

# FOSSIL CLUB OF LEE COUNTY JANUARY 2016

### **Letter from the President**

# HAPPY NEWYEAR!!

After a great December meeting, and everyone left with a full belly and lots of Christmas cheer, we've moved on towards our new year.

I hope everyone has made their resolutions for the new year and are looking forward to great times ahead! One of the resolutions should be to get more involved in this great fossil hobby this year. A good way to do so is becoming more involved with the club. We can always use a volunteer or two!

The 11th annual Fossil Festival will be on February 13. We ask for as many of you as possible to support the club and help out! It will be fun day, and helps us get the word out to people about the club and the fossil opportunities we have here. There are other upcoming fossil shows! Plan on attending, and I promise you will have a great time and learn a lot.

Another way to get involved is by donating, not just your time, but some actual fossils! Most folks have more than they can display, so we will gladly take your extras and put to good use. We need fossils for the kids dig, the silent auction at the festival. We also need fossils and fossil related donations for the annual March auction. This is our biggest fund raiser of the year. February meeting is cutoff time for auction donations.

We recently received a very nice fossil donation from Linda Grispino. She donated a large collection of fossil sea shells, all identified and individually packaged. We will have some of this collection at our auction. Thank you Linda!! We also received a donation from Bobby Jo Sherrill, at the Christmas meeting. he bought over a hundred dollars of river screens and donated them back to the club. Thank you so much for your generosity!

Our speaker this month, Walter Stein, will be talking about collecting Dinosaurs. He actually does it, folks, and will tell us all about it! Come see his presentation!!

River hunting is finally back!! It's still touch and go, as the water levels are fluctuating because of unseasonal rains, but overall, many places are huntable. The December walk-in trip was cancelled due to high water, but we have another scheduled two days following this January meeting. We really want to do this, so many of the newer members can learn how to do it. Keep your fingers crossed for the rains to hold off. REMEMBER--a **FOSSIL PERMIT** is required by the state to hunt most of the waterways around here, and we require it also. You must have a permit to join a club trip. Forms are available on our website: www.fcolc.com

A canoe trip on the Peace River is in the works. More info to come.

Marc Cantos, a long-time member, has been providing a good hot meal for a club meeting, for a couple of years now. He wants to continue this tradition and do it this month. So, Marc asks--please come hungry! We will change our routine a bit and have the eats at the start of the meeting, rather than midway. He wants the hot food to be enjoyed while it is still hot! I'm sure if anyone wants to bring Marc a large Meg tooth as appreciation, he would not turn it down! :-)

Continued on page 2

Continued from page 1

We recently had a board meeting. We discussed the future of the club, our goals and needs. Our scholarship program, which has been on hold for a couple of years, mostly due to financial concerns, will be starting up again. We discussed club outreach, and the fossil festival, and financials, as well as trips and upcoming auction and elections. At the present time, all board and executive positions can continue to remain as is, since everyone has agreed to stay as is. HOWEVER--any member of the club can run for any office. If a member would like to be a director on the board, or an officer, please let me know. I want to encourage members to take an active part in the direction of the club. Elections take place in April. Also, any member interested in the official Board Meeting minutes, please see our secretary, Al Govin.

We will be manning a table at the Gumbo fest, at the Shell Factory, on January 31. Two weeks after this we will be there for our Fossil Festival. This is a good time to promote the festival, as well as our club. You are welcome to come represent the club.

The Shell Factory has a great FOSSIL MUSEUM, free of charge. I encourage al members to visit the museum. And, if you want to be an active part of it, see Pam Plummer, the museum director and FCOLC club member.

Don't be shy about sending me your fossil hunting pictures and stories. we all like to see them. You will see some in this newsletter. You could be just as famous!!

Annual DUES ARE DUE!!

Please check out the FCOLC site on Face Book. We are able to post pictures of trips, hunts, finds, happening, etc, on there. Go to Face Book and search for the Fossil Club of Lee County. If not a member, request to join. Post your finds, etc, for everyone to see and share and learn!

