

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 or 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

February 2009**President's Message**

Hope that everyone enjoyed the Holidays in spite of the weather. This is proving to be a trying winter with the cold and snowy weather we have been enduring. Hopefully it will not stay so wintery all the time and we will get some breaks, but do be careful out there.

Well, it is almost ShowTime!! I hope you have all given it some thought and decided what you want to put in your display case. Please let Mark Kuntz or John Good know so they can plan the floor space needed for the cases. We are hoping to have a good show this year. It is a difficult time and our show will be a good place for people to come and relax and enjoy themselves and find some good bargains. We will need all kinds of help to set up and tear down and during the Show too. Please come and volunteer and spend some time at the Show. It will be appreciated and it is fun.

Keep in mind that this is a special year for the club – it is our 60th anniversary. It has been 60 years that we have been doing this and we will want to find a way to celebrate it. If you come up with some ideas let us know.

I'm anxious to see the new ESCONI web site that will have a whole new look soon. Diana Lord has given us a little peek at what she is working on and it looks really good. We'll let you know when to check it out for yourself.

Karen Nordquist, President

Be sure to visit our ESCONI WEBSITE www.esconi.org for the latest in updates.

Any information, articles or pictures for the newsletter or web site, contact John Good or Don Cronauer

Also, the renewal of your annual dues for 2009 (\$20) is now due. Please send the payment to our Membership Chairman."

Don't Forget

**ESCONI GEM, MINERAL AND FOSSIL SHOW
MARCH 14, 15 2008**

**BURPEE MUSEUM PALEOFEST
Saturday – Sunday 3/7 – 3/8**

FEBRUARY 2009 ESCONI EVENTS

General Meeting: 8:00pm Friday, February 13 College of DuPage K-131	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 by Cary Easterday, Northeastern University Visitors are welcome; refreshments will be served; parking and admission are free.
Mineral-Micromount 7:30 PM, February 14 College of DuPage K-131	Video Presentation: The Wonderful World of Agates held in July 2008 Bring minerals for the March Show display Case. Visitors are welcome; refreshments will be served
Paleontology 7:30 PM, February 21 College of DuPage K-131	Mazon Creek flora and fauna by Chris Cozert. Bring your Mazon Creek fossils! Visitors are welcome; refreshments will be served; parking and admission are free.
Archaeology 7:30 PM, February 28 College of DuPage K-131	Otzi, The Ice Man by Vickie and Lexie Kiamco. Visitors are welcome; refreshments will be served; parking and admission are free.
Junior	Subject to reorganization.
ESCONI Field Trips Mayslake Field Trip and Pizza Party Saturday, February 14, 2009 from 10:30 a.m. until approximately 1:00 p.m. as we explore the elegant Mayslake Peabody Estate, 1717 West 31st Street, Oak Brook, IL 60523.	Note the Mayslake Peabody Estate Tour info. 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, February 27 College of DuPage K-131	Board Meeting

**ESCONI GEM, MINERAL AND FOSSIL SHOW
 MARCH 14, 15 2008**

BURPEE MUSEUM PALEOFEST
Saturday – Sunday 3/7 – 3/8
10.00 am – 5.00 pm
Tickets go on sale February 1st!



E.S.C.O.N.I. GEM-MINERAL- FOSSIL SHOW



COLLEGE OF DUPAGE

Saturday March 14, 2009 10 A.M. to 5 P.M.
Sunday March 15, 2009 10 A.M. to 4 P.M.

FREE ADMISSION & PARKING

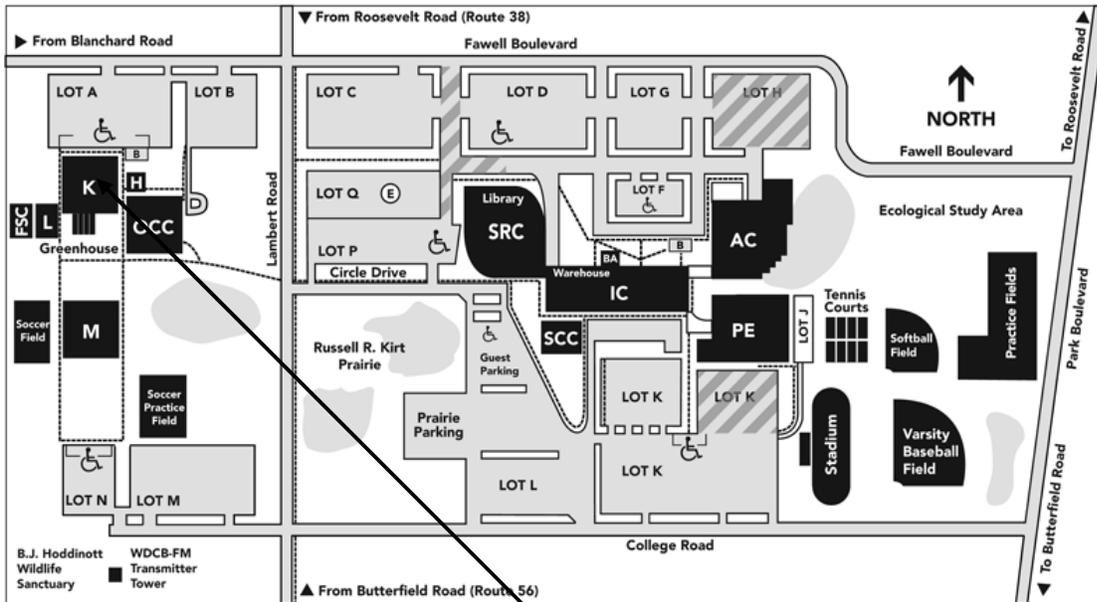
**Earth Science Club of Northern Illinois
WWW.ESCONI.ORG**

