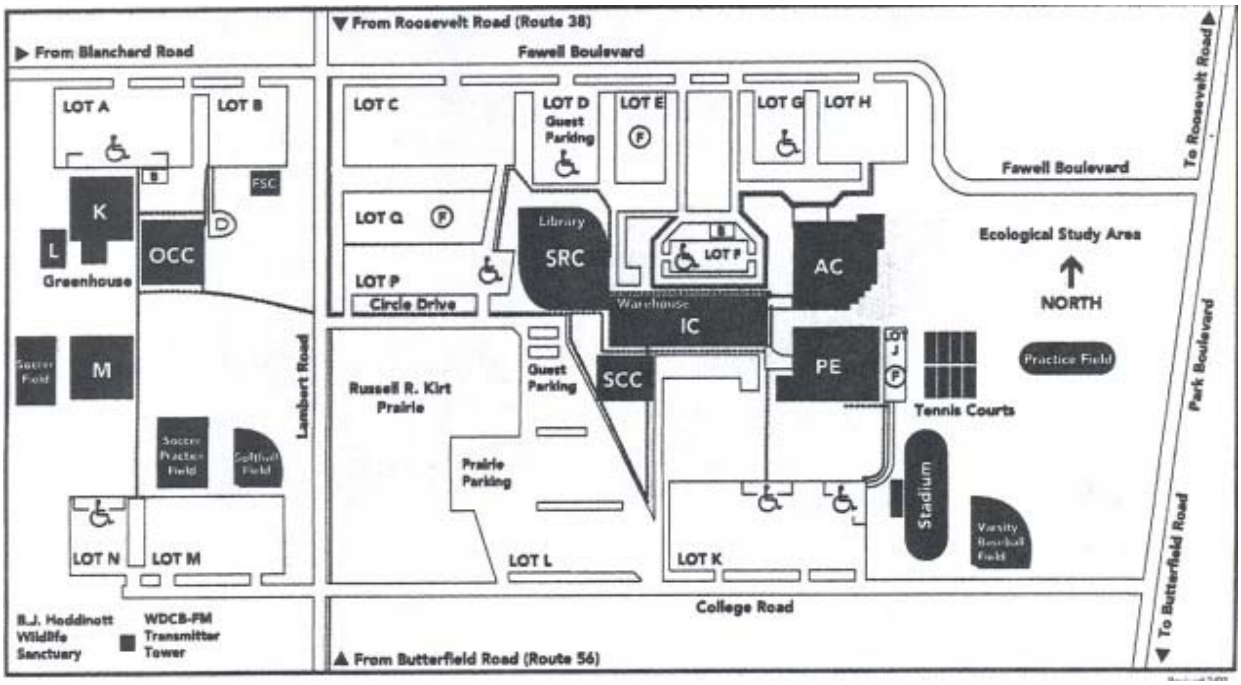

SEND EXCHANGE BULLETINS TO
Don Cronauer; 6S180 Cape Road; Naperville, IL 60540