

FOSSIL CLUB OF LEE COUNTY APRIL 2016

Letter from the President

Greetings fellow fossilers!! This newsletter should find you relaxing and sorting your fossils. Of course, unless you attended the recent Fcolc Fossil Fest, or the SWFFS auction, or the Tampa fossil Show, or the FCOLC fossil auction, or the Cape Coral Show, or the Venice Shark Tooth Festival, the fossils you're sorting are probably from last year! Because--the water level in the rivers and creeks just will not go down!! With the exception of a few days in a few creeks, not much collecting has been going on. It seems to be the same message every month--the Peace is too high! Hang in their folks! Sooner or later!

The newsletter is a little shorter this month. I've been swamped with a lot of activities and obligations. I have not had much input from club members showing any fossil finds, although some have been posted on the club Facebook page, so you may want to look there.

Last month we had our annual fossil auction. As usual, it was a success, and we managed to break our record for most sales ever! Thank you to all you loyal members! I hope your collections now have that missing link filled! As tradition, the Bonita Beachcombers, a great group of fossil folks in our club, provided the refreshments! It was terrific as always! Thanks! Also, mention and atta-a-boys is deserving to Al Govin, Leslie Stieffel, Mike Siciliano, Dean Hart, Dave and Jeanne Seehaver, Joe Larkin and all you members who either contributed fossils or bid on them!

The speaker this month will be Ron Bopp, an author and speaker on fossil invertebrates. Don't miss it!

The April meeting is the annual election meeting. Please attend and cast your vote! At this time the slate of candidates is the same lucky group that is already on the executive branch and the board. Any member wanting to seek election to any office or board position must let me know as soon as possible. Next year elections will be held a month early, to help facilitate filling with the government, concerning our 501c3 incorporation status.

Fossil trips have been impossible to plan and complete! Water levels will not go down enough. But, Al Govin, the trip coordinator, says he'll keep trying to make something happen!

Many of our seasonal residents have left, or will be doing so soon. Thank you all for participating in the club, as actively as you do, during your time here. Keep us in mind while up north and as you fossil hunt there. Good luck! Send pictures and stories for the newsletter.

I'm sure I'm forgetting something, but if so, I'll just have to tell it later! It's late, and the thoughts are sketchy! Good night!

Louis Stieffel

President

Fossil Club of Lee County.





Meetings are held on the third Thursday of the month, at Zion Lutheran Church Fellowship Hall.

Websites & Locations of Interest

Fossil Club of Lee County: www.fcolc.com FCOLC Fossil Club of Lee County, Inc. c/o AL GOVIN TREASURER 3584 MIDDLETOWN ST. PORT CHARLOTTE, FLORIDA 33952 The FCOLC website is a source for links to Fossil websites of interest, archived monthly club newsletters, details on club meetings and officers. Museum of Natural History @ Gainesville www.flmnh.ufl.edu/ The Fossil Project www.myFOSSIL.org Randell Research Center PO Box 608, Pineland, FL www.flmnh.ufl.edu/RRC/ Smithsonian Natural History Museum www.mnh.si.edu 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 Cracker Museum at Pioneer Park in Zolfo Springs, FL Tel 863.735.0119 www.hardeecounty.net/crackertrailmuseum/about.html 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.org Imaginarium 2000 Cranford Ave, Fort Myers www.i-sci.org Florida Fossil Clubs Southwest Florida Fossil Club www.southwestfloridafossilclub.com Tampa Bay Fossil Club www.tampabayfossilclub.com Orlando Fossil Club www.floridafossilhunters.com The Fossil Forum www.thefossilforum.com/index.php Fossil Treasures of Florida www.fossil-treasures-of-florida.com Florida Paleontological Society http://floridapaleosociety.com/ Collecting Vertebrate Fossils on Florida state lands **requires** a permit. A fossil hunting permit is also part of being an ethical Florida fossil hunter. Florida Vertebrate **Fossil Permit** http://flmnh.ufl.edu/natsci/vertpaleo/vppermit.htm Peace River Water Levels http://waterdata.usgs.gov/fl/nwis/rt Picking Up Isolated Native American Artifacts www.flheritage.com/news/faq.cfm

Hello! The FOSSIL Project is thrilled to invite you to our 2016 mini conference taking place in Cincinnati, OH, June 3-5. This mini conference is being held thanks to partnerships with the Cincinnati Dry Dredgers club, the Cincinnati Museum Center, and the Paleontological Society. The event includes two days of field trips to iconic Cincinnati Arch field sites (Ordovician and Silurian geologic age) with crinoids, trilobites, brachiopods, mollusks, echinoids, etc., as well as a full day of exciting talks, student research poster presentations, breakout sessions, and a townhall meeting with officers from the Paleontological Society (townhall topic: how amateur/avocational paleontologists can become an integral part of their premier professional society).