Dealers

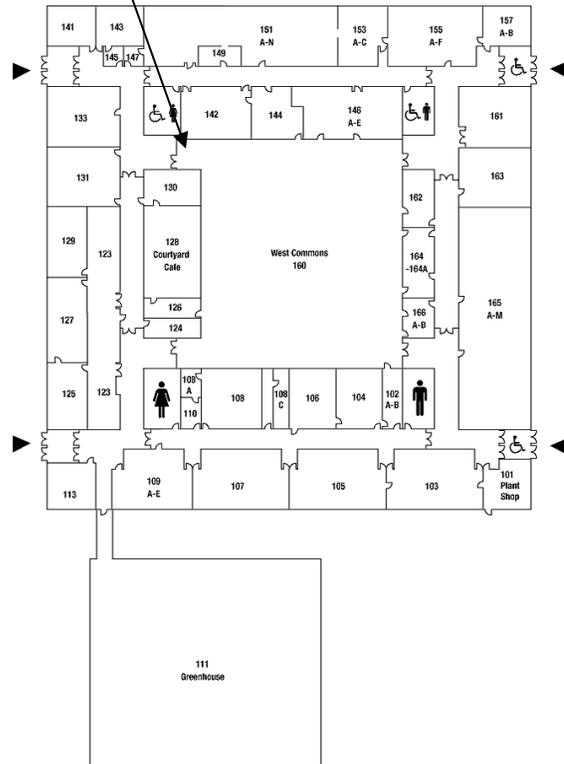
Rib River Fossils
Exclusive Inspiration
Mineral Miner
Southwest Treasures
Lavin's Gems and Jewelry

Attractions

Demonstrations
Light Refreshments
Book Sale
Kids Korner
Live & Silent Auction
Museum Exhibits
Door Prizes
Ginkgo Trees



College Of DuPage K Building



2009 DUES

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

Do you wonder whether or not you've paid your dues? Check your bulletin mailing label! The year that is printed on the label on the NAME LINE reflects the date for the most current year your dues have been paid. If the year on your label is 2008, you are paid up for the 2008 year. If the year on your label is 2009, you are paid up for the 2009 year.

Mayslake Field Trip and Pizza Party

Join us on Saturday, February 14, 2009 from 10:30 a.m. until approximately 1:00 p.m. as we explore the elegant Mayslake Peabody Estate, 1717 West 31st Street, Oak Brook, IL 60523. The estate, currently owned by the Forest Preserve District of DuPage County, 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. We will meet at the west door in front of the estate which is located just to the west of Route 83 on 31st Street in Oak Brook. There is plenty of free parking available.

We will then tour the 39-room mansion, a National Registry of Landmarks designated property, which is undergoing significant renovation. This historic house was designed by noted architect, Benjamin Marshall and is an outstanding example of the Tudor Revival style. A knowledgeable docent will share interesting stories with us about Mr. Peabody and his family from the infamous haunting of the estate to the mysterious secret staircase. Other tales will highlight a world record-breaking jumping horse and the history of Mr. Peabody's coal mining endeavors here in Illinois and elsewhere.

After the guided tour of the building, we will have an informal luncheon of Connie's pizza and refreshments in the estate's Dining Hall. It is also possible that we may have a short presentation during lunch on DuPage area fossils by one of the Forest Preserve District naturalists.

The cost for this field trip is \$20 and includes lunch. Admission to the property is included in this price, as are taxes and tip. Please remember that field trips are only open to current ESCONI members. There is no limit to the number of participants on this trip and members of all ages are welcome. (Note: There is no discount for Junior members.)

Reservations are being taken until January 30th. Please make out your check to "Joe Kubal" and send to him at 30W600 Sunrise Road, Naperville, IL 60563. If you need additional information, please contact Joe at 630-983-6159 (Telephone), SMKubal0712@aol.com (e-Mail) or by "snail mail" at the above address.



General Meeting

December 5, 2008



This was a fun meeting that started as our Holiday Party at Charlie's Ale House in Wheaton. Many members joined together for a nice dinner and gift exchange before the General Meeting at the College of DuPage. We did conduct some business there. Jim said that the Burpee Museum has again asked for our support of their PaleoFest in 2009. In the past we have sponsored them with support for some of their speakers. The group decided to again support them with \$1,000 in 2009. The group also elected unanimously our new slate of officers for 2009 and passed the gavel from our current President Jim Fairchild to our new President for 2009 Karen Nordquist. Past President John Good then presented Jim Fairchild and his wife Mary with the traditional gifts of silver trilobites – the bolo tie for Jim and the pin for Mary. Jim is sporting his new trilobite tie in the photo above. He thanked the Board members for their service for the past three years of his tenure. There was a gift exchange for those who had brought gifts and one of those who received a

special gift was Sheila Bergmann who is pictured with her gift – a drawing by our own Rob Sula – a special gift indeed! All in all it was a fun evening and a good dinner for all. We then moved to COD for the regular meeting.

President Jim Fairchild welcomed all to his final meeting of 2008. John Good mentioned that there will be a field trip to Mayslake Peabody Estate on February 14, 2009 with a tour and Connie's Pizza. He also mentioned the ESCONI Show on March 14 and 15, 2009. The Show Chairman is Mark Kuntz and he will need help with donations and during the show. We have display cases for use. It will be in the K Commons at COD. John mentioned that the Burpee Museum PaleoFest will be the first weekend in March in Rockford. Mineralogy will meet next weekend with their mineral contest and John Good's ice cream.

Diana Lord is working on the new ESCONI web site and it will have a new look next year. Jim mentioned that we have 4 new Honorary Members – Howard and Beverly Svoboda and Sheila and David Bergmann. He mentioned that we are pleased to see Bealis Giddings here from Wisconsin.



General Meeting of December 5, 2008, Continued

We also have Mazon Creek books for sale at the meetings at meeting sale prices of \$25 for the soft cover and \$40 for hard cover. Andy Jansen reminded everyone that he as Librarian had a great supply of books available for everyone to borrow in the ESCONI library. 1st Vice President Rob Sula mentioned that the speaker at the General Meeting for January will be Scott Williams from the Burpee Museum in Rockford. He then introduced the speaker for the evening who is **Scott Demel** from the Archaeology Department at the Field Museum.