Parting thought--knowledge is the key to enjoying this great hobby. The science is real and is not subjective. The more you learn, the better you get and the more you will enjoy it. Research is needed for correct information. Google is nice, but it's NOT research. It's not general knowledge. It's just an answer. Books are the key to overall understanding. To find the answer in a book, you learn other, related bits of information. It's not just about the answer. It's about the knowledge.

Remember--this is a hobby where you need to **leave your comfort zone** to be successful!!

See ya'll at the meetin !! Don't forget your show-n-tell!

Louis Stieffel President Fossil Club of Lee County





A walk-in river trip is planned for January 23.

• Signup sheet and details will be provided at this meeting.

► REMEMBER: you <u>MUST</u> have a fossil hunting permit to attend this trip.

## FCOLC Meeting Minutes of 12/17/2015

Louis Stieffel Louis Stieffel called the meeting to order. 48 members were present. This meeting will not have a dollar raffle due to the Christmas party. The FCOLC store was open for merchandise sales. Donations are being accepted for the February 13<sup>th</sup> Fossil Show. Jim & Vicki Manderfields were thanked for cooking two turkeys for the evening. Al Govin was thanked for preparing two hams for the evening. Pat and Dave Rosenquist were thanked for supplying the beverages Louis explained the rules for the fossil gift exchange. The river trip planned for December 19<sup>th</sup> was cancelled due to high water levels. Next river trip planned for January 23<sup>rd</sup>, details will be announced at the January meeting. Anyone not getting the news letter was told to check with Al Govin. A signup sheet was out for volunteers to help at the February fossil show. Meeting adjourned to the pot luck supper. Door prizes were awarded. Gift exchange took place.

Minutes by: AI Govin Secretary/Treasurer

Click on this link, or post into your browser! Read about fossils found where you would never expect!!

http://www.msn.com/en-us/news/us/signs-of-mass-extinction-behind-a-new-jersey-store/ar-AAglLSK



### **OFFICERS**

Louis Stieffel, President 239-851-7499, <u>cape187@earthlink.net</u> Michael Siciliano, Vice President 239-980-1406 Al Govin, Secretary, Treasurer 239-910-2339

#### DIRECTORS

Dean Hart......941-979-8217 Staci Marshen Dave Seehaver Jeanne Seehaver Jim Manderfield

#### COMMITTEES

Al Govin, Club Trips Director Curt Klug, Web Master Cherie Neat, Newsletter Developer Al Govin, Badges, Membership, Trips Cindy Bateman, Librarian Dave and Jeanne Seehaver, Merchandise Dean Hart, Refreshment Michael Siciliano, Raffle and Dive Trips Mike Cox, Speakers, Trips Louis Stieffel, Auctioneer, Vertebrate Education, Newsletter editor, FOSSIL project representative

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 c/o Al Govin 16331 Estuary Ct., Bokeelia, Fl., 33922 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

If you find an Indian artifact, such as an arrowhead, on Florida state lands or river bottom, be aware that possession of an Indian artifact found on state lands after 2004 is a Class 3 Felony.

## THE JOY OF BEING AN EDITOR

Getting out this little paper is no picnic

If we print jokes, people say we're silly

If we don't, then we are too serious

If we copy things from other sources, we're too lazy to write them ourselves

If we don't, we're too fond of our own stuff

If we don't print contributions, we don't appreciate true genius

If we do print them, the paper is full of junk

If we make a change in the other person's writing, we're too critical

If we don't, we are asleep

Now, likely as not, someone will say we swiped this from some other publication.

WE DID

HOT FOOD WILL BE SERVED AT THIS JANUARY MEETING. Marc Cantos, as a continuation of a tradition he started a couple of years ago, provides a nice hot meal to the club once a year. Since this meal should be eaten right away, the meeting will start and within a few minutes we will break for the refreshments. Please come hungry and enjoy! We all thank you, Marc Our speaker will have time to do his presentation after the meal, rather than before, as usu <b>JANUARY meeting SPEAKER:</b> <u>Walter W. "Bill" Steinn</u> President www.paleoadventures.com Topic: "The 10 ton dinosaur in the room; The Contributions of Commercial Paleontology". It will discuss the role of commercial paleontology, its positive contributions and its problem His Facebook page at: https://www.facebook.com/pages/PALEOADVENTURES- DINOSAUR-DIGS/110528125650279?ref=hl Pues are \$20/year per household address. See Al at the membership table! To participate in a club sponsored event or outing, you must be a member in good standing.	ATTENTI	
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Please bring any contributions to the annual club auction to this meeting. Thanks!	fossils, etc). to this meeting.	

