



FOSSIL CLUB OF LEE COUNTY

JUNE 2016

Letter from the President

PLEASE READ:

THE JUNE MEETING DATE HAS BEEN CHANGED FROM THE 18TH (THIRD THURSDAY) TO THE 23RD (FOURTH THURSDAY). SAME TIME AND PLACE.

PLEASE MARK IT ON YOUR CALENDAR. IF YOU SHOW UP ON THE 18TH, YOU WILL NOT BE ATTENDING A FOSSIL CLUB MEETING!

On a serious note, I want to discuss the issue of this newsletter. I get calls, pretty regularly, from FCOLC members asking when is the meeting, where is it, what time, who's the speaker, etc., etc... My first response is "Have you received, and then read, the newsletter?" Almost always is yes, and err. NO. I wear a lot of hats for this club and if the newsletter is not read, or wanted, I can hang this hat up, no problem.

Over the last 20 years, before I was editor, I always read the newsletter, and actually kept them for a long time. But, in this age of folks wanting to be "always connected", and instantly apprised of anything, but in a very short amount of space, I start to wonder if this newsletter is needed anymore. I've had one member tell me that if it's anything in their inbox over two paragraphs, it gets deleted! So, it would be relatively easier to just send out a meeting announcement, time and date, by email, instead of spending a portion of my life doing this newsletter. Members could just Google everything else maybe? Don't get me wrong, though. I am not saying we should just stop it. I think it's an integral part of the club. But, I'm looking at addressing this with the board if I keep feeling that it's not utilized. For instance, I ask for member content. Aimee Hankel volunteered to do a monthly column, AIMEEE'S CORNER. Perhaps you could do that also? After all, it's YOUR newsletter. Be a part of it. Send me an article. With pictures, even, to make it more visual. Write a story. Tell a tale. Share with the club. We're all in this together, so let's be a team and talk about our fossil experiences with each other. If you're a lurker, who never steps up and contributes, then don't be a complainer if it goes away.

This June meeting is our annual Show and Tell and Trade and Sell. Over the years we have had members want to sell fossils. Since we are not a selling club, but geared more towards education, we discouraged it. But, as a solution, we do this type of meeting once a year. The club makes no money from this, but gives members an opportunity to show off, or trade, or even sell some of your fossils, while it also gives members a chance to see fossils and have an opportunity to acquire some if desired. The only rules are that the tables are first come, first served, and we ask that if it's for sale, to post your prices. Try and deal, of course, but show what you're asking for upfront. If looking to trade, post that as well, so folks know the score.

We will still have a business meeting, with refreshments, club store, library, door prizes, but no \$1 raffle or speaker. This is a fun meeting, with a less structured setup than usual, so socializing is the

norm. Come, enjoy the club, and its members, and their fossils. You'll have fun!

Refreshments this month will be handled by Ken Follmann. But-- I have no one signed up for refreshments for July, or beyond. When I ask for hands, please raise yours!

Refreshments can be very simple or involved. If you're a regular, you know that some members go all out and even provide a meal. Others, not nearly as involved. The "rule" is--snacks. It's NOT a dinner meeting. It's a fossil meeting, with a refreshment break. So, if you want to bake brownies-go for it! If you just want to open a few bags of chips and pretzels-that's fine, also. Some ice, drinks and water, put into the club coolers, and you're all set. The club will reimburse up to \$40, with receipts, if the refreshment volunteer wants that. Many members donate it but that is NOT a requirement. So, a little bit of time and effort as a refreshment volunteer and if everyone takes a turn you won't be needed for a couple more years!

If someone wants to volunteer as the regular, year-round refreshment person, we will surely love you a lot!! :-)

The 12th ANNUAL FOSSIL CLUB OF LEE COUNTY FOSSIL FESTIVAL will be held at the Shell Factory on February 18. This does not conflict with Valentine Day, or any other club's functions. It's the third Saturday of the month, and will be high season! Last year we had it one week earlier, and it was very busy. Our attempt at being a festival was pretty successful, but we can do better. The Shell Factory suggested we use two large tents instead of the one, and have even more activities for the kids. They like that we have it there, as it helps promote the fossil museum, and it brings lots of folks who haven't been to the Shell Factory in a while. Since they bend over backwards to help us, it's a win-win, and everyone has a good time! This last one we had many of the dealers tell us that they did more sales than at any other fossil show, and a few of those dealers have been doing it for many years! So, it was a success, all the way around, and this coming year's festival should be great!

However, I am asking for a member to please step up and be the festival chairman. That person should have some organizational skills, of course, but he/she would also get lots of help from the rest of us. We have the formula worked out, we (I)!! just need someone to take charge. Form a team, delegate tasks and follow-up. It's a bit of work, but it's a lot of satisfaction when it's done! So, please consider being that person. I will gladly help as much as needed, but would really like to not be in charge again. Thanks!

For those of you who do not know, we have a Face Book group. Just do a search for FCOLC and you will see it. Lots of folks are members on there who are not in the regular club. You can join it no matter where you live, and there are no dues. We have many postings of fossils and stories and it's pretty interesting. We keep it spam free and don't allow solicitations or selling. With the fossil hunting opportunities dwindling, you can get your fossil fix here. And, we always encourage sharing. So, be a part of it. Ask to be a member and you will have it granted. Yes, it's THAT easy!