Revealing Chicago's Remarkable History



Scott has worked on many Great Lakes' regional prehistoric sites. This includes a mastodon site, the Garrison site, ancient's fish weirs, a Kankakee site and many others. When looking at coastal archaeology he uses a 1910 map of Albert Scharf that shows many sites along the shore. 13,000 years ago the lake was 350 feet higher than today. Glacial uplift causes rebound after the glacier leaves, a phenomena that is still happening today. There are coastal zone settlement patterns based on vegetation. The ripening varies and even the deer move based upon it. Archaeologists have found clusters of campsites based on the nuts, for example. There are relict plant communities near the coast in pockets and there are changes in the vegetation from 12,000 YA to 1,000 YA. It changes from spruce to hickory to deciduous in the most recent times. The people would move as the lake level

changed because they would live on the edge of the lake.

The Garrison site was about 10,000 years old and they excavated for three seasons. They found a Late Paleo farmstead. They found a wetland, an old hickory forest. Wherever they found a darker stain it was because it was organic material. They found fire cracked rock and projectile points and they were diagnostic from paleo Indians dated to 2000 YA.

At a Sturgeon Bay site they found ancient fish weirs, fish traps along the near shore near a stream inlet where fish would go to spawn.

In DuPage County they have a mastodon dig site that is 9,000-12,000 years old. A mastodon tooth was found by a plow and they have now set up a camp with the Field Museum to study the site and see what else they can find there in 2006-7. In year 1 they found 8% of one tusk and some bone and relics. In year 2 they found a black spruce tree that was 3 meters long, some glacial gravel, 4 flecks of chert (man-made) and 2 black spruce cones.

They also rediscover things that are in museum collections. In 2007 they found 3 Clovis points in the Field Museum collection and they are now in the Ancient America Exhibit.

They have also found artifacts when there was construction done at various sites around town. One recent such event was the building of the CRC or underground storage facility at the Field Museum. Many artifacts were found and some were displayed for a time at the Field.

General Meeting of December 5, 2008, Continued

Scott does many programs with school children in the area to teach and encourage them in archaeology. One such project involves a farmstead called the Tetter property which is 20 acres. With groups of students they have surveyed the property and found many items including a jaw harp, buttons, ordinance, farm objects, buckles, hooks, prehistoric material and stem based woodland projectile points.

With DePaul University he worked a site on the Field Museum land which is on land fill and they dug up many interesting things. Included were stone ware, ink bottles, and many other items. They were also able to map where many of the items came from including hotels, restaurants, bars, printing shops, offices, households, stables, spoil piles, etc.

In China Town he has worked with the Chinese American Museum on several excavations where they have investigated debris from different groups that have lived there including the German, the Swedish, etc. You can actually see the neighborhood change based on the things found – the dolls, bullet casings, food stuffs; chopping instead of sawing, etc.

In the Pullman State Historic site you see industrial archaeology. The old railroad system was used to bring in the steam engine.

He is also involved in underwater archaeology and shipwreck investigation. He studies samples for radiocarbon dating. In one interesting case he was asked to study some timbers found to see if it belonged to the famous ship Griffin that sunk near Michigan in 1679.

He has studied Camp Douglas (1861-1865) and what's left of the prison. It was used to train the Union army and was then a Confederate prison. It is now Lake Meadow Park and there is little sign left now. He is studying some sign of a wall and buildings that were there. And a French fort in Palos. And a Rogers Park stage coach stop.

He has big plans for students in 2010 with a large Forest Preserve Program. We were all very impressed with all the programs and work that he was doing in the Chicago area.

The meeting was adjourned for more discussion and refreshments.

Respectfully submitted, Karen Nordquist, Recording Secretary

SALT By Lexie Kiamco

Salt has 14,000 known uses. The adult human body contains 2 lbs. of salt. You have to acquire it through eating it. Salt was used for storage. All meat was packaged in salt to preserve it from spoiling. Salt prevents the growth of bacteria. In early times salt was scarce and hard to make so it was considered very valuable; at times it was traded at the price of gold. Those who controlled the salt trade routes wielded vast economic power. Old salt trade routes became major European roads. The Roman soldiers were sometimes paid in salt.

February – Amethyst

(Alternate gem: Onyx

By LaVergne R. Novak



The amethyst has one of the most interesting histories of all the gemstones—symbol of royalty and favored by clergy. From the time when Moses was commanded to set an amethyst in Aaron's breastplate, this lovely stone was adopted by high-ranking officials and later by Christian clergy. Roman Catholics call it the "Bishop's Stone" and frequently recite their rosaries while fingering amethyst beads. Since the 13th Century every Pope has worn a ring of amethyst, called the "Ring of the Fisherman" because of the depiction carved on the stone of St. Peter casting a net into the sea. In ancient Egypt Cleopatra wore a signet ring set with a brilliant amethyst. This gemstone became so closely identified with royalty that the deepest, softest color has become known as "royal purple."

What is it that gives amethyst this special aura and makes it so desirable? Certainly its beautiful colors, ranging from pale violet to reddish purple to very deep purple, are part of the mystique. Primarily, though, it was its rarity in early times that made it much coveted and preferred even over diamonds. Until the discovery in Brazil of great quantities of excellent quality amethyst, the finest stones had come from the Ural Mountains in Siberia. Those mines were closed under Communist rule, however, and Brazil became the primary source, which it remains today. Brazilian mines have yielded so much amethyst that it is now easily affordable.

Notwithstanding the royal and religious connotations of the amethyst, it is interesting to note that the word "amethyst" comes from the Greek *amethystos*, meaning "without drunkenness." A strange stone to be adopted by the heads of Church and State? Not if we consider all the powers attributed to amethyst, one of which was to protect the wearer from the effects of too much wine. Early Egyptians considered the amethyst to be a power for good and buried their pharaohs with it. In other cultures the amethyst was a shield against gout, sorcery, and even hailstorms. It could sharpen the wits and confer sincerity and contentment. One of its greatest attributes was its ability to change color in the presence of poisons. It was often held over food by high officials to guard against poisoning attempts. In fact, intense heat will change an amethyst's color to yellow or brown, and some amethysts even lose their color in daylight.

