

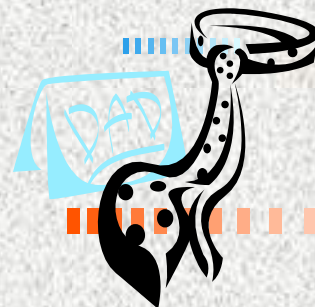


FOSSIL CLUB OF LEE COUNTY

JUNE 2012



Message from the President



Greetings to all members and friends and a warm welcome to our new members. We are always pleased to have new members and we invite you to participate in all the activities. Please take time to visit the Club's fossil exhibits at the Imaginarium and at the Calusa Nature Center here in Ft. Myers. Also visit our fossil library at the Iona House when you come to the monthly meetings.

At our last meeting we voted to make donations to the University of Florida, the Calusa Nature Center, and the University of South Florida. The donations were mailed early this month and we already received a response from USF thanking us for supporting their research projects in the geology and paleontology department. Thanks to everyone in the club for helping to raise money so we can promote the science of paleontology and make donations to worthy organizations in our community.

We want to thank Dr. Bruce MacFadden again for speaking at our May meeting. We

appreciate the excellence he brings to the University of Florida Museum of Natural History.

We have speakers lined up for the July, August and September meetings. If anyone has suggestions for speakers for October or November or would like to be a speaker, please let us know.

Our June program includes an invitation to everyone to bring in fossils for exhibiting, selling or trading, a Show and Tell of some of your best finds/acquisitions, Fossil Identification by local experts, a chance to visit the Club Library, club merchandise for sale, our monthly raffle, refreshments, and an opportunity to socialize. Sounds great!

I look forward to seeing everyone at the June 21st meeting at the Iona House.

Best regards Bill

Next Meeting

FCOLC next meeting is on Thursday June 21st at the Iona House, Calusa Nature Center. Meeting starts at 7 PM.

WELCOME NEW MEMBERS

Rick Batt
Robin Harris

OFFICERS

Bill Shaver, President, 239-834-0694
billshaverpeaceriver@hotmail.com
Michael Siciliano, Vice President,
239-980-1406
Pam Plummer, Treasurer, 239-246-5993
Kathy Pawlowski, Secretary, 239-267-6130

DIRECTORS

Dean Hart, 941-979-8217
Gunther Lobish, 941-268-7506
Charles O'Connor, 239-246-5526
Joshua Frank, 239-248-5094
Ray Seguin, 239-939-1921

COMMITTEES

Cherie Neat, Newsletter
Curt Klug, Web Master
Bill Shaver, Speakers
Louis Stieffel, Auctioneer
Kathy Pawlowski, Club Merchandise
Pam Plummer, Club Badges
Pam Plummer, Membership
Joshua Frank, Refreshments
Dean Hart, Refreshments co-chairman
Gunther Lobish, Pit Trips
Michael Siciliano, Raffle and Dive Trips
Coby Pawlowski, Youth Activities Director
Hollie Tiner, Club Photographer
Gunther Lobish, Invertebrate Education
Louis Stieffel, Vertebrate Education

MINUTES OF MAY MEETING THE FOSSIL CLUB OF LEE COUNTY

Date: May 17th, 2012
Place: Iona House, Calusa Nature Center
Attendance: 53
Presided by: Bill Shaver, President

Bill opened the meeting and announced that the program for the June meeting is Swap and Shop, Show and Tell, Fossil ID, and raffle.

Dr. Bruce MacFadden from the University of Florida gave a presentation entitled Fossils in the Clouds.

Charles (Chuck) Ferber got a round of applause for bringing in some great refreshments.

The Club voted to make donations to the University of Florida, University of South Florida, and to the Calusa Nature Center.

Show and Tell was done by: Gunther Lobish, Louis Stieffel, Mike Siciliano, Linda Warner, Jack Boyce, and Dean Hart.

REFRESHMENTS FOR MAY

Volunteers to do refreshments for June are none other than our co-chairmen of the Refreshments Committee, namely Dean Hart and Joshua Frank. Thanks so much for caring about your Club. Joshua will have a sign-up sheet at the June meeting asking for volunteers for the remaining months of 2012. Please support your club and sign up, but hurry as you may not get your first choice if you hesitate!