I do ask-again-if you post something to the face book site, to also send it to me for the newsletter. Just sayin!

We do not yet have a speaker committed for July. Details will be in the July newsletter. (Be sure to READ IT!!)

See you at the meeting! ON THE 23RD!!

Louis Stieffel
President
Fossil Club of Lee County



FCOLC Club Meeting of 5/19/2016

Louis Stieffel called the meeting to order.

There were 33 members present.

Members informed that \$1,000.00 was awarded to Florida University by the club and was added to the Ken Erickson fund.

October 16th, 2016 is National fossil day and it was discussed. We will have a presence there, and will ask for volunteers as it gets closer.

Leslie Stieffel , newest board member, introduced.

We will not have a speaker for June. The June meeting will consist of show-n-tell and members are allowed to trade and sell.

February 18th, 2017 is the annual Fossil Show at the Shell Factory. A volunteer is needed to head up the show with the help of assistants. No one volunteered at this time.

The importance of reading and following the newsletter was discussed. If you are not receiving the newsletter, contact Al Govin.

Door prizes were awarded.

Valerie First was the Speaker for the evening and discussed evolution of animals and humans. She had many fine fossils and cast's for viewing.

Snack break was taken.

Dollar raffle was held.

Minutes by:

Al Govin secretary/treasurer

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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



ATTENTION!!!!
IMPORTANT MESSAGE-
PLEASE READ!!

THE JUNE MEETING OF THE FOSSIL CLUB OF LEE COUNTY HAS BEEN MOVED TO THE 4TH THURSDAY!! THE NEW DATE IS **JUNE 23. IF YOU SHOW UP ON THE THIRD THURSDAY, (THE 16TH), YOU WILL NOT BE ATTENDING A FCOLC MEETING. THE CHURCH NEEDED TO MOVE US--FOR THIS ONE MONTH ONLY!-- SO PLEASE MARK IT ON YOUR CALENDAR!! DO IT NOW!! THANK YOU.**

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

Aimeee's Corner!!

We've all heard of the Petrified National Forest near Holbrook, Arizona: a wonderland of rainbow-hued fossilized trees that drive people crazy with the desire to take some of that petrified wood home which is a big no-no, yet people still filch bits of this treasure from a national park at an estimated rate of 12 tons a year. What exactly is driving people to risk vandalism, guilty consciences, and potential ancient curses (not sure about the curses but I'm throwing it in for good measure)? The petrified wood from southeast Arizona is arguably some of the most beautiful in the world and has earned its moniker "rainbow wood". The main color tends to be a true deep red but brilliant yellows are common, as well as blacks, browns, blues, etc. The bulk of these petrified trees have been classified as *Araucarioxylon arizonicum*, an extinct species of conifer that is the state fossil of Arizona. The petrified wood in this part of Arizona was deposited around 225 million years ago during the Late Triassic period in a chain of events that probably began with a volcanic eruption that knocked down and buried the trees, allowing the slow process of mineral replacement to occur. The worst part about people defacing the national park is that 90% of the petrified wood lies outside of the park boundaries and can be obtained legally and ethically. I checked out a couple of the local gift shops and the prices were exorbitant which is why I recommend a visit to the Dobell Ranch, adjacent to the national park. The Dobell Ranch flies under the radar and has no web presence although 4th generation Noah Dobell operates an Instagram page as *stixn2stones*. The ranch is a visual feast even before you see the rainbow wood. There is junk EVERYWHERE, as well as piles of petrified wood and a decidedly casual rock shop. You can dig through spoil piles for your own fossils at the rate of \$28 per 5-gallon bucket or purchase a piece that they've polished. I bought a fabulous piece that Noah was in the process of polishing for a mere \$30 and it weighs in at 5 lbs. You could drive around the backroads and probably find enough petrified wood to satisfy your fossil craving but your time would be better spent hanging out at the Dobell Ranch.

Aimeee's Corner!!



Arizona's rainbow wood



Dobell Ranch, Arizona



First Time Fossil Hunting

This is about a first time Peace River Fossil hunt. Matt is the go-to, all around guy at Zion, where we hold our meetings. He took his son to Arcadia to Creation Adventures Museum. They organize fossil hunts occasionally for children. Matt sent a few pictures for the newsletter. They had a great time and his son learned a lot. Looked like fun!

Creations Adventure museum.org



MEANDERINGS AND SUCH...

Hurricane season is upon us. Please check your lists to make sure you are prepared, just in case.

River and creek fossil hunting is probably over for the season. It was a short season! if normal then we can expect to get back into the water around the end of the year.



The club has a face book site. Just do a search for FCOLC. Lots of folks post fossil pictures and stories and you may want to take a look.

This is a good time to repair your sifting screens. Replace the floats. Check your other gear. When it's time to hunt, you will be ready!

This is also a good time to finish cleaning and prepping any finds you have. Label them, also. You think you will always remember everything about them, but, over the years, you will forget.

Check your fossil permit. If it needs to be renewed, go ahead and do it. Make sure to list the finds you made on state lands.