#### **UPCOMING EVENTS!!!** Fossil Club of Lee County 11th annual Fossil Festival Held on February 13th, at the Shell Factory, Ft Myers, Fl. 2787 N. Tamiami Trail, 33903 9:00am -- 5:00pm Fossils, exhibits, games, Kid's Dig Free admittance, free parking igodolTampa Bay Fossil Club will hold their Fossil Fest on Mar. 12th & 13th. Sat 9am - 6pm, Sun 10am - 4pm. Admission is \$7. Kids 12 & under get in free. It will be held at the Florida State Fairgrounds, intersection of I-4 and Hwy. 301, just east of Tampa. There is a charge for parking. Fossils, minerals, exhibits, etc. For more info, go to tampabayfossilclub.com $\bullet$ **Cape Coral Fossil Show** will be held on Saturday, April 2 10:00am--4:00 pm Admission \$3, children 10 and under are free. Location: Rotary Park Environmental Center 5505 Rose Garden Road Cape Coral, Fl, 33914 • 239-549-4606 rotaryparkinfo@capecoral.net Venice Shark's Tooth Festival will be on Apr. 8th - 10th at the Venice Airport Festival Grounds, 610 E. airport Ave, Venice, FL $\bullet$ Admission is \$4. Kids 12 & under get in free.

## **How Do Fossils Form?**

by Joseph Castro, Live Science Contributor | September 21, 2015 08:50am ET



Skeleton of the bird-like specimen (Aurornis xui) found in Yizhou Fossil & Geology Park, China. Credit: Thierry Hubin/IRSNB

When animals, plants and other organisms die, they typically decay completely. But sometimes, when the conditions are just right, they're preserved as fossils.

Several different physical and chemical processes create <u>fossils</u>, according to the New York State Geological Survey.

Freezing, drying and encasement, such as in tar or resin, can create whole-body fossils that preserve bodily tissues. These fossils represent the organisms as they were when living, but these types of fossils are very rare.

Most organisms become fossils when they're changed through various other means.

The heat and pressure from being buried in sediment can sometimes cause the tissues of organisms — including plant leaves and the soft body parts of fish, reptiles and marine invertebrates — to release hydrogen and oxygen, leaving behind a residue of <u>carbon</u>.

This process — which is called carbonization, or distillation — yields a detailed carbon impression of the dead organism in sedimentary rock.

The most common method of fossilization is called permineralization, or petrification. After an organism's soft tissues decay in sediment, the hard parts — particularly the bones — are left behind.

Water seeps into the remains, and minerals dissolved in the water seep into the spaces within the remains, where they form crystals. These crystallized minerals cause the remains to harden along with the encasing <u>sedimentary rock</u>.

In another fossilization process, called replacement, the minerals in groundwater replace the minerals that make up the bodily remains after the water completely dissolves the original hard parts of the organism.

Fossils also form from molds and casts. If an organism completely dissolves in sedimentary rock, it can leave an impression of its exterior in the rock, called an external mold. If that mold gets filled with other minerals, it becomes a cast.

An internal mold forms when sediments or minerals fill the internal cavity, such as a shell or skull, of an organism, and the remains dissolve.

#### **Organic remnants**

In recent years, researchers have discovered that some fossils aren't just made of minerals. Fossil analyses have shown, for instance, that some <u>retain organic material</u> dated to the Cretaceous, a period that lasted from 65.5 million to 145.5 million years ago, and the Jurassic period, which lasted from 145.5 million to 199.6 million years ago

Tests suggest that these organic materials belong to dinosaurs because they match certain proteins from birds, which <u>evolved from dinosaurs</u>.

"It used to be that no one thought it was possible for any endogenous material — material that comes from the animal — could be left behind after the fossilization process," said Ken Lacovara, the dean of the School of Earth and Environment at Rowan University in New Jersey. "[But] that's not really the case."