You won't want to miss out on this terrific mini conference! All attendees must pre-register by May **4, 2016.** Please do so by filling out this <u>registration form</u>.

There is NO registration fee to participate. However, participants are responsible for their own travel costs (e.g., flying or driving to Cincinnati), lodging, and meals other than provided lunches. A block of rooms is being held at the <u>Radisson Hotel-Cincinnati Riverfront</u> for the nights of June 2, 3, & 4 at a rate of \$149 per night; please call 1-(859)-491-1200 and mention the FOSSIL Project to reserve a room. To get the special rate, **you must reserve your room by May 4, 2016.**

For a tentative schedule and other details, please check out our <u>dedicated information webpage</u>. (And join the<u>myFOSSIL community</u>!)

<u>Presidents/officers of fossil clubs:</u> please share this announcement with your members and/or run either of the attached flyers in your newsletters. Thank you!

Feel free to email me with any questions or concerns. I hope to see you in Cincinnati this summer!

Best,

Eleanor

Eleanor E. Gardner, M.S. FOSSIL Project Coordinator Florida Museum of Natural History Phone: (352)-273-1936 Email: <u>egardner@flmnh.ufl.edu</u> | <u>fossil@flmnh.ufl.edu</u> Website: www.myfossil.org

Cincinnati Mini Conference on Paleontology

June 3 – 5, 2016 Cincinnati Museum Center Cincinnati, Ohio

Isorophus cincinnatiensis, Official Fossil of the City of Cincinnati Image Credit: Jack Kallmeyer of the Cincinnati Dry Dredgers

Everyone with an interest in the world-renowned paleontology of the Cincinnati, Ohio, region is invited to attend the Cincinnati Mini Conference on Paleontology, co-sponsored by the Cincinnati Dry Dredgers, the Cincinnati Museum Center, the FOSSIL Project, and the Paleontological Society.

For more information, including a prospectus and agenda, see: http://community.myfossil.org/cincinnati2016-mini-conference/.

Travel Scholarships for College/University Students and K-12 Educators

Thanks to sponsorship from the Paleontological Society, five university paleontology students and five K12 educators will be reimbursed for up to \$500 each for their travel costs to attend this meeting!

University students (undergraduate or graduate) and K-12 teachers affiliated with fossil clubs or societies are particularly encouraged to apply. Students are invited to present posters on their research endeavors. Of special interest to educators, there will be a fossils and paleontology lesson-planning session at this mini conference.

Please contact Eleanor Gardner at fossil@flmnh.ufl.edu for more information.

Travel scholarship applications may be submitted via this online form: https://docs.google.com/forms/ d/1tm9s6YhKF1lqLoX8ULq8o8cPed1Qe1eaDzk3LPB7E20/viewform

Deadline for receipt of the application is April 6, 2016. Recipients will be announced by April 15.

Cincinnati Mini Conference on Paleontology June 3 – 5, 2016 Travel Scholarship Application Form

Due: April 6, 2016

Your name:

Postal Address:

Email address:

Phone (Cell) Number:

Fossil club affiliation, if any (otherwise N/A):

Status

___ university student: undergraduate _____ or graduate _____

_____ K-12 science (or STEM) teacher and grade level _____

Why do you want to attend this conference (max. 50 words)?

What would you hope to get out of the conference (max. 50 words)?

If you were selected for the scholarship would you be prepared to:

For students, present a poster on your work or interests in fossils (Yes) (No)

What would the title or subject of your poster be?

For teachers, participate in the lesson planning session with the intent of implementing it

back in your classroom (Yes) (No)

What would the general theme be for your optimal lesson plan?

Where would you be travelling from in order to attend the meeting?

How much scholarship travel funding would you need (maximum \$500*) \$_____

(*We anticipate that scholarships will be disbursed as a lump sum after the conference.)

Please complete this form and submit online by April 6, 2016 or return it by email to Eleanor Gardner, FOSSIL Project Coordinator, at fossil@flmnh.ufl.edu.

FOSSIL FINDS!!!

A good day on the river! Joe Larkin hunted wit Jack Boyce and they hit a good spot. This is Joe's finds.