Summer is a good time to do some fossil diving at Venice. The water is warmer, and between rains, it gets fairly clear.



The June meeting is Show and Tell and Trade and Sell. A good time to enjoy a social type meeting and adding to your collection.

The National Fossil Day will be held on October 1, at the Bradenton museum.

The Orlando Fossil Show will be held on October 15 and 16 at the Orlando fairgrounds.

The FCOLC Fossil Festival will be held on February 18, 2017 at the Shell Factory in No. Ft. Myers.



Safety and security!

Recently I heard that a FCOLC member came back from a hunting trip and found his tail lights missing from his truck. \$450 replacement! Ouch!! Jack was hunting the Peace River, and parked near the bridge on Rea Road. This is a semi-popular spot, but still considered out in the boonies. Some of the local folks go there to play in the river, and some folks park there on the side of the road to access the river for fossil hunting, especially using kayaks and/or canoes. Trouble is, once someone sees you paddle off in a boat, they know you're gone for a long time. And, with no other people around, the bad guys have all day to do what they want.

A few years ago, we had another club member get his vehicle vandalized. Tires punctured, a few windows smashed. Overall, a bad day for the club member. James was parked next to some woods, near a trail leading to Prairie Creek, off of HWY 31. But, a good ways off, on a side road, and parked away from the road. Out of sight mostly, except to the bad guys.

About ten years ago, we used to hunt Joshua Creek, upstream from the Hwy 17 bridge. This was a nice spot to hunt, but required a long walk of about a mile, through cow pastures. One day, a FCOLC member decided to shorten the walk, and drove his small truck through a narrow opening between a fence and a gate and drove a good portion of the way to the creek. After a few times doing that, he thought nothing of it, and was glad of the shorter walk in. However, one afternoon, after walking back on the cow paths to his truck, Jim discovered it gone! Yes, someone, knowing he's gone for hours, decided to help themselves to his truck! We never found out how, but they took it. We believe that not wanting to take a chance on getting his keys/wallet wet, he placed them on top of a tire. Not hidden well, but somewhat out of sight. Needless to say, this really caused a hardship getting home! Well, a few days later it turned up. The police called and had him drive up to see it. Seems that after starting it up, and joy riding a while, several miles from where it originally was taken, it wound up getting stuck between two trees in a field. Not being able to extricate it, the "new owners" set it on fire. The smoke is the reason the landowner called the fire department., and found Jim's truck.

Many times over the years I've parked, like lots of others, next to bridges, under bridges, and in the edge of the woods near a creek. So far, even though I was always concerned, nothing's happened. So far. But, I've mostly stopped doing this, and encourage others to not, also.

The reason I'm telling these tales is to make you aware that if you park off the beaten path, you have a higher risk of property damage to your vehicle. We worry about snakes and alligators, when the real problems usually come from two-legged animals. Be smart. Park at one of the boat ramps. If not, park in full view of the road. If you can't, because it's posted, then you have no business parking there anyway. But, keep in mind to park in an approved and legal location and there are more people around and less vandalism and mischief. Especially if you are using a boat. What's a few extra minutes of traveling to help ensure your vehicle is still there, and ok, when you return.

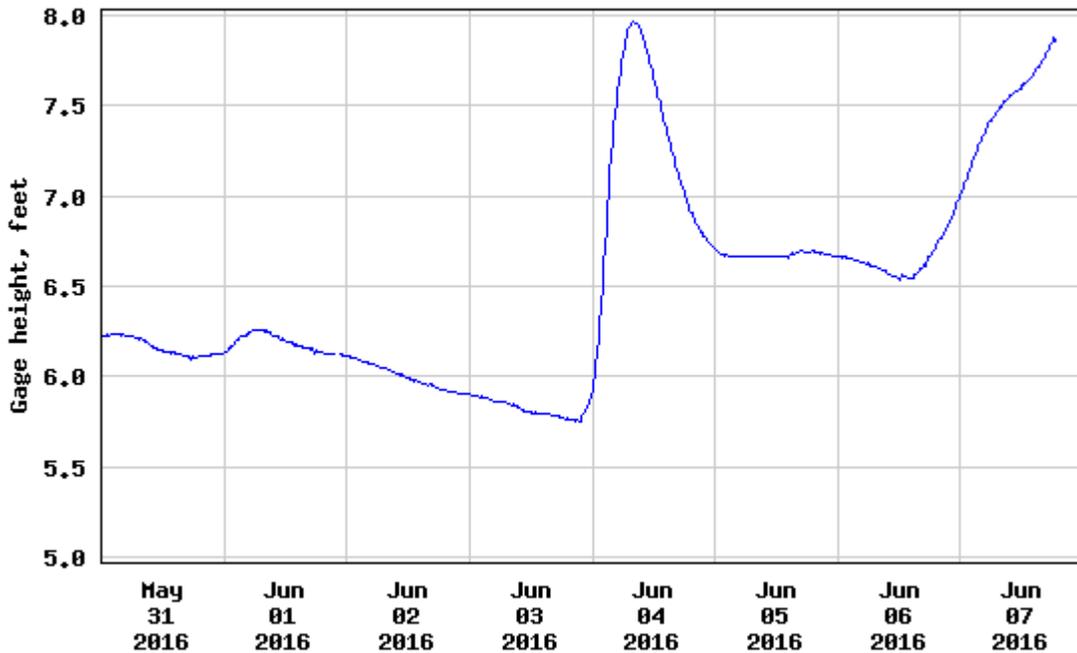
Also, especially if walking, like I usually do, use a backpack. Carry your wallet and keys. And camera and phone. And fossil permit. A lot less temptation for breaking and entering if your stuff is not there. Pack it in (like your trash!) and pack it back out with you. (I'm not saying that you stand a better chance at misfortune if your name starts with a J, like these three fellows, but I would be EXTRA cautious if it did!) And, good luck!!