It's unclear how the organic material is preserved, but iron might help the proteins become cross-linked and unrecognizable, or unavailable to the bacteria that would otherwise consume them, Lacovara said. (Formaldehyde works in a similar way, cross-linking the amino acids that make up proteins, making them more resistant to decay, Mary Schweitzer, a molecular paleontologist at North Carolina State University, told Live Science.)

Another idea is "microbial masonry," Lacovara said. "It's possible that the bacteria that initially chomped through the tissue are secreting minerals as a waste product that then hermetically [airtight] seal a little bit of

what remains behind," almost like a stone mason sealing off a structure, he told Live Science

Moreover, sandstone — rock made of sand-size grains of minerals, sediments or inorganic material — seems to be the best type of environment for preserving organic material in fossils.

"Sandstone is like a bunch of volleyballs sitting on top of each other with big interstitial [spaced] areas between them," Lacovara said. "So it seems like rapid decay might promote the preservation process. Maybe we need the bacteria to get through fast and to chomp through the sediment so that they can <u>sequester some of [the</u> <u>surviving organic material] in the process</u>."

Additional reporting by Staff Writer Laura Geggel.

Follow Laura on Twitter <u>@LauraGeggel</u>. Follow Live Science <u>@livescience</u>, <u>Facebook</u> & <u>Google+</u>. Original article on Live Science.



## Mighty Mammoths Fell Prey to Rapidly Warming Earth

by Laura Geggel, Staff Writer | July 23, 2015 06:27pm ET



This photo shows a museum worker inspecting a replica of a woolly mammoth. Credit: Photo by Jonathan S. Blair/National Geographic

The mighty megafauna of the last ice age, including the wooly mammoths, short-faced bears and cave lions, largely went extinct because of rapid climatewarming events, a new study finds. During the unstable climate of the Late Pleistocene, about 60,000 to 12,000 years ago, abrupt climate spikes, called interstadials, increased temperatures between 7 and 29 degrees Fahrenheit (4 and 16 degrees Celsius) in a matter of decades. Large animals likely found it difficult to survive in these hot conditions, possibly because of the effects it had on their habitats and prey, the researchers said.

Interstadials "are known to have caused dramatic shifts in global rainfall and vegetation patterns," the study's first author Alan Cooper, director for the Australian Centre for Ancient DNA at the University of Adelaide in Australia, said in a statement emailed to Live Science. [Photos: Autopsy of a 40,000-Year-Old Mammoth]

Temperature drops during the Late Pleistocene showed no association with animal extinctions, Cooper said. Instead, only the hot interstadial periods were associated with the large die-offs that hit populations (local events) and entire species of animals (global events), he said.

Ancient humans also played a role in the megafaunal extinction, albeit a smaller one, he said. By disrupting the animals' environments, human societies and hunting parties likely made it harder for megafauna to migrate to new areas and to refill areas once populated by animals that had gone extinct, he said.

#### **Extinction analysis**

The study is the latest in a long string of research examining what caused megafauna, or animals weighing more than 99 pounds (45 kilograms), to die off during the <u>Late Pleistocene</u>.

George Cuvier, the French paleontologist who first recognized the mammoth and the giant ground sloth, started the speculation in 1796 when he suggested that giant biblical floods were to blame for the animals' demise. The extinctions also baffled Charles Darwin after he encountered megafaunal remains in South America.



Alan Cooper lowers himself into Natural Trap Cave in Wyoming, a location rich with ice age megafaunal fossils. Credit: Laura Weyrich

Since then, various studies have placed the bulk of responsibility on <u>ice age humans</u>, <u>temperature swings</u> and a <u>perfect storm of events</u>.

However, advances in examining ancient DNA and ancient climate allowed Cooper and his colleagues to get to the bottom of the issue.

They examined DNA from dozens of megafaunal species that

lived during the Late Pleistocene, combing through more than 50,000 years of DNA records for extinction events. The ancient DNA not only told them about global extinction events, but also local population

turnovers, which occur when a group of animals dies and another population of animals moves in to replace them. [Wipe Out: History's Most Mysterious Extinctions]

They then compared the data on megafauna extinction with detailed records of severe climate events, which they gathered from Greenland ice cores and the sedimentary record of the Cariaco Basin off Venezuela. "By combining these two records, we can place the climate and <u>radiocarbon dating</u> data on the same timescale, thereby allowing us to precisely align the dated fossils against climate," Cooper said. "The high-resolution view we gained through this approach clearly showed a strong relationship between warming events and megafaunal extinctions."