Finally, how did this common quartz stone, which forms in six-sided crystals, first acquire the beautiful colors which make it so desirable? Scientists claim it is from the presence of manganese; but legend attributes a different explanation to Aristotle: One day as Bacchus, the god of wine, walked down a lonely path, he encountered Amethyst, a lovely young maiden of whom he was greatly enamored, but who wanted nothing to do with him. Frightened at this unexpected meeting, Amethyst pleaded with the goddess Diana to protect her from Bacchus's advances. Diana, heeding her plea, instantly transformed Amethyst into a sparkling white statue. Frustrated and angry, Bacchus poured a flask of grape wine over the statue, forever imparting to amethyst the color of the grape.

(This is a birthstone series. Text was first printed by the Lizzadro Museum. Picture was added.)

Thunder Egg Collecting Adventure Around Deming, New Mexico

Jeffrey Anderson, edited by Kathy Dedina

Jeff extended a special thanks to Paul "Geode Kid" Colburn and his partners who gave Jeff information and opportunities to dig at thunder egg site around Deming. Paul has been hunting thunder eggs for decades. He gave Jeff advice on where to dig and permission to dig on his claims. Some of the sites mentioned in this article are private property.

Knowledge of the geology of New Mexico can enhance your collecting experience. Most mountains in New Mexico have a north south orientation. The earth's crust has been stretching, breaking into blocks and growing at the rate of 1mm per year to form the Rio Grande Rift System. The rift system produced the fractures for lava to escape to the surface. This is evident in the many mesa forming basalt and rhyolite beds along the rift valley. Such intrusions are responsible for the fluorite mines near Blanchard, the zinc mines near Magdalena and the agate deposits of southern New Mexico. The area around Deming is the northernmost portion of the Chihuahuahua desert. Small cacti and thorny bushes abound. Temperatures can be very hot in the daytime and cold at night. Plenty of water and supplies are needed to explore in the area. Autumn and Spring are the best collecting seasons. High winds can cause dust storms that severely limit visibility. Careful scanning of the ground will prevent stepping on small cacti and injuring them.

We begin our adventure in the Florida Mountains to the southeast of Deming. We stop at Rockhound State Park at Little Florida Mountain. This is one park that encourages rock collecting. Hard rhyolite beds occur in a step like pattern. The crust was stretching causing the blocks of rocks to break up and slide down against each other in the step like pattern. The rocks weathered and filled in the gaps between the blocks. The park is mainly rhyolite flow beds and basalt. What is the difference between the two rock types? Basalt is a darker and heavier type of rock formed by very fluid lavas like those of the Hawaiian Islands. Rhyolites are light colored and lighter formed by slow moving lava like at Mt St. Helen.

Many places around Deming are rhyolitic lava flows that overlap each other to form mixtures of lensed and continuous beds. The best thunder eggs are found in light colored beds of weathered perlite. Perlite is a hydrated glasslike rock that decomposes into clay layers. It is a half hour walk to the collecting site. The thunder eggs are found in the perlite and need to be removed with a hammer and chisel. It took one hour to remove one thunder egg. Typical thunder eggs from the park are found with layers of grayish agate and white opal. I found some thunder eggs with colorful agate, opal and jasper. I have the impression that these are rare.

What are thunder eggs? The name was given by the Native Americans to ball-like nodules with ridges that they believed the fire gods used as ammunition. Thunder eggs were first found in Oregon. The name is used for any nodules with rhyolite shells from rhyolite beds around the world. The technical name for thunder eggs is lithospysae. Thunder eggs were formed from banded balls of cristobalite growing in the molten rhyolite lavas before having the cavities forced open by the hot gases just like balloons. You can see how the cavities open into star-like or box-like cavities. Any smaller and nearby balls would get squashed against a larger thunder egg as its cavity opens up. Once the lava has hardened, the perlite would weather to provide the solutions needed to silicify the thunder eggs and fill their cavities with agate, jasper, opal or all of the three.

Thunder Egg Collecting Adventure, Continued

The next stop is the Never Again Mine which is a private claim of Paul Colburn. Many thunder eggs from here contain flat layers of agate and opal formed from the solution setting at the bottom. I always mark the tops before digging out the thunder eggs. This way I know how to cut them. Faulting here messes up the cutting orientation. The name comes from Paul saying "never again" after making the long trek to the collecting site, rolling them down the hill and retrieving them from inconvenient places. After cutting the thunder eggs Paul decided it was worth coming back just as I have come back. This mine is the best source of "Tillage" thunder eggs showing agate and opal layer not parallel to each other. That happens when the formation of agate and opal was interrupted by a shift in the fault blocks. Most "Tillage" thunder eggs show evidence of two tectonic events although some have been found with three event evidence.

The South Canyon of the Little Florida Mountains has not been a productive area for me although it was shown on the travel channel. The next stop is the Sugar Bowl Mine opened by Paul but later abandoned because it was unproductive. The mine is questionably accessible by truck. From the mine you can see into Texas and Mexico. Here the thunder eggs occur in seams. The one I worked on last March pinched out. One thunder egg had a geode center with very fine quartz crystals that sparkled like sugar. Thunder eggs with white to gray to black contrasting bands are more typical. I have found a few with rare sagenite inclusions.

Just a walk away from the Sugar Bowl Mine is the Sky Blue Mine also owned by Paul. Like the Sugar Bowl Mine, it is a small deposit. I did find a few thunder eggs left after mining by Paul and his partner. The best thing is the tight banding of the agate which may show some shading. A few thunder eggs had tinges of purple and blue .or manganese colored calcite blades. Several other areas around the Little Florida Mountains show signs of thunder eggs.

We move on to Hermanas west of Columbia near the Mexican border. Here the mountains strike northwest to southeast. Geologists first thought they were a series of faulted blocks. The thunder egg bearing rhyolite .and perlite beds have been faulted 130 degrees. That shows a compression event in the area before the rifting occurred.