Louis

RAINY SEASON BLUES!!

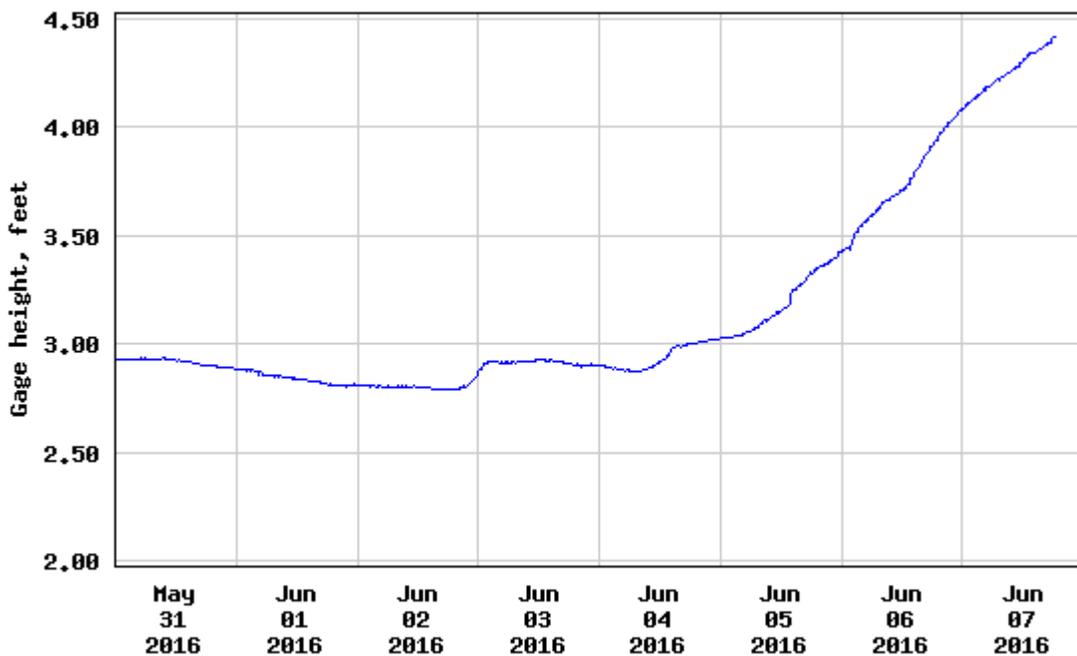
With the recent rains we just got from TS Colin, the rivers have went up again. On top of a dismal season, water level wise, this pretty much finishes it! Sorry folks, but it looks like fossil hunting in the local rivers and creeks is done for until later on in the year!

USGS 02295637 PEACE RIVER AT ZOLFO SPRINGS FL



----- Provisional Data Subject to Revision -----

USGS 02297310 HORSE CREEK NEAR ARCADIA FL



----- Provisional Data Subject to Revision -----

Lowcountry shark-teeth hunting ‘some of the most dangerous type of diving’

Poor visibility, strong current among issues Megalodon teeth, fossils, war artifacts among treasures drawing divers Popular diving areas also a hotbed for sharks.

Pictured are some of the teeth that retired Beaufort County school teacher Doyle Clifton collected when he dove – including the necklace made for him by friend and fellow diver Vito Bertucci. Bertucci died while diving for shark teeth in Georgia in 2004. Submitted By Stephen Fastenau

sfastenau@beaufortgazette.com

Doyle Clifton remembers emerging from water as clear as chocolate milk, slipping off a diving glove and seeing a small, reddish shark’s tooth fall to the deck of the boat.

The fossil caught the eye of Clifton’s friend and fellow diver Vito Bertucci, who made the tooth into a necklace for Clifton.

Bertucci was a renowned diver who filled his Port Royal shop and museum with treasures from the bottom of area rivers. He recreated a megalodon jaw from almost 200 teeth, the finished product said to be worth more than \$1 million.

Bertucci died in 2004 while diving for teeth and fossils in Georgia. Clifton, 62, still wears the necklace in memory of his friend, a reminder of the dangerous hobby Clifton has since given up due to his age.

Beaufort County rivers and other nearby waters are searched by divers not only for teeth and fossils, but also for historical artifacts. Native American and early Spanish settlements and war artifacts are among the targeted loot.

The prizes aren’t without risks, including near pitch-black conditions, strong tides and sharks. The divers here are considered a select group.