June 17th



SCHEDULE OF EVENTS AND SPEAKERS

June 14th	Flag Day
June 21st	FCOLC Monthly Meeting @Iona House
June 21st	No Speaker; Members Exhibit/Show & Tell/Buy/Sell/Swap Meet
July 19th	FCOLC Monthly Meeting @ Iona House
July 19th	Dr. Robin Batt—Talk about Cretaceous Mollusks
August 16th	FCOLC Monthly Meeting @ Iona House
August 16th	Speaker: Ian Bartoszek, Florida Tortoise/Turtle
September	Speaker Dr. Brian Andres, USF Professor

Websites & Locations of Interest

Fossil Club of Lee County: www.fcolc.com

Museum of Natural History @ Gainesville
www.flmnh.ufl.edu/

Florida Vertebrate Fossil Permit <http://flmnh.ufl.edu/natsci/vertpaleo/vppermit.htm>

Southwest Florida Fossil Club
www.southwestfloridafossilclub.com

Orlando Fossil Club
www.floridafossilhunters.com

PEACE RIVER Water Levels
www.canoeoutpost.com

Mark Renz's Fossil Expeditions
www.fossilx@earthlink.net

Smithsonian Natural History Museum
www.mnh.si.edu

Florida Fossil Clubs
www.fossil-treasures-of-florida.com

Cape Coral Friends of Wildlife Burrowing Owls
www.ccfriendsofwildlife.org

Calusa Nature Center and Planetarium 3450 Ortiz Av, Fort Myers Tel 239-275-3435
www.calusanature.com

Imaginarium 2000 Cranford Ave, Fort Myers
www.i-sci.org

Southwest Florida Museum of History
2031 Jackson St., Fort Myers
www.MUSEUMofHISTORY.org

The Bailey-Matthews Shell Museum, 3075 Sanibel-Captiva Rd, Sanibel, FL www.shellmuseum.org

Randell Research Center PO Box 608, Pineland, FL
www.flmnh.ufl.edu/RRC/

Cracker Museum at Pioneer Park in Zolfo Springs, FL Tel 863.735.0119

Lost in Time, 4719 69th Street, N. St Petersburg, FL 33709, Tel. 727-541-2567 Owner Brian Evensen

Tampa Bay Fossil Club
Www.tampabayfossilclub.com

Picking Up Isolated Native American Artifacts
<http://dhr.dos.state.fl.us/archaeology/> underwater/ finds

REQUESTS FOR SPEAKERS

The Fossil Club often gets requests from schools and summer camps asking if we can give a talk on fossils.

Normally there is no compensation for your efforts.

The reward is knowing that you and your club did a good thing for the young people in your community.

If you are willing to give a talk or assist in a presentation, please contact Bill Shaver.

2012 CLUB ELECTIONS

In accordance with club by-laws, elections were held in April with persons elected taking office on the first day of May. This year, all club officers and directors volunteered to stay on for another year and no other members expressed their desire to seek office. The club membership in attendance at the April meeting voted unanimously to seat all incumbents.

There was one change in positions on the executive committee; Ray Seguin, who served as Treasurer for several years resigned and will serve as a Director. Pam Plummer, who was serving as a Director was voted in as Treasurer.

In January, 2013, the club will appoint a nomination committee. Members who wish to serve as a Club Officer or Director should make their intentions known to the committee at that time.

ABOUT THE MEETING ON JUNE 21st

The June meeting will be held at the Iona House. The program includes an opportunity for members to sell/buy/trade their fossils or other related items. Also, you are invited to share your finds/acquisitions with your fellow members. Bring in some of your "best of the best" to exhibit or to do Show and Tell.

We will have the monthly raffle; you are invited to bring in a donation for the table or buy some tickets. The Club Fossil Library, which is stored at the Iona House, will be open and club merchandise will be available. Fossil Identification services by our local experts will be provided---so if you don't know what it is, bring it in and see if it can be identified. Refreshments will be provided by Dean Hart and Joshua Frank.