Basalt beds overcap the rhyolite and perlite. The basalt is a major source of minerals for coloring the agate. Some of the area is state owned while some is private or BLM land. White spots are spots with weathered perlite beds. My first stop is the Torpedo Beds first opened by a mineral dealers looking for scepter quartz. Thunder eggs from here have very thin shells that easily weather away leaving agate cores. Some thunder eggs are shaped like a torpedo. This happens when the thunder egg in the molten state is stretched by the flow of lava. Most thunder eggs found here are the geode type with quartz and sometimes amethyst centers. This is the best place for small amethyst geodes. The agates are small but some of the most colorful I have collected with a spectrum of red, purple, pink, white, brown and black.

To the north of the Torpedo Beds is the Tavenier Mine which was operated in the 1960's for thunder eggs on what was state land. It became too expensive to keep open. Many small dud thunder eggs are found here. The best finds were dark colored agates with some colors of glowing embers. I found a few tillage agates.

The Lindburgs also opened a number of mines in the area. The Baker Egg Mine named for the Baker Ranch was opened by the Lindburgs but transferred to Paul Colburn in the 1970's. It is the biggest thunder egg mine in the area. There are at least four major thunder egg deposits within the thousands of acres of the Baker ranch. The Baker Egg Mine is private and posted.

Thunder Egg Collecting Adventure, Continued

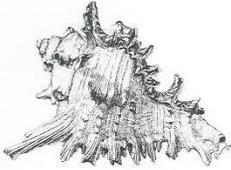
I found some collectors poking around without written permission. The Lindburgs had trouble finding the layers of better thunder eggs when they bulldozed the area. The first ones found were very small or with narrow agate cavities. When Paul stated digging he found that the best thunder eggs were on the bottom. The size of the cavities in thunder eggs is related to the depth and pressure of the lava flow. The deeper the thunder eggs go, the higher the pressure and the smaller the cavity. Here the best were on the bottom because the thunder egg bed had been overturned upside down. Deep digging hit the right bed. Faults run through the stratum making it hard to follow stratum. The faults may have funneled solutions to fill the cavities with agate. The best agates seem to be concentrated around faults and fissures.

The first step is to remove the junk layers off the thunder egg stratum. We look for fat thunder eggs with bubbly surfaces. We break a chip looking for the contents. If an area is promising we bring in the backhoe. When I work there we divide the find into two buckets one for me and one for Paul. A toss of the coin decides which bucket I get to keep. We collect the thunder eggs as the rock is slowly dropped from the backhoe. The remaining rock is dumped somewhere else or used to refill trenches. We remove any good ones we spot in the rock wall. The geode type thunder eggs tend to break easily. About 70% of thunder eggs are junk such as collapsed thunder eggs or hollow ones filled with white zeolite mineral. My salary for a week long expedition is three buckets of good graded thunder eggs. About 35% of Baker Egg Mine thunder eggs we cut are any good with most being the geode type mostly quartz lined. Some are found with calcite crystals. About 1 in 10 geodes has some statitilic structures lined with quartz or amethyst. These are hard to cut without ruining the structure. We have our share of miscut specimens. Luckily finds are the thunder eggs with good color. Blue and green are the rarest colors. We suspect nickel impurities are coloring them. Pink is also a rare color. The usual colors are the red, black and white combination. Many of the Baker Egg Mine thunder eggs contain some needle-like inclusions. The blade like crystals may be tridymite, a polymer of quartz formed from the hot gases. Others have metallic needles and agate replacing zeolites. I am not sure of the future of Baker Egg Mine. It seems to be starting to run dry.

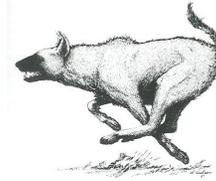
There are many other places where thunder eggs or fragments have been found. While searching a flash of red caught my eye. It turned out to be an opal with a play of color. I followed the trail of common opal and found a few pieces of fire opal. I dug at one place and found some pieces of blue opal. Paul thinks I may have rediscovered Tavenier's lost opal mine. Tavenier had once shown Paul a bottle of opal but would not reveal the source. When I went back the site had been trashed. No machinery can be used because the site is on state land. I also found a site I call JA's Little Wash. The thunder eggs are similar to Baker Egg Mine and Tavenier Mine. The first agate I found was pink. But what makes the site special is the presence of iris agate in a thunder egg. The rainbow effect is caused by a specific orientation of agate fiber-like microcrystals acting like prisms. I find 1 iris agate in 50 graded thunder eggs. The site is on state land. Again no machinery can be used in digging. The Orange Star site is another of my recent finds. If it proves to be a good site I may file a claim on it, I also want to look near Silver city and Truth or Consequences and Luna.

There are more than just thunder eggs around Deming. Fossils, fluorite, copper, quartz, zeolites and copper minerals have all been found in the area. Information can be obtained from rock shops in Deming and Silver City. The Luna Mimbres Museum in Deming has a collection of thunder eggs and agates from 150 worldwide locations donated by the Paul Colburn "the Geode Kid."

Jeff's website is Dwarves' Earth Treasures. He sells agates from many locations and information on agates and thunder eggs and pictures of his own collection.