A paragraph and some photos...

I was out with a FCOLC Fossil hunting buddy Saturday. We compliment each other and always have a great time. Today was one of those special days. The water was perfect depth over our hunting spot, the sun was shining for most of the days and the fossil finds were excellent. We have a sequence of code words that indicate the type of fossil "Hold that Tiger" and "Holy S***" that describe the type and quality of a find. We also have friendly discussions on who is holding the "fossil mantle" which carries unbelievable luck and must be passed off whenever one of us gets too lucky. There is the "Fossil of the day" category which always leads to the discussion of "what will you trade for it?" I decided to open this story with an inSitu photo of the jointly agreed "Fossil of the day". This pretty Camel-Llama (Paleolama Mirafica) showed up in my screen at about 1pm, after my hunting buddy said he would like to find a gorgeous camel tooth. There is a rumor that he is the real owner having "called" for



it 1st, but I am not sure that I agree. I'll have to ask Louis about hunting etiquette. I wonder why it is blue? Think Cobalt minerals in the fossilization process.



Leslie Stieffel, setting up at the Cape Coral Fossil Show held at Rotary park on April 2.



FCOLC member Sue Coller attended The FOSSIL Project's March PaleoBlitz! We've uploaded a bunch of fun pictures to the Facebook page with photos from Gordon Hubbell's museum and examples of what collecting in Gainesville's creeks looks like:<u>https://www.facebook.com/media/set/?</u> set=a.478229189046495.1073741841.173936902809060&type=3

March 2016 PaleoBlitz

On March 18-20, 13 members from fossil clubs across the south joined Florida Museum of Natural History paleontologists for two days of cataloging specimens, visiting Gordon Hubbell's collection, and collecting at a private creek site in Florida. Here's a selection of the action. PaleoBlitz participants: please share photos from the event with us!

Florida Museum watermarked photos by FLMNH photographer Jeff Gage; non-watermarked photos by FOSSIL Project social media person Lisa Lundgren





10-Million-Year-Old Snake Revealed in Living Color

by Mindy Weisberger, Senior Writer | March 31, 2016 12:02pm ET



Preserved pigment cells in a snake fossil — the cream-colored material in the image is fossilized skin — allowed scientists to determine the ancient snake's color in life. Credit: McNamara et al./Current Biology 2016

The fossilized remains of a snake that lived 10 million years ago don't look very colorful to the naked eye today. But preserved within are cell structures that revealed to scientists the colors that would have dappled its skin while the animal was alive.

Though the pigment grains held within the snake's cells were long gone when scientists discovered the fossil, the cell shapes resembled several types of pigment cells in <u>modern snakes</u> that contain various kinds of color information.

Matching the ancient and modern cell shapes allowed researchers to use modern snake color celldata as a road map. They described the hue of the fossilized snake's back as green mixed with blotches of brown-black and yellow-green, with a pale, creamy shade extending along its belly. [Image Gallery: Snakes of the World]



An artistic representation of the snake, classified in the Colubridae family, as it would have appeared in life. Credit: Jim Robbins, artist

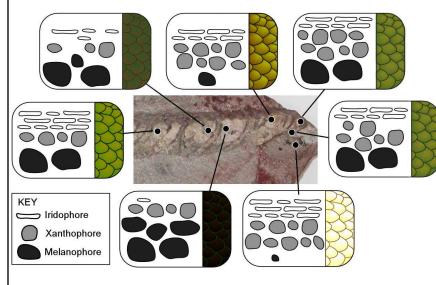
A snake of a different color

<u>Modern snakes</u> have three different types of pigment cells, or chromatophores, arranged in layers in their skin: iridophores at the top, then xanthophores, and melanophores at the bottom, with each containing a different type of granule related to color.

But the abundance and distribution of these pigment cells vary across a snake's body, which produces the color patterns in different body regions.

On the skin of the fossilized snake's belly, for example, the only chromatophores the scientists found were iridophores. In modern snakes, these scatter light and are associated with white and cream hues, according to the study's lead author, Maria McNamara, a paleobiologist at the University College Cork, in Ireland. In other areas of the skin across the snake's body, xanthophores and

iridophores were abundant, and melanophores were rare, hinting at patterns of yellowish-green, McNamara said.



Layout of the color-producing cells in skin samples from different regions of the fossil, and the resulting color as it would have appeared in the living snake. Credit: McNamara et al./Current Biology 2016

Skin deep

The secret to the exceptional quality of those preserved cell structures lies in the process that fossilized the snake: mineralization, McNamara explained.