“That particular type of diving, shark-tooth diving, especially around here is probably some of the most dangerous type of diving you can do,” Clifton said Tuesday. “...It’s a strain (even) for a young man.”

The area diving community received a reminder of the perils when a Tennessee man died Saturday while diving for teeth in the Broad River. Brian Owens, the 57-year-old victim from Johnson City, Tenn., had been diving more than 20 years.

Clifton, a volunteer more than 20 years with Beaufort Water Search and Rescue, noted that Bertucci was also an experienced diver. Time in the water isn’t necessarily as important as keeping calm when something goes wrong, Clifton said. Not addressing a small problem, he said, can lead to bigger issues.

In Lowcountry waters, low visibility is a key issue.

Diving for fossils and artifacts involves loading up a weight belt and getting to the bottom as quickly as possible, about 30 to 40 feet down, Clifton said. Then, divers crawl around on their hands and knees feeling for shapes, depositing possible finds into a bag.



Knee pads are required to keep from wearing a hole in a wetsuit. Gloves protect hands from sharp shells.

Flashlights can be worthless in a cloud of sediment, like a car's high beams in fog.

Divers new to the coastal rivers sometimes reach the bottom, realize they can't see inches in front of their face and immediately return to the boat, Clifton said.

The Ashepoo River, a body of water north of Beaufort County emptying into the St. Helena Sound, is like chocolate milk, he said. The buddy system is impossible, he said, and you can barely see your own air gauge to know how much time you have left.

The Morgan River, between St. Helena Island and Morgan Island, is a popular spot for finding megalodon teeth but also a hangout for modern-day sharks.

Aaron Youmans, a Charleston contractor who was on the Broad River charter with Owens on Saturday, believes he was once knocked down by Mary Lee, the 3,500-pound great white shark tracked by researchers.

"This is nothing like diving and looking at pretty fish in clear water," Youmans said. "It takes a special kind of person to even go down there."

Read more here: <http://www.thestate.com/news/state/south-carolina/article76892577.html#storylink=cpy>

Check that shovel!!

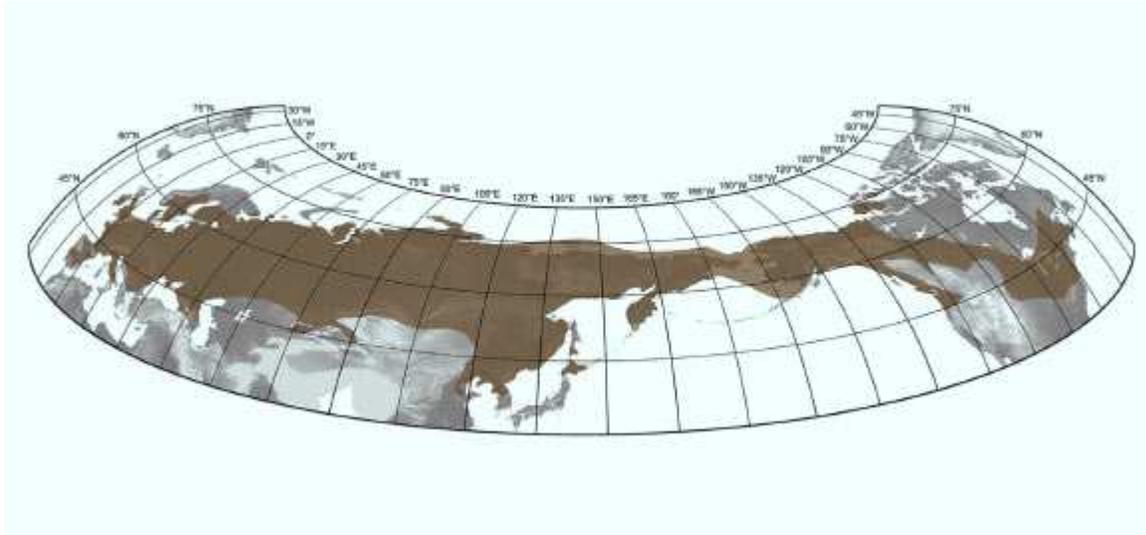
Recently Al and I were hunting the Peace near Wachula. This was a few weeks ago when the river lowered for a few days! Anyway, I was digging to the clay layer, as often the fossils will settle to the clay and lay on top of it. When we got back to the truck at the end of the day, I noticed a bit of clay was stuck in the groove of the underside of the shovel. And, wouldn't you know it! A shark tooth was imbedded in it! Who would have thought? I just had to take a pic, as it may never happen again! Maybe next time it will be a sloth claw or Megalodon tooth! :-)



Paleontologist Releases Most Accurate Map Yet of **Woolly** Mammoth Distribution

Aug 25, 2015 by [News Staff / Source](#)

Prof Ralf-Dietrich Kahlke from the Senckenberg Research Station for Quaternary Paleontology in Weimar, Germany, has recorded the maximum geographic distribution of the **woolly**



mammoth (*Mammuthus primigenius*) during the most recent Ice Age, and prepared the most accurate global map in this regard.

Maximum extension of *Mammuthus primigenius* during the Late Pleistocene based on the current fossil record. Image credit: Ralf-Dietrich Kahlke, doi: 10.1016/j.quaint.2015.03.023.