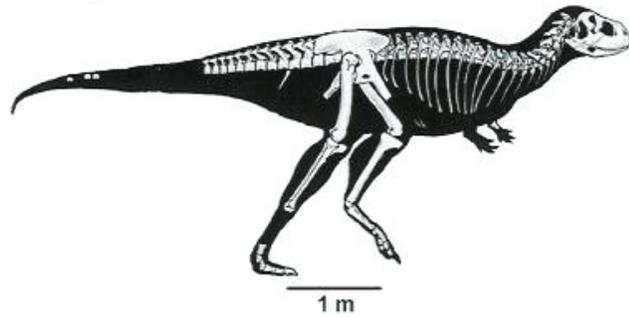


Karen's Komments



New Abelisaurid Dinosaur from Patagonia – *Skorpiovenator*

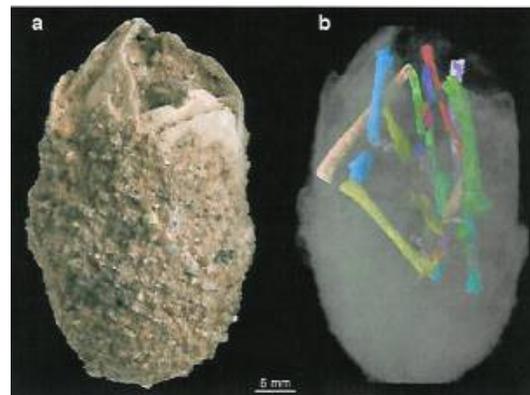
The holotype of this new species is an almost complete articulated skeleton including the skull and most of the postcranial bones (the bones found are pictured at left). It was found on a farm in Neuquen Province in NW Patagonia, Argentina and is dated to the Late Cretaceous. Other theropod dinosaurs that have come from this formation are the carcharodontosaurid *Mapusaurus roseae*, and the abelisaurid *Ilokekesia aquadagrandensis*.



The new fossil has been named *Skorpiovenator bustingorryi* from the Latin “skorprios” for scorpion and “venator” for hunter because of the abundance of scorpions near the excavation. The species name honors the late Manuel Bustingorry who owned the farm where the specimen was found. The authors have placed it into a new clade they have named Brachyrostra within Carnotaurine and Abelisauridae. It is estimated to have been about 6 m (19.7 ft) long based on the 4.35 m (14.3 ft.) of preserved fossil to the 12th caudal vertebra. The skull is similar to other abelisaurids with ridges, furrows and tubercles. The prominences differ in that there is a single frontal prominence in *Majungasaurus*, a pair of frontal horns in *Carnotaurus* and dorsally inflated postorbital bones in *Skorpiovenator*. It has a short and deep skull being a little shorter and deeper than that of *Majungasaurus* and *Abelisaurus*. It is similar to the skull of *Carnotaurus*. It has 19 maxillary teeth which is more than any other known abelisaurid. The teeth have enamel wrinkles next to the marginal serrations like carcharodontosaurid allosauroids. (Canale, Novas et al in **Naturwissenschaften** on line 12/5/08)

Neoceratopsian Found Within Eggshell In Mongolia

An isolated egg was found in the Khugenetslavkant locality of the eastern Gobi Desert of Mongolia. It has been dated to the Late Cretaceous in age and the primary fauna of the area was the neoceratopsian *Yamaceratops dorn gobiensis*. It is a small egg that measures about 28.5 cubic cm in volume and about 4.75 cm (1.9 in.) long and 2.23 cm (.9 in.) wide and is almost complete except it is broken at one end. Because it is fragile it was not prepared but was scanned using high resolution CRT to see the specimen within (the photo shows the egg on the left and the digital scan on the right showing the bones).



Karen's Komments, Continued

Much of the skeleton is identifiable and it was determined that although many of the elements were in an advanced state of ossification they were relatively small and therefore not ready to hatch yet. The braincase is similar to that of juveniles of *Protoceratops* and *Yamaceratops*. It does have a prementary bone and a straight quadrate shaft that places it in Ornithischia and Neoceratopsia respectively. It also has a fourth trochanter on the midshaft of the femur supporting its position in Ornithischia. The fact that it is reduced suggests that it is a neoceratopsian. The eggshell also was studied and found to consist of three layers which differed from eggshell previously attributed to protoceratopsians (two-layered). This is the first case of an eggshell/embryo association for this dinosaur clade and so it is important. (Balanoff, Norell et al in **Naturwissenschaften** Vol. 95 p.493; 2008)

New Large Pterosaur Found in Brazil – *Lacusovagus*



This very large pterosaur lived in Brazil some 115 MYA. Its estimated wingspan was 16.4 feet and it would have stood about 39 inches tall at the shoulder. The fossil consists of a partial skull found in the Nova Olinda Member of the Crato Formation which is Lower Cretaceous in Brazil. It has no teeth in its jaws and has features that suggest that it belongs to the azhdarchoid taxa. It has been named *Lacusovagus magnificens* meaning lake wanderer because it was found in the remains of a lake. It does have a wide skull which may indicate that it favored large prey. It shares skull features with pterosaurs in China

like *Chaoyangopterus* but is much 55 -66% bigger, making it the largest of this type of pterosaur. (Witton et al in **Paleontology** Vol. 51/6 2008)

Ancient 312 MY old Insect Imprint Found

A fossil hunter Richard Knecht has been hunting in the rocks near a shopping center in North Attleboro Massachusetts looking for fossils when he found the imprint that is pictured at left. It is about three inches long and his professor, paleontologist Jake Brenner of Tufts University hope that it will help yield insight into the large insects that lived 312 MYA. The body is fairly well preserved and is segmented with six projections that mark the legs of the animal. One of the legs may have moved once or twice and left those impressions. It looks like a dragonfly but is probably related to the mayfly. The fossilized remains of a wing have been found in the vicinity also. They have also found an amphibian in the area at an earlier time. There are not a lot of fossils found in the New England area so they are feeling very fortunate. (Emery of **Providence Journal** 11/29/08)



Karen Nordquist, Paleontology

Local Calendar of Events



BURPEE MUSEUM PALEOFEST
Saturday – Sunday 3/7 – 3/8
10.00 am – 5.00 pm
Tickets go on sale February 1st!

Burpee's 11th annual dinosaur & fossil festival returns March 7 & 8, 2009. Keynote speaker Dr. Robert T. Bakker returns to Rockford to present as only Dr. Bakker can. He will be speaking about his latest discoveries and research at our annual Dinner Lecture Saturday night March 7th.

Speakers in the Lecture Series include: Dr. Christopher Brochu, Nancy Englehart-Moore, Dr. Scott Foss, Dr. John Pojeta, Dr. Robert Reisz, Mike Triebold, and Holly Woodward.