The findings also show that extinction events were staggered over time and space, likely because the interstadial warming events had different effects on different regions, Cooper said.

#### Modern connections

Earth's climate is much more stable today than it was during the Late Pleistocene, making the world's current warming trends a "major concern," the researchers said.



Alan Cooper looks at the skull of an ancient wolf in Canada's Yukon Territory. Credit: Julien Soubrier

"In many ways, the rise of atmospheric carbon dioxide levels and resulting warming effects are expected to have a similar rate of change to the onset of <u>past interstadials</u>, heralding another major phase of large mammal extinctions," Cooper said.

In addition, humans have disrupted the habitats and surrounding areas of many wild animals, making it challenging for species to migrate or shift

ranges to places where they would be better adapted to deal with climate change, he said.

Other researchers called the new study an important one.

It shows "that the extinction and population turnover of many megafauna was associated with rapid warming periods, rather than the last glacial maximum [when the ice sheets reached their maximum during the last glacial period] or <u>Younger Dryas</u> [a sudden, cold spell that happened when the Earth was starting to warm] as has previously been suggested," said Eline Lorenzen, an assistant professor of paleogenetics at the University of Copenhagen in Denmark.

In fact, understanding how the past climate change affected extinction rates may help people be better prepared for future rapid global warming events, she said.

"This study is a bit of a wake-up call," Lorenzen said. "Here we have empirical evidence — based on data from a lot of species — that rapid climate warming has profoundly impacted megafauna communities, negatively, during the past 50,000 years.

"It doesn't bode well for the future survival of the world's megafauna populations," she said. The study was published online today (July 23) in the journal Science.

*Follow Laura Geggel on Twitter <u>@LauraGeggel</u>. Follow Live Science <u>@livescience</u>, <u>Facebook</u> & <u>Google+</u>. <i>Original article on <u>Live Science</u>*.

## **Rare Dinosaur Find: Fossil Covered in Feathers, Skin**

by Laura Geggel, Staff Writer | November 05, 2015 08:01am ET



An illustration of Ornithomimus showing long and short feathers covering most of its body. Credit: Julius Csotonyi

The skeleton of a heavily feathered, ostrichlike dinosaur has "unparalleled" fossilized feathers and skin — anatomical features that aren't usually preserved in dinosaur remains, a new study reports.

The remains indicate that the dinosaur — an *Ornithomimus*, a fast-moving theropod (bipedal, mostly meateating dinosaurs) with an uncanny resemblance to an ostrich — sported a feathery coat during the Late Cretaceous, more than 66 million years ago.

Study lead researcher Aaron van der Reest found the partial skeleton in Alberta's Dinosaur Provincial Park in 2009, during his first undergraduate year at the University of Alberta. The newfound skeleton is just one of three feathered *Ornithomimus* specimens in the world, and the only one with a well-preserved tail, he said. [Images: These Downy Dinosaurs Sported Feathers]

"It's pretty remarkable. I don't know if I've stopped smiling since [excavating it]," van der Reest <u>said in a</u> <u>statement</u>. "We now know what the plumage looked like on the tail, and that from the midfemur down, it had bare skin."

Modern ostriches also have exposed bare skin, which they use to regulate their body temperature , the researchers said in the study. Given that the newfound *Ornithomimus* specimen has a lightly feathered neck and doesn't have feathers on its legs or the underside of its tail, perhaps it, too, used its bare skin for thermoregulation, they said.



The adult specimen also has a skin impression next to its thighbone, just like the webs of skin living birds have. However, modern birds have a web that bridges the knee to the abdomen, whereas *Ornithomimus* has a web of skin from the midthigh to the abdomen.

"This is the first report of such soft-tissue structures in nonavian theropods," the researchers wrote in the study, which will be published in the March 2016 issue of the journal Cretaceous Research. The curious skin web may be a transitional feature between theropods and modern birds, they said.