“The recent research findings show that during the last Ice Age, woolly mammoths were the most widely distributed large mammals, thus rightfully serving as a flagship species of the glacial era,” said Prof Kahlke, who authored a paper published in the [journal *Quaternary International*](#).

He summarized the mammoth’s distribution during the most recent Ice Age (110,000 – 12,000 years ago) on a worldwide map, and determined a total distribution area of 33,301,000 sq. km for these extinct giants.

“From Portugal in the southwest across Central and Eastern Europe, Mongolia, Northern China, South Korea and Japan up to Northeastern Siberia, and thence to the American Midwest and Eastern Canada, from the shelf regions of the Arctic Ocean and Northwestern Europe to the bottom of the Adriatic Sea and to the mountains of Crimea: the fossil remains of woolly mammoths have been found everywhere,” Prof Kahlke said.

“We related the computed distribution area to the real land surface at that time, thus generating the most precise map to date regarding the global habitats of the **woolly mammoth**. Such detailed knowledge regarding the distribution area is not even available for many species of animals alive today.”

The generated map is based on decades of surveys of thousands of excavation sites on three continents.

“Even sites under water, off the North American Atlantic shore and the North Sea, were taken into account. Due to the lower sea levels during the Ice Age – a large volume of water was bound in glaciers – these areas had fallen dry and were also inhabited by *Mammuthus primigenius*,” Prof Kahlke said.



This is an artist's rendition of a woolly mammoth. Image credit: Flying Puffin / CC BY-SA 2.0.

Only the extinct [steppe bison](#) (*Bison priscus*) had a widespread distribution similar to that of the woolly mammoth.

“The bison were clearly more variable than the woolly mammoths,” he said. “Obviously, the mammoths had a higher tolerance toward various environmental factors and they were able to successfully settle in a variety of rather different open landscapes.”

But there were certain factors that limited the distribution of *Mammuthus primigenius*: glaciers, mountain chains, semi-deserts and deserts, as well as changes in sea level and shifts in vegetation placed restrictions on the species' distribution area.

“The analysis of these limiting factors is useful in understanding the distribution of fossil species and their extinction – as with the mammoths toward the end of the last Ice Age.”

“In addition, the data aid in comprehending current changes in the distribution areas of recent animal species,” Prof Kahlke said.

Ralf-Dietrich Kahlke. The maximum geographic extension of Late Pleistocene *Mammuthus primigenius* (Proboscidea, Mammalia) and its limiting factors. *Quaternary International*, published online May 8, 2015; doi: 10.1016/j.quaint.2015.03.023

FOSSIL NEWS MAGAZINE

Any interested FCOLC member who would like information about the fossil news magazine, here's the latest.

In Spring 2016, the popular magazine, *Fossil News: The Journal of Avocational Paleontology*, returned under new editorship as a print quarterly. Here's just some of the praise received for our first issue:

“Thank you for a great Issue. **Wonderful topics and beautiful photos and drawings.** I'm happy and keep up the good work.” | “Your first issue of *Fossil News* just arrived and it **is beautifully done!** Your **choice of articles was well thought out...** This would look perfect sitting on magazine racks in libraries and bookstores. I suspect this will be a big success. | “Yesterday's mail delivery included my very own first issue of *Fossil News*. Wow! I'm **very impressed and pleased** with your publication.”

We're convinced there's never been a greater need for well-written, reliable, high-quality information for amateur and paraprofessional fossil enthusiasts – and that's where *Fossil News comes in*. Each full-color quarterly issue is chock full of national and international news from the world of vertebrate and invertebrate paleontology, advice for amateur and paraprofessional fossil collectors, paleoart & fossil photography, original book reviews, updates on important issues in paleontology and related fields, and much more.

The Summer 2016 issue (on sale in June) includes:

the first of a two-part series on the **discovery of “Dee the Mammoth”** in Wyoming | a discussion of the scientific importance of the **counterpart of the famous “Berlin Archaeopteryx”** | a report on Jurassic **plant fossils from Western Cuba** | an investigative update on efforts to solve the **mystery of the first animals to walk on land** | a review of paleontologists' efforts to **reconstruct animal coloration in “deep time”**