Family Workshops and DinoBlast Activities start at 11am both days.

PaleoFest admission is \$6 per person, Burpee Members are FREE. Coupons and passes will not be honored.

LIZZADRO MUSEUM Events

February 7 “Dinosaur Discoveries”

Children become dinosaur detectives with “Paleontologist Illinois Bones” to learn about the world of dinosaurs. The discovery of fossils 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: \$5 per person, Museum Members \$4. Reservations Recommended

February 21 “Rocks & Minerals of Illinois”

Learn about basic Illinois geology and useful rocks and minerals found in Illinois. Includes hands-on specimens, identification activities and fossil hunt. Great instructional information for teachers, Science Olympics and Scout groups.

Lecture/Activity - Ages 8 yrs. to Adult

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

Admission: \$5. per person, Museum Members \$3. Reservations Required: (630) 833-1616

Local Shows

South Suburban Earth Science Club (SSESC) annual Silent Auction

Date: Sunday, February 8th,

Time: 1:00 to 4:00 p.m.

Place: Freedom Hall, 410 Lakewood Blvd., Park Forest, IL.

Come early for the best deals. This is a good opportunity to meet club members, ask questions and purchase items at a great price!

Donated items include, but not limited to: gemstones, minerals, fossils, crystals, findings, slabs, jewelry, lapidary supplies, beads, books and magazines.

Orland Park Rock, Fossil, Gem & Mineral Show

Saturday 9 a.m.—4 p.m Admission \$2 (kids 12 and under free)

Orland Park Civic Center (Southwest Entrance)

14750 Ravina

Orland Park, IL

Jewelry, Fossils, Minerals, Beads and Demonstrations

Mineral and Fossil Identification

Des Plaines, IL 44th Annual Show, Des Plaines Valley Geological Society,

APRIL 18-19, 2009

Sat 9:30 a.m. - 5 p.m.; Sun. 10 a.m. - 4 p.m.

Des Plaines Park District Leisure Center, 2222 Birch St. Jewelry, gem, fossil, rock and mineral dealers. Live lapidary arts demonstrations, silent auction, educational exhibits, kids' room, raffles and door prizes. Contact Lois Zima at (847) 298-4653 or Jeanine N. Mielecki, jayne9@aol.com.

College of Dupage Continuing Education Jewelry Courses

Wire Wrap 1

Brings your treasures and use a variety of tecyhniques to intertwine wire around your own crystals, smooth pebbles, beads, precious sentimental or found objects to create jewelry.

Tools and gold-filled and sterling wire are provided. Beginners welcome. \$115.

Code #34303

Glen Ellyn Campus

Tuesday, April 7 to 14, 7 to 9:50 PM

Local Classes of the Lapidary Arts

The Elmhurst Park District in cooperation with the West Suburban Lapidary Club is presenting a program of instruction in the Lapidary Arts. Specifically, classes are being offered in the areas of bead stringing, the basics of wirewrapping, the cutting and polishing of stones, and silversmithing. These classes are offered at the Crestview Park Recreation Building in Elmhurst. Registration can be made through the Elmhurst Park District (630-993-8900) and information is available through their web site.

The following is a summary of the classes and schedule (the classes are open for those 16 and up, and the cited costs are for non-residents, resident fees are lower):

Basic Stringing: This class is the introduction to necklace/bracelet design, and bead stringing. Learn to use flexible wire as well as crimp beads to complete a single strand necklace or bracelet. Stringing materials will be included. Findings and beads are extra. Thursdays, 2/12 & 2/19, 7—9 pm, \$40 .

Basic Wirewrapping - Jewelry: Learn to create beautiful, custom jewelry using wirewrap techniques. This method uses hand tools to tightly bind wire together - no solder, glue, fire, machinery or dangerous chemicals. You will learn to create rings, chains, bracelets, earrings, etc. Supplies need to be purchased. Wednesdays, 2/4—4/8, 7—9 pm, \$99.

Beaded Earrings: Use ear wires, head pins, and eye pins to make 2 to 3 pairs of earrings. Learn to make both a simple loop and a wrapped loop for a professional look and secure finish. Findings and beads are extra - available for purchase or bring your own. Thursday, 3/5, 7—9 pm, \$20.

Cutting And Polishing Stones : This class is designed for all levels of experience. Beginners will learn to cut and polish various shapes and fit the stone into a jewelry mounting. Returning students who have satisfactorily completed the beginning course requirements may work on other projects with the approval of the instructors. Some material will be available for purchase. The fee includes a protective apron and stones. Tuesdays, 3/3—5/5, 7—9 pm, \$113.

Multi Strand Beaded Necklace: Create a multi strand necklace incorporating seed beads. Findings and beads are extra - available for purchase or bring your own. Pre-requisite: Basic Stringing. Thursday, 3/19, 7—9 pm, \$30.

Silversmithing: The beginner silversmith learns the techniques of working with sterling silver including chasing, sawing, filing, soldering and polishing. Each student has the opportunity to complete a bracelet, band ring, pair of earrings or pendant. The experienced silversmith (after completing two projects to the satisfaction of the instructor) may select projects that would involve the techniques of piercing, fusing, chasing, repose, etc. Silver and stones must be purchased, as needed, for each project at an additional fee. Students may be permitted to repeat classes provided their activity is consistent with regular class routine. Students must furnish their own basic tools or purchase them as an additional registration for the class. Mondays, 2/2—4/6, 7—9 pm, \$113.