Tables are limited so if you plan to sell, please bring your own table if you can. For Show and Tell or for Exhibit, please plan to share a table with someone else. For planning purposes, please contact Bill Shaver by email or 239-834-0694 if you need a table or half a table.

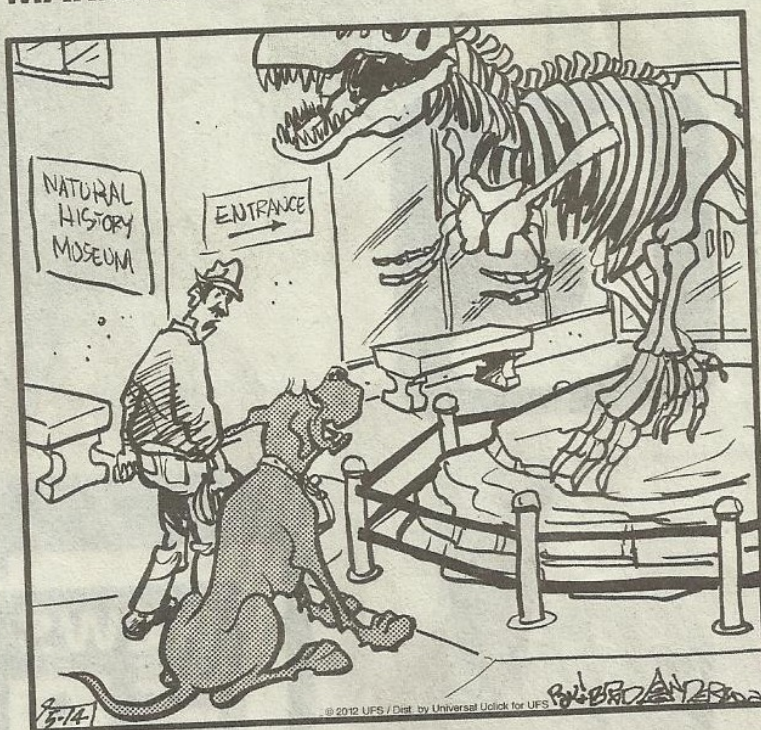
You are not required to do anything, but come and have a good time. This is a good time to socialize and enjoy the company of others who share your interests.



COBY'S COLUMN

Glyptodonts were an armadillo-like creature that grew to the size of a volkswagon beetle. They migrated from South America when North and South America connected and eventually made its way to Florida. They fed on grasses and on small plants that grew near water. Glyptodonts had over one thousand of the bone scutes which made up its shell that we find today. There is an artist's drawing of a glyptodont in Dr. Robin Brown's book titled Florida's Fossils.

MARMADUKE



"Don't even think about it."

CLUB TRIP TO WAUCHULA

It was a perfect day to hunt for fossils in the Peace River. The sun was shining and the river was running shallow and clear---just right for locating a good spot for fossils. Jack Boyce used his ocean going kayak as a work boat to take equipment upstream for some of the "hunters" who chose to wade to the dig site. Some of the other members chose to go by kayak and do some exploring as well as digging. Paddling north, they were treated to a wide array of flowers along the banks, cypress trees with balding knees, blue herons, a squawking little green heron, and a flock of feeding ibis.

At the end of the day everyone shared their finds, talked about how much fun they had, admired Kathy Copmann's pristine megalodon tooth, and asked when are we going again? The stock answer was: next month unless the water gets too deep. We will check the water levels just before the June meeting and see if another trip is feasible. We just might have to postpone another trip for several months because we are now entering the rainy season. Let's wait and see!



Tom, Rick and Kathy Copmann
Hoping to Find a Beauty



Cindy Bateman Enjoying the Moment



Mary Southall Having A Great Day



Bill and Grandson Julian
Kayaking the Peace



Kathy Copmann Finds a Pristine Meg

Reign of the Giant Insects Ended With the Evolution of Birds

ScienceDaily (June 4, 2012) — Giant insects ruled the prehistoric skies during periods when Earth's atmosphere was rich in oxygen. Then came the birds. After the evolution of birds about 150 million years ago, insects got smaller despite rising oxygen levels, according to a new study by scientists at the University of California, Santa Cruz.