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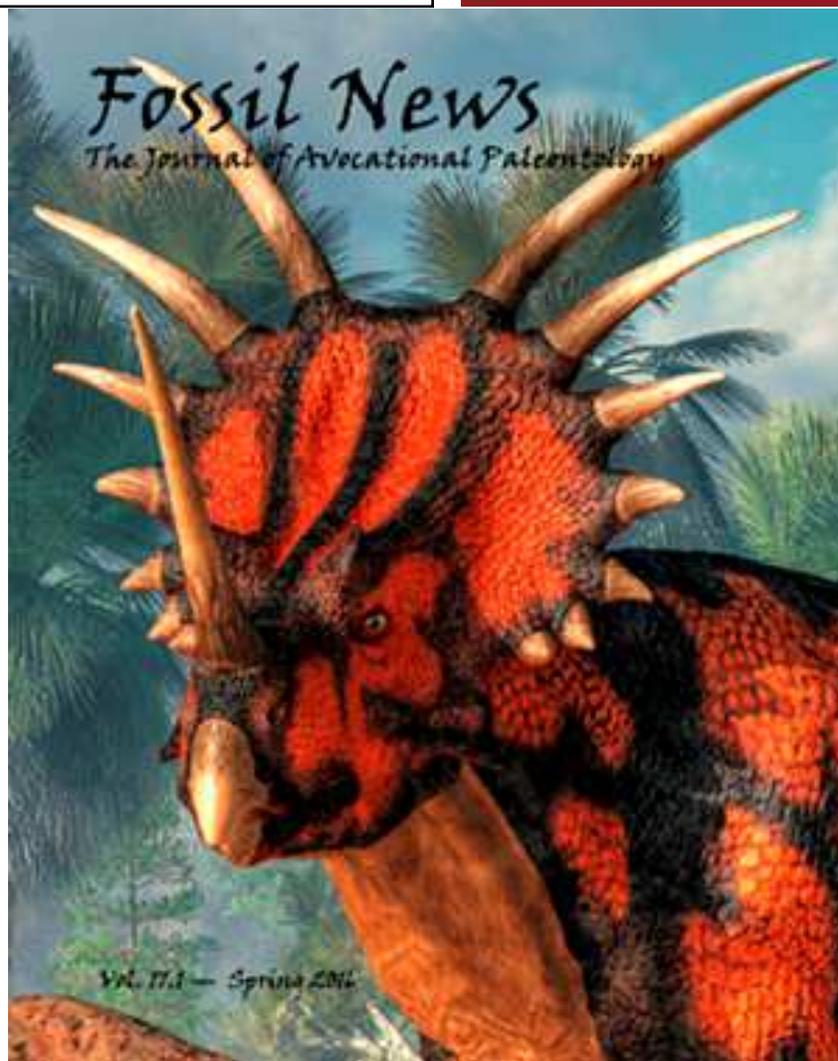
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you and your customers become acquainted with *Fossil News*, we're making this special offer: We'll send you copies of the Summer 2016 issue of *Fossil News* at our cost, with no markup, for you to resell. If you and your customers like them and you think they'll sell in future, we'll negotiate a price for subsequent issues that's fair to both of us.

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Wendell Ricketts
Editor & Publisher
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T. Rex May Have Had Lips

By Mindy Weisberger, [Senior](#) Writer | May 31, 2016 06:13am E



Meat-eating dinosaurs' teeth were long thought to stick out of their mouths like a crocodile's — but that might not have been the case. *Credit: metha1819*

T. rex may have had lips. Yes, you read that right. Lips.

Robert Reisz, a paleontologist at the University of Toronto, is challenging the long-standing image of meat-eating theropod dinosaurs such as [T. rex](#). Specifically, Reisz suggests that theropods' teeth were not bared all the time, extending outside their mouths and fully visible whether their jaws were open or closed. Rather, these teeth were kept hidden, covered by scaly lips, he said in [a presentation](#) May 20 at the Canadian Society of Vertebrate Paleontology's annual meeting in Ontario. [[Gory Guts: Photos of a T. Rex Autopsy](#)]

Reisz told Live Science in an email that he had always been bothered by the typical "permanent smile" portrayal of theropod dinosaur teeth. He first looked to the closest living relatives of theropod dinosaurs — [crocodiles](#) — for clues about tooth exposure.

At first glance, it could seem like the expectation for large theropods to have exposed teeth was on the right track. Crocodiles' teeth are covered by gums for about one-quarter of their length, but lips are absent and the tooth crowns are permanently exposed, Reisz explained.

However, if you look closer at tooth structure, a different story might emerge, he noted in his presentation.

The hard enamel of animals' teeth has low water content, and is typically kept hydrated by saliva. Without lips to keep moisture in and [prevent the teeth from drying out, the tough enamel would become brittle and more prone to damage and wear, Reisz told Live Science.](#)

Crocodiles live in watery environments and would rely on their habitat to keep exposed teeth hydrated. But land-dwelling theropods' large teeth — which are known to have enamel — could have been compromised by perpetual exposure, and likely needed to be covered by lips in order to stay moist, Reisz said in the presentation.

What about elephants?

But crocodiles aren't the only animals with exposed teeth — elephants, for instance, have exposed teeth as well, and many extinct saber-toothed predators had very long canines that were also exposed when their mouths were closed. Wouldn't their teeth have been [vulnerable to serious drying out, too?](#)

Not necessarily. A mammal's tooth structure is actually quite different from a reptile's, said Zhijie Jack Tseng, a paleontologist who studies bite-force biomechanics in [extinct carnivores](#) at the American Museum of Natural History in New York City.

"Mammalian teeth are prismatic — they have a crisscrossing structure," Tseng told Live Science. He explained that when mammal teeth grow, the enamel emerges from the root area and "races outward in all directions," creating a 3D shape that may be better at keeping water inside.

In reptile teeth, the enamel grows in one direction, creating a different type of structure that may not retain water as effectively — potentially making their teeth more likely to chip or crack, Tseng suggested.

But for reptiles — and theropod dinosaurs — damaging or losing a tooth simply isn't as big a deal as it would be for a mammal, Tseng added. Mammals typically grow a set of baby teeth followed by a set of adult teeth, whereas reptiles — and likely many, if not all, dinosaurs — [replace individual teeth](#) throughout their lifetimes, scientists have found.