In previous studies of color extraction from fossils, scientists had reconstructed pigments from traces of melanin (produced by melanophores) preserved in both <u>feathers and skin</u>, McNamara told Live Science.

Those surviving melanin traces represented only a partial picture of an animal's color palette, as other types of pigment-producing structures are typically destroyed during the most common type of fossilization that preserves leftover carbon-based residue. But after this snake died, it was preserved by mineralization, with calcium phosphate crystals growing within its decaying tissues.

"Instead of the <u>organic residues</u> of the tissues being fossilized, the entire tissue has been fossilized in mineral," McNamara said.

And as McNamara and her colleagues discovered, that mineralization left behind a fossil that retained the shapes of cells linked to skin color.

"Up until now, all attempts to reconstruct fossil color have used organic fossils — fossils where<u>soft</u> <u>tissue was preserved</u> as organic residue. Nobody had looked at mineralized fossils before," McNamara said.

"Mineralized fossils not only preserve evidence of melanin, but they preserve evidence of other types of colors as well," she added.

Colorful portraits

In addition to providing multihued portraits of these long-ago reptiles, deciphering an ancient snake's color could provide scientists with a clearer picture of how it interacted <u>with its habitat</u>, and could inform scientists' understanding of how colors and patterns evolved in modern snakes, the study authors suggested.

In modern snakes, colors vary from a coral snake's vivid bands to drab camouflage (think dustyhued rattlesnakes) to iridescent (like rainbow boa constrictors), and their colors and patterns can look different when the snake is slithering, said David Kizirian, a curatorial associate of herpetology at the American Museum of Natural History in New York, who was not involved in the current study.

And there is still much to be learned about how colors in snakes evolved and even what they're used for, Kizirian said.

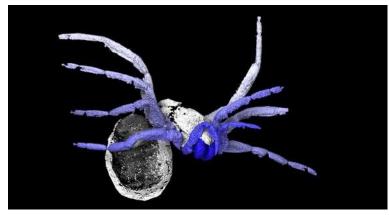
Knowing that mineralized fossils could retain a lot more color information than scientists had previously suspected could be an important part of answering questions about how snakes evolved and use their color — today and millions of years in the past.

The findings were published online today (March 31) in the journal Current Biology.

Follow Mindy Weisberger on <u>Twitter</u> and <u>Google+</u>. Follow us <u>@livescience</u>, <u>Facebook</u> &<u>Google+</u>. Original article on <u>Live Science</u>.

305-Million-Year-Old 'Almost Spider' Unlocks Arachnid History

by Stephanie Pappas, Live Science Contributor | March 30, 2016 08:02am ET



A computed tomography image reveals the 305-million-year-old arachnid that is almost, but not quite, a spider. : Garwood et al 2016/Museum National d'Histoire Naturelle, Paris

A new fossil found in France is almost a spider, but not quite.

The arachnid, locked in iron carbonate for 305 million years, reveals the stepwise evolution of arachnids into <u>spiders</u>. Dubbed *Idmonarachne brasieri* after the Greek mythological figure Idmon, father of Arachne, a weaver turned into a spider by a jealous goddess, the "almost spider" lacks only the spinnerets that spiders use to turn silk into webs.

"It's not quite a spider, but it's very close to being one," said <u>study</u> researcher Russell Garwood, a paleontologist at the University of Manchester in the United Kingdom. [See Images of the Fossilized 'Almost Spider']

Locked in rock

Arachnids are an ancient group with murky origins, Garwood told Live<u>Science</u>. The creatures were among the first land-dwellers, adopting a terrestrial life at least 420 million years ago. There are very few rocks laid down on land from that time, so little of arachnids' early history is preserved, Garwood said. And figuring out arachnid evolutionary relationships from DNA is likewise difficult because <u>arachnids</u> <u>diversified so early</u>, leaving few traceable evolutionary changes in their genes.

The oldest known <u>spider fossil</u> comes from the Montceau-les-Mines, a coal seam in eastern France. That spider was 305 million years old. The newfound fossil from the same time period reveals that these ancient spiders lived alongside not-quite-spider cousins.

The 0.4-inch-long (10 millimeters) arachnid was discovered decades ago, but no one could make much of it, because the front half of the fossil is buried in rock. Computed tomography unlocked the mystery by allowing Garwood and his colleagues to peer inside the rock at the arachnid's walking legs and

mouthparts, which are important for identifying the genus and species of this kind of creature.