In addition to shedding light on dinosaur feathers and skin, the finding may help paleontologists determine where to <u>dig for fossils</u>, the researchers said.

"If we can better understand the processes behind the preservation of the feathers in this specimen, we can better predict whether other fossilized animals in the ground will have soft tissues, feathers or skin impressions preserved," van der Reest said.

*Follow Laura Geggel on Twitter <u>@LauraGeggel</u>. Follow Live Science <u>@livescience</u>, <u>Facebook</u> & <u>Google+</u>. <i>Original article on <u>Live Science</u>*.

### Ancient Brazilian Lake Offers Trove of Amphibian Fossils

by Laura Geggel, Staff Writer | November 09, 2015 07:19am ET

A mishmash of ancient amphibians and reptiles once swam and hunted prey in an ancient Brazilian tropical lake, a new study finds.

However, few of these animals are known to science, said the researchers who recently excavated fossils from the 278-millionyear-old lake. Their findings reveal two new species of amphibians that lived during the Early Permian on <u>Gondwana, a</u> <u>supercontinent</u> that included Africa, South America, Australia, Antarctica, the Indian subcontinent and the Arabian Peninsula.

The findings also shed light on how ancient animals moved around Gondwana in prehistoric times, the researchers said. [In Photos: Giant Amphibian Ruled Ancient Rivers]



An artist's interpretation of the newly identified animals from the 278million-year old tropical lake community, including the amphibian *Timonya anneae* (light colored animal with gills on the left), the amphibian *Procuhy nazariensis* (large animal

swimming by the tree trunk on the right) and a rhinesuchid amphibian (sitting under a fallen branch on the left). Credit: Andrey Atuchin

"Almost all of our <u>knowledge</u> about land animals from this time comes from a handful of regions in North America and western Europe, which were located near the equator," study co-researcher Ken Angielczyk, an associate curator at the Field Museum in Chicago, <u>said</u> <u>in a statement</u>. "Now we finally have information about what kinds of animals were present in areas farther to the south, and their similarities and differences to the animals living near the equator."

The researchers named the new amphibian species *Timonya annae* (tih-MOAN-yuh ann-AYE), in reference to Brazil's Timon municipality and Ann Warren, a specialist in Temnospondyli, a diverse group of primitive, <u>four-legged amphibians</u>.

*Timonya* was an aquatic carnivorous predator that had fangs and gills, and looked like a cross between a modern Mexican salamander and an eel, the researchers said. They found several specimens of *Timonya*, including skulls and skeletons, most of them juvenile. The other newfound species is named *Procuhy nazarienis* (pro-KOO-ee naz-ar-ee-en-sis), from pro<sup>^</sup>t (frog) and cuhy (fire) in the local Timbira language, a reference to the local Rock of Fire formation that got its name from the presence of flint. Nazariensis honors the Nazaria municipality, where the fossils were uncovered.

*Procuhy* likely spent its entire life underwater, the researchers said. Both *Procuhy* and *Timonya* are distant relatives of <u>modern salamanders</u>, they added.

The researchers also found fossils of an amphibian known as a rhinesuchid — a collie-size creature whose known closest relatives lived in southern Africa in later times, and a lizardlike reptile called *Captorhinus aguti*, which was only known from fossils in North America, until now.



The partial skeleton of *Timonya anneae*, an amphibian that lived in the tropical lakes of ancient Brazil about 278 million years ago. Credit: Juan Cisneros

These findings illuminate how animals spread

during the Permian and colonized new areas, the researchers said. Moreover, it helps paleontologists learn more about fossils from a little-known time and place.

"Fossils from classic areas in North America and Europe have been studied for over a century, but there are long-standing questions about how different animal groups dispersed to other areas that we can't answer using just those <u>fossils</u>," Angielczyk said. "Exploration in understudied areas, such as northeastern Brazil, gives us a snapshot of life elsewhere that we can use for comparisons. In turn, we can see which animals were dispersing into new areas, particularly as an ice age was ending in the southern continents and environmental conditions were becoming more favorable for reptiles and amphibians."