MAPS FOSSIL EXPO XXX

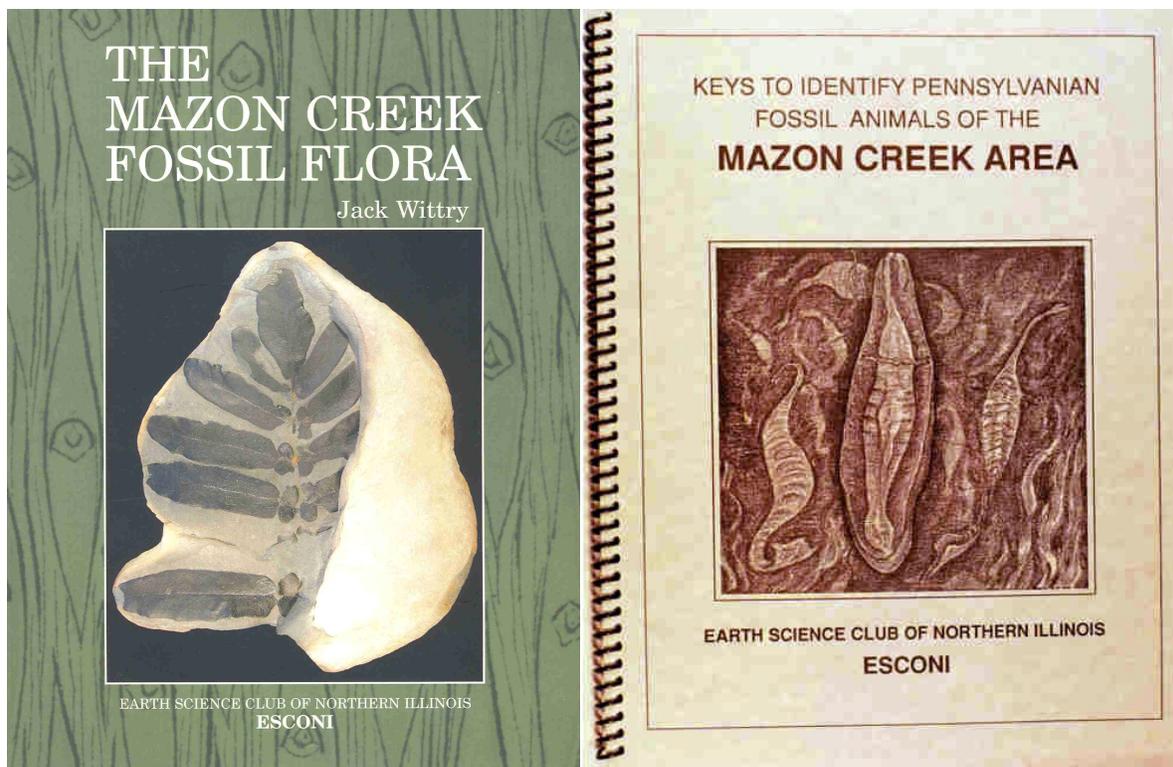
April 4-6, 2008

Western Illinois University

Macomb, Illinois

Fossil Dealers, Silent Auction, Live Auction, Displays and Lectures
This year's theme is Crinoids.

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	GENR'L MGTS.	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	
Septem- ber	11	12	19	26	25	
October	9	10	17	24	23	
Novem- ber	13	14	21	28	Dec 4	
Decem- ber	TBD	12	X	X	X	
DAY	2 nd FRI	2 nd SAT	3 rd SAT	4 th SAT	4 th FRI	2 nd 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.

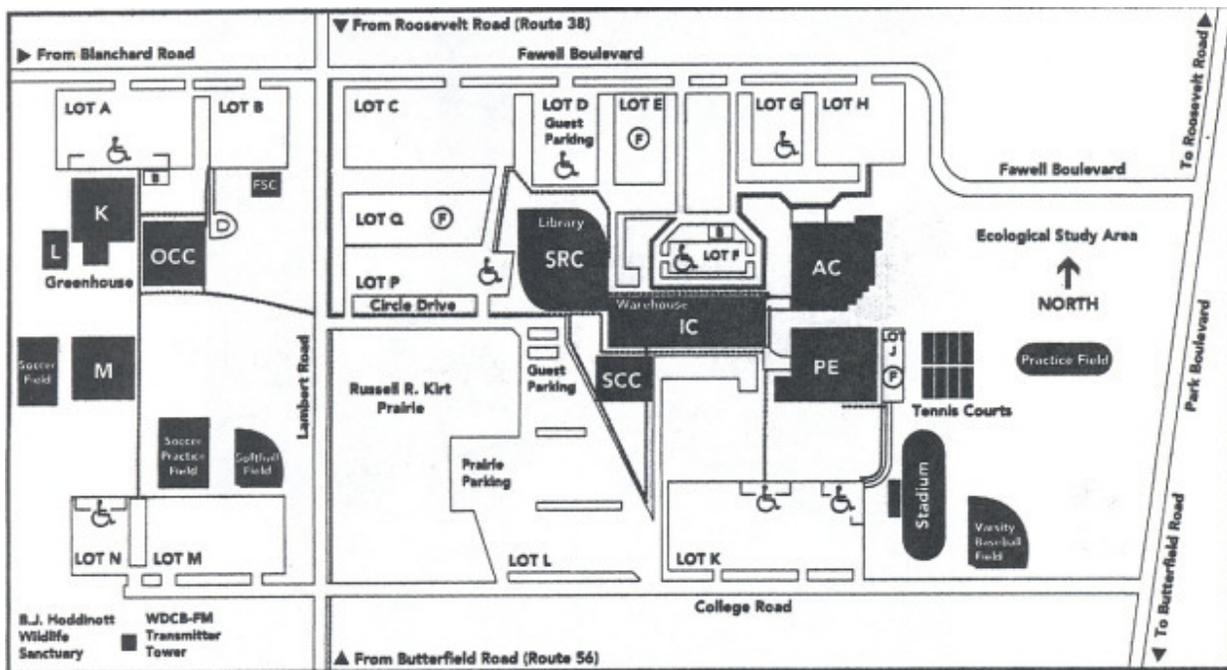
No scheduled meetings for Lapidary; contact Don Cronauer for information. (Lapidary may meet in Room #162, Arts Center if there is sufficient interest)

**EARTH SCIENCE CLUB OF NORTHERN ILLINOIS
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SEND EXCHANGE BULLETINS TO
Don Cronauer; 6S180 Cape Road; Naperville, IL 60540