Long-lost cousin

The arachnid turned out to have had spiderlike mouthparts and legs. But unlike true spiders, it lacked spinnerets. It also had a segmented abdomen, rather than a fused abdomen, which modern spiders have.

"We're looking at a line of spiderlike arachnids that haven't survived but must have split off before 305 million years ago," Garwood said.

Members of an earlier arachnid branch, called the Uraraneida, known from 385-million-year-old fossils, were also spiderlike in appearance, Garwood said, but had a long, tail-like structure called the flagellum that disappeared before *I. brasieri* branched off the <u>family</u> tree. Uraraneida did not have spinnerets, but did have structures called spigots that could have excreted silk. As a result, the researchers said they suspect that *I. brasieri* might have produced silk, too, just without the spectacular weaving abilities that spinnerets allow.

The researchers said they plan to examine other fossils to get a better understanding of the rise of spiders. Very little is known about how spiders and other arachnids, such as scorpions and <u>harvestmen</u>, fit together in a family tree, Garwood said.

"Arachnids as a whole are an incredibly <u>successful</u> group," he said. "They're the most diverse group of living organisms after insects. They're really, really successful — but we have a very limited understanding of how they are related to each other."

Follow Stephanie Pappas on <u>Twitter</u> and <u>Google+</u>. Follow s<u>@livescience</u>, <u>Facebook</u> & <u>Google+</u>. Original article on <u>Live Science</u>.



A fantastic slab of Orthosaris, an early uncoiled seashell. This slab, owned by member Eric Vierling, is over 4 foot tall!! It has HUNDREDS of these very old fossils! Eric has two of these terrific slabs! What a collection!



FOSSIL NEWS is BACK!!

FCOLC club members, even though this is addressed to the Florida Paleontological Society, we have been invited to participate. Any member that is interested, here is all the information/links needed to submit an article!

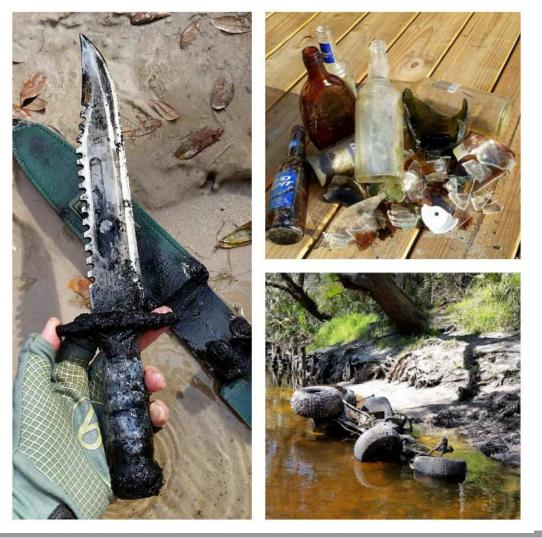
Also, Please join the FCOLC club page on Face Book. There you will see more interesting articles and breaking news on the fossil project and other things going on in our fossil world!! Go to the page and hit LIKE. And if not yet a member on that group page, just request to join. Simple. It's a closed group and no spam. https://www.facebook.com/ groups/378838762286864/



Link to Fossil Club of Lee County Face Book page Please check out the FCOLC site and if not a member, please join. https://www.facebook.com/ groups/378838762286864/

Aimeee's Corner!!

No matter what kind of ancient fossils I'm finding when digging in Florida's rivers I always find some more recent human fossils. Not human bones, thank goodness, but the debris of human lives. We're all familiar with the shards of glass that drop into our screen with almost every shovelful of gravel. Some days I collect it and take it to the trash but, I must admit, some days I don't. Depending on where you are digging you could spend the bulk of your time sorting broken glass out of your screen. It can be fun to find an unbroken antique bottle but those were just trash at one time, too. I've been digging in a particular area, off and on, for almost 2 years now and the amount of broken eyeglasses that have come out of that small area verges on creepy. I find myself wondering why they all settled there. One day I was digging and found an old truck key in the morning, and then found the matching key and keyring later in the afternoon. We've all had the misfortune to uncover car tires (not so easy to load onto a kayak and take to the dump) but, as you can see from my photo, I recently found 4 tires with a vehicle still attached. I'm guessing beer was involved in that mishap and I was glad to see the wreck was gone the following week. My best human fossil find this year was the totally boss Bear Grylls-style Walmart survival knife, as seen in photo. Obviously the remnant of weekend warriors flipping their canoe, it made me laugh all day, not because of the boaters' misfortune but because of the incongruity of having this item drop into my screen. I'm currently having the blade fitted with an elk horn handle. If you want to look tough on the river, you might as well do it right.