Insects reached their biggest sizes about 300 million years ago during the late Carboniferous and early Permian periods. This was the reign of the predatory griffin-flies, giant dragonfly-like insects with wingspans of up to 28 inches (70 centimeters). The leading theory attributes their large size to high oxygen concentrations in the atmosphere (over 30 percent, compared to 21 percent today), which allowed giant insects to get enough oxygen through the tiny breathing tubes that insects use instead of lungs.

The new study takes a close look at the relationship between insect size and prehistoric oxygen levels. Matthew Clapham, an assistant professor of Earth and planetary sciences at UC Santa Cruz, and Jered Karr, a UCSC graduate student who began working on the project as an undergraduate, compiled a huge dataset of wing lengths from published records of fossil insects, then analyzed insect size in relation to oxygen levels over hundreds of millions of years of insect evolution. Their findings are published in the June 4 online early edition of the *Proceedings of the National Academy of Sciences (PNAS)*.

"Maximum insect size does track oxygen surprisingly well as it goes up and down for about 200 million years," Clapham said. "Then right around the end of the Jurassic and beginning of the Cretaceous period, about 150 million years ago, all of a sudden oxygen goes up but insect size goes down. And this coincides really strikingly with the evolution of birds."

With predatory birds on the wing, the need for maneuverability became a driving force in the evolution of flying insects, favoring smaller body size.

The findings are based on a fairly straightforward analysis, Clapham said, but getting the data was a laborious task. Karr compiled the dataset of more than 10,500 fossil insect wing lengths from an extensive review of publications on fossil insects. For atmospheric oxygen concentrations over time, the researchers relied on the widely used "Geocarbsulf" model developed by Yale geologist Robert Berner. They also repeated the analysis using a different model and got similar results.

The study provided weak support for an effect on insect size from pterosaurs, the flying reptiles that evolved in the late Triassic about 230 million years ago. There were larger insects in the Triassic than in the Jurassic, after pterosaurs appeared. But a 20-million-year gap in the insect fossil record makes it hard to tell when insect size changed, and a drop in oxygen levels around the same time further complicates the analysis.

Another transition in insect size occurred more recently at the end of the Cretaceous period, between 90 and 65 million years ago. Again, a shortage of fossils makes it hard to track the decrease in insect sizes during this period, and several factors could be responsible. These include the continued specialization of birds, the evolution of bats, and a mass extinction at the end of the Cretaceous.

"I suspect it's from the continuing specialization of birds," Clapham said. "The early birds were not very good at flying. But by the end of the Cretaceous, birds did look quite a lot like modern birds."

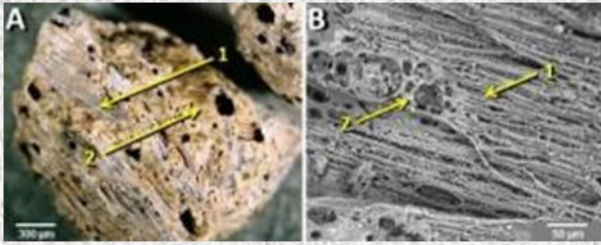
Clapham emphasized that the study focused on changes in the maximum size of insects over time. Average insect size would be much more difficult to determine due to biases in the fossil record, since larger insects are more likely to be preserved and discovered.

"There have always been small insects," he said. "Even in the Permian when you had these giant insects, there were lots with wings a couple of millimeters long. It's always a combination of ecological and environmental factors that determines body size, and there are plenty of ecological reasons why insects are small."



This fossil insect wing (Stephanotypus schneideri) from the period about 300 million years ago when insects reached their greatest sizes, measures 19.5 centimeters (almost eight inches) long. The largest species of that time were even bigger, with wings 30 centimeters long. For comparison, the inset shows the wing of the largest dragonfly of the past 65 million years. (Credit: Photo by Wolfgang Zessin.)