The findings were published online Thursday (Nov. 6) in the journal Nature Communications.

Follow Laura Geggel on Twitter <u>@LauraGeggel</u>. Follow Live Science <u>@livescience</u>, <u>Facebook</u> & <u>Google+</u>. Original article on <u>Live Science</u>. THINGS I LEARNED LIVING IN THE SOUTH

A possum is a flat animal that sleeps in the middle of the road.

There are 5,000 types of snakes and 4,998 of them live in the South.

There are 10,000 types of spiders. All 10,000 of them live in the South, plus a couple no one's seen before.



"On the bright side, I'm sure our bodies will turn into something future species will use with caution and prudence."

### **FOSSIL FINDS OF THE MONTH**

A SUPER RARE GLYPTODONT TOOTH, FOUND BY JOE LARKIN.



### **FOSSIL FINDS OF THE MONTH**

Collected by Joe Larkin





### **FOSSIL FINDS OF THE MONTH**

Josh's 12-12-2016 Venice dive find. Found a pretty good 4.75 " er in the first 2 minutes of my first dive.



### Fossil hunting trip between all the rains!

Zack and Dave Deyo, Staci Marshen and Louis Stieffel Story and pics on our club facebook page.



## Aimeee's Corner!!

### Florida's Treasure Chest

The state of Florida is filled with hidden treasure and I'm not referring to lost Spanish gold. I'm talking about an immense wealth of fossilized coral, amazingly varied in form, texture, and color. Agatized coral is the state stone of Florida and the best examples can be found around Tampa and north to the Georgia state line. Anywhere that the ground has been opened up through the action of rivers or by machinery there is a chance of finding a beautiful agatized treasure.

Ancient corals thrived in warm shallow marine waters that covered Florida 20 to 25 million years ago. Fossil corals formed as these reefs were buried in sediments and the coral heads went through the slow process of mineral replacement with chalcedonic or opaline silica.

Last year's fossil season found me getting distracted by Florida coral and I ended up spending more time in the Alafia and Withlacoochee Rivers than I did in the Peace River. The Alafia was particularly rewarding as a place to find whole coral heads and as natural born hunters and collectors club member Pam Plummer and I couldn't resist picking out a couple of specimens to take home. Fair warning: fossil coral heads are HEAVY! I've included a photo of Pam, beaming with excitement, during our first attempt to get her "baby" home. It took us 2 more visits, a much bigger kayak, and some ibuprofen before we succeeded.

I've had luck finding the lovely yellow and orange toned Pasco County coral in roadside ditches north of Tampa.

Withlacoochee River coral comes in a myriad of forms and colors ranging from clear druzy to deep butterscotch agatized to blue botryoidal. This would be a good weekend trip as the coral is abundant and easy to access during times of low water. Club member Joe Larkin and I went on a collecting trip in November and came home with several new additions to our collections. Joe has the strength to hammer at the rocks all day, thus sorting the "wheat from the chaff". I, on the other hand, had to be a little less selective and hump more rocks back to my truck for closer examination upon my return home. I was not disappointed. My most exciting find was a large fossil coral geode, filled with matte white botryoidal formations and voluminous enough to hold 8 cups of water.

Fossil coral proves there's a lot more fossil treasure in Florida than shark teeth.



## Aimeee's Corner!!









"... and hold the trilobites."

### **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/

### FOSSIL FINDS OF THE MONTH!!

What a day of fossil hunting. Days like this come along once in a great while. Out with Joe Larkin on January 2nd, we were both doing well on Horse teeth, Snaggles, and Tigers with an occasional small Mako and enjoying the success when late in the day, my partner yelled "Holy \*\*\*\*", which is the basic way we communicate a rare find to each other.



Many of you know that I LOVE Sloth, but I was pleased he found something so rare (not quite as pleased as I would be if I found it, but still pleased) and shared his joy. This tooth was later identified as a Harlans Ground Sloth Caniniform. Quite an impressive find. About 30 minutes later, he had a chance to return the joy and did so with great enthusiasm.