Reaching Out to Avocational Paleontologists

Arnie Miller, President-Elect

Most members of the Paleontological Society would probably agree that, from a scientific and societal perspective, paleontology has never been more vital than at present. Collectively, paleontologists use an ever-expanding toolkit to collect and analyze data relevant to a spectrum of questions spanning the history of life. When coupled with the continued discovery and documentation of fossil taxa that are new to science, paleontologists routinely capture the imaginations not only of our scientific colleagues, but also broad segments of society. Paleontologists contribute to contemporary discussions about matters as far flung as the possible existence of life elsewhere in the solar system and beyond, and the assessment of anthropogenic alterations to environments and ecosystems.

Yet there is a sense that paleontology is also vulnerable at present, be it at the hands of school boards who seek to undermine the teaching of evolution in public schools, politicians looking to micromanage federal research funding to suit their own beliefs and needs, or federal offices enacting new restrictions on the collection of fossils on public lands.

Against this backdrop, I believe it is important for the Society to undertake a robust effort to recruit avocational paleontologists as members of the Society. The metaphorical firewall between "amateur" and "professional" paleontologists has long struck me as artificial, and the interests of the Society would be well served by a larger contingent of avocational paleontologists among its members, particularly given the efforts of avocational groups to counteract, through positive actions, issues that threaten our science.

The principal avocational group in my region, the <u>Cincinnati Dry Dredgers</u>, has demonstrated copiously over the years that there is nothing amateurish about its paleontological pursuits. Members of The Dry Dredgers have long partnered with students and faculty at the University of Cincinnati in scientific studies, graciously sharing their encyclopedic knowledge of the classic fossils and strata in the Cincinnati region. They have co-authored numerous scientific publications with their colleagues at the university, have financially underwritten the research of generations of graduate students at Cincinnati and elsewhere, and participate extensively in education-and-public outreach activities.

The activities of avocational organizations nationwide are summarized at the <u>website</u> of *The Fossil Project*, a very successful NSF-funded initiative to provide avocational paleontologists with enhanced networking opportunities, educational activities, and contact with professionals. I encourage readers to have a look at the map available at *The Fossil Project* website showing the locations of avocational paleontological organizations, and to peruse the websites of organizations linked electronically to the site. A quick look at this extensive network of organizations provides convincing evidence that avocational paleontologists throughout North America are actively serving the interests of our science, sometimes with only the limited awareness of professionals and students.

There is nothing at present to preclude anyone from becoming a member, but the Society has never *ac-tively* reached out to avocational paleontologists. With this in mind, I pose the following questions:

- 1. Should the Paleontological Society undertake an active effort to recruit avocational paleontologists as members?
- 2. Should avocational paleontologists be given the option of a reduced rate for membership and/or reduced rates for attendance at our meetings?
- 3. Should the Society establish a position on Council for a representative from the avocational community?
- 4. Beyond providing opportunities to participate in the Society's meetings, symposia, workshops, and other regular activities, should the Society undertake special programming aimed at the avocational community?
- 5. Should the Society establish special sections at its website to highlight the accomplishments and contributions of the avocational community, and to provide educational information of practical use to avocational paleontologists in their own research and outreach efforts?
- 6. As part of its recruiting efforts, should the Society also reach out to K-12 science teachers?

I would greatly appreciate hearing from you on this important topic. Please feel free respond to any or all of the questions, or provide additional thoughts, by emailing me at: <u>arnold.miller@uc.edu</u>. Many thanks!











Field Trips



2 Collaboration & Research **3**

Two field trips to Cincinnati Arch locations with opportunities to collect and document many iconic species.

Informative talks by Dr. Carlton Brett, Dr. Alycia Stigall, & Dry Dredgers President Jack Kallmeyer, plus a townhall discussion with Paleontological Society officers about how amateur/avocational paleontologists can become an integral part of the Society.



Travel Scholarships

Thanks to sponsorship from the Paleontological Society, five university paleontology students and five K-12 educators will be reimbursed for up to \$500 each for their travel costs to attend this meeting.

Apply for travel scholarships via our online form. Deadline for receipt of the application is April 6, 2016. Recipients will be announced by April 15.

Questions? Email fossil@flmnh.ufl.edu The FOSSIL Project community.myfossil.org