New Evidence Supports Theory of Extraterrestrial Impact



These are microscopic images of grains of melted quartz from the YDB cosmic impact layer at Abu Hureyra, Syria, showing evidence of burst bubbles and flow textures that resulted from the melting and boiling of rock at very high temperatures. (Light microscope image at left; SEM image at right.) (Credit: UCSB)

ScienceDaily (June 11, 2012) — An 18-member international team of researchers that includes James Kennett, professor of earth science at UC Santa Barbara, has discovered melt-glass material in a thin layer of sedimentary rock in Pennsylvania, South Carolina, and Syria. According to the researchers, the material -- which dates back nearly 13,000 years -- was formed at temperatures of 1,700 to 2,200 degrees Celsius (3,100 to 3,600 degrees Fahrenheit), and is the result of a cosmic body impacting Earth.

These new data are the latest to strongly support the controversial Younger Dryas Boundary (YDB) hypothesis, which proposes that a cosmic impact occurred 12,900 years ago at the onset of an unusual cold climatic period called the Younger Dryas. This episode occurred at or close to the time of major extinction of the North American megafauna, including mammoths and giant ground sloths; and the disappearance of the prehistoric and widely distributed Clovis culture. The researchers' findings appear June 11 in the *Proceedings of the National Academy of Sciences*.

"These scientists have identified three contemporaneous levels more than 12,000 years ago, on two continents yielding siliceous scoria-like objects (SLO's)," said H. Richard Lane, program director of National Science Foundation's Division of Earth Sciences, which funded the research. "SLO's are indicative of high-energy cosmic airbursts/impacts, bolstering the contention that these events induced the beginning of the Younger Dryas. That time was a major departure in biotic, human and climate history."

Morphological and geochemical evidence of the melt-glass confirms that the material is not cosmic, volcanic, or of human-made origin. "The very high temperature melt-glass appears identical to that produced in known cosmic impact events such as Meteor Crater in Arizona, and the Australasian tektite field," said Kennett.

"The melt material also matches melt-glass produced by the Trinity nuclear airburst of 1945 in Socorro, New Mexico," he continued. "The extreme temperatures required are equal to those of an atomic bomb blast, high enough

to make sand melt and boil."

The material evidence supporting the YDB cosmic impact hypothesis spans three continents, and covers nearly one-third of the planet, from California to Western Europe, and into the Middle East. The discovery extends the range of evidence into Germany and Syria, the easternmost site yet identified in the northern hemisphere. The researchers have yet to identify a limit to the debris field of the impact.

"Because these three sites in North America and the Middle East are separated by 1,000 to 10,000 kilometers, there were most likely three or more major impact/airburst epicenters for the YDB impact event, likely caused by a swarm of cosmic objects that were fragments of either a meteorite or comet," said Kennett.

The PNAS paper also presents examples of recent independent research that supports the YDB cosmic impact hypothesis, and supports two independent groups that found melt-glass in the YDB layers in Arizona and Venezuela. "The results strongly refute the assertion of some critics that 'no one can replicate' the YDB evidence, or that the materials simply fell from space non-catastrophically," Kennett noted.

He added that the archaeological site in Syria where the melt-glass material was found -- Abu Hureyra, in the Euphrates Valley -- is one of the few sites of its kind that record the transition from nomadic hunter-gatherers to farmer-hunters who live in permanent villages.

"Archeologists and anthropologists consider this area the 'birthplace of agriculture,' which occurred close to 12,900 years ago," Kennett said.

"The presence of a thick charcoal layer in the ancient village in Syria indicates a major fire associated with the melt-glass and impact spherules 12,900 years ago," he continued. "Evidence suggests that the effects on that settlement and its inhabitants would have been severe."

Other scientists contributing to the research include Ted Bunch and James H. Wittke of Northern Arizona University; Robert E. Hermes of Los Alamos National Laboratory; Andrew Moore of the Rochester Institute of Technology; James C. Weaver of Harvard University; Douglas J. Kennett of Pennsylvania State University; Paul S. DeCarli of SRI International; James L. Bischoff of the U.S. Geological Survey; Gordon C. Hillman of the University College London; George A. Howard of Restoration Systems; David R. Kimbel of Kimstar Research; Gunther Kletetschka of Charles University in Prague, and of the Czech Academy of Science; Carl Lipo and Sachiko Sakai of California State University, Long Beach; Zsolt Revay of the Technical University of Munich in Germany; Allen West of GeoScience Consulting; and Richard B. Firestone of Lawrence Berkeley National Laboratory.