Unbelievable!!!! that we found these 30 minutes and 10 feet apart. They both look like Paramylodons (a common type of fossil sloth in Florida). I think that both are Harlans Ground Sloth, a member of the Paramylodon family. I am amazed at the small size of the jaw (4 inches long x 3 inches height) and teeth 23 mm occlusal for back tooth and 9x12 mm for the other tooth. I post these on the TFF Fossil Forum for Identification.

Nate Curtis, well known fossil hunter, fossil dealer, and TFF member says that the sloth jaw might be Paramylodon garbanii, due to the small size. The difference here is that P. garbanii is only 5-6 feet high and went extinct at the end of the Blancan Mammal Age (2.2 MYA).

I sent and email to Richard Hulbert, and he replied almost immediately:

#### Quote

These measurements are less than half the reported sizes for Paramylodon harlani from Rancholabrea tar pits by Stock (1925). So that leaves two likely possibilities. Either it is from a juvenile or is the smaller species P. garbanii. If the teeth can be removed from the jaw, see if the size at the occlusal surface is substantially smaller than at the growing base of the crown or if the two are more or less the same. If the former, then it is from a juvenile. If the latter, then it is an adult of the smaller species. The relative sizes of the two teeth is within the normal range for Paramylodon. Richard

The 2 teeth are solidly in the jaw. I am unwilling to break it just to Identify the correct Sloth. SO, I'll identify as Paramylodon .sp (possibly P. garbanii) for the immediate future. I will continue to enjoy a fantastic fossil find and very glad that Joe found the Sloth Canine first.



Jack Boyce

# Don't you wish that Florida had an artifact permit similar to the Florida fossil permit??

Currently, there is a bill in the Florida legislature that would create a permit system to allow collectors to keep isolated artifacts found in Florida's rivers. This bill would help ensure that no one else is arrested and charged with felonies for collecting arrowheads. The bill (HB803) is currently in the Economic Development and Tourism Subcommittee. Please email the members of this committee and tell them how important it is that collectors can once again be involved in the archaeological process, after all, every major archaeological site in Florida was found by amateurs. Tell them that you don't want to see anyone else taken to jail over arrowheads, the state of Florida has far more important things to worry about.

Here are the email addresses for the House of Representatives members on the Economic Development and Tourism Subcommittee:

Frank Artiles - Frank.Artiles@myfloridahouse.gov

Mike La Rosa - Mike.LaRosa@myfloridahouse.gov

Victor Torres - Victor.Torres@myfloridahouse.gov

Bruce Antone - Bruce.Antone@myfloridahouse.gov

Brad Drake - Brad.Drake@myfloridahouse.gov

Dane Eagle - dane.eagle@myfloridahouse.gov

Heather Fitzenhagen - Heather.Fitzenhagen@myfloridahouse.gov

Shawn Harrison - <u>Shawn.Harrison@myfloridahouse.gov</u>

Clay Ingram - Clay.Ingram@myfloridahouse.gov

Edwin Narain - Edwin.Narain@myfloridahouse.gov

Ray Pilon - Ray.Pilon@myfloridahouse.gov

Bobby Powell - <u>bobby.powell@myfloridahouse.gov</u>

Pat Rooney - Pat.Rooney@myfloridahouse.gov





## PALEO WORKSHOPS

Learn about Florida's prehistoric past in a FossilFest workshop! Experienced collectors will teach you how to find, identify, and preserve fossil treasures of your very own! <u>All workshops are free</u> to FossilFest attendees!

#### Saturday & Sunday

Discovering Florida's Fossil Treasures with TBFC's own Dr. Bob Sinibaldi PhD. Learn where and how to find fossils of your own right here in Florida!

Florida's Fossil Vertebrates & the Fossil Hunting Permit with Dr. Richard Hulbert PhD of the Florida Museum of Natural History. It's cheap and easy! Learn how to get your fossil permit and participate in the science of paleontology.

The Perfect Plaster Jacket & Other Preservation Techniques with Bill Faucher. Learn how to successfully get fossils from the field to your lab. Jacketing, glues, and preservation techniques are discussed for the beginner.

Be a part of the adventure! JOIN TBFC TODAY! www.tampabayfossilclub.com

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For more information contact: Rotary Park

5505 Rose Garden Road Cape Coral, FL 33914 Phone: (239) 549-4606

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