"Each tooth — relatively speaking — doesn't have as much value to the animal as in mammals," Tseng said. "*T. rex* could chip a tooth or get one stuck in prey, and just replace it. Evolving [protection for teeth is not a critical component of how they eat.](#)"

The dinos, they are a-changin'

Reisz suggested [in a statement](#) that people may be reluctant to abandon the terrifying but familiar image of a "ferocious-looking" *T. rex* [with bared teeth](#).

But now more than ever, scientists are challenging traditional ideas about how dinosaurs may have looked and behaved. New fossil evidence, [computer modeling and comparisons with living creatures are helping scientists to paint a clearer picture of these extinct animals, overturning many historic conceptions of their postures, gaits, skin coverings and colors.](#)

Long gone are the days when dinosaurs were almost uniformly pictured as grayish-green, ponderous reptiles with scaly skin. Contrary to [their portrayal in popular films](#), dinosaurs are now widely accepted by scientists as having been [covered in feathers](#), possibly in a range of colors, much like the colorful plumage of modern birds, which are a living dinosaur lineage.

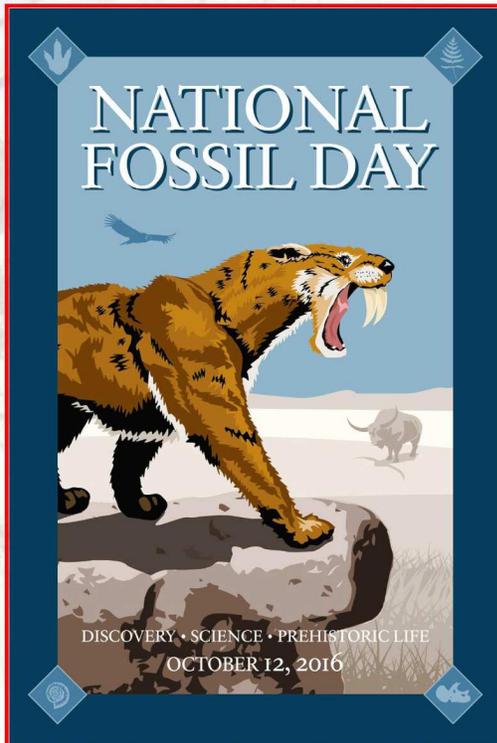
Is it really so far-fetched to suggest that *T. rex*'s toothy grin should also be relegated to the past? Time — and further research — will tell, Reisz said.

Original article on [Live Science](#).

Mark Your Calendar!

Please Join us in Celebrating National Fossil Day 2016!!!

“Fossil’s & Dino’s at Play”



National Fossil Day Celebration!

Saturday, October 1st, 2016

South Florida Museum
Bradenton, Florida



Come join us in celebrating this year’s [National Fossil Day](#). The South Florida Museum is excited to be a host institution this year and to partner with local and state agencies, organizations and clubs. Guests can come and meet real paleontologists and geologists who work everyday to uncover the secrets fossils reveal about our ancient Earth.

Location: South Florida Museum, 201 - 10th St. West, Bradenton, FL 34205

Time: Museum hours 10 a.m. to 8 p.m. Special Family Night Event extended hours. Clubs and Vendor Displays 10 a.m. to 4 p.m.

Updated 2016 Schedule Coming Soon!

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Dear FPS members,

Our “Paleo Friends” to the north will be hosting the 25th Canadian Paleontological Conference in August. Thought I would help spread the word if anyone had an interest in attending, the special session theme sounds quite interesting.

Paul Roth – President FPS

Hello!

You’re receiving this email because you attended the last NAPC and I thought that you might be interested in hearing about what we’ve got planned this year up in Nova Scotia! (Apologies if you get multiple notifications: I am working hard to get the word out.)

This year is the 25th annual Canadian Paleontological Conference, and we’ve got some pretty special things planned. In addition to great paleo talks and community, we’ve created an action packed agenda of exciting cultural activities, designed to showcase Cape Breton’s vibrant Celtic culture and rich industrial history (coal and fishing). It’s an academic conference, don’t be mistaken, but there’s so much jammed in, it’s a vacation too! (As well as an event that your spouse or partner would be happy to accompany you to.) The website includes detailed travel information, special discounts for conference attendees at regional museums and elsewhere, and suggestions for how to expand your visit out to East Coast if you’ve got the time—and you should make it: there’s so much to see!

Check out the conference website, spread the word widely, and head on over the registration soon to make sure you take advantage of the early bird deals!

Conference website: www.cbu.ca/cpc2016.

As a reminder: Like past CPC’s, presentations are welcome on any area of paleontology. This year, however, we have a special session on paleotourism, education, and site stewardship, and encourage participants who have something to say on these matters to consider submitting an abstract. (You may submit abstracts to both the special session and a regular session.) If you have contacts in education, government, museums, or other stakeholder groups, who might not normally come to an academic paleontology conference, please forward this email!

My co-organizer Melissa Grey (Joggins Fossils Institute) and I are happy to hear any suggestions for what we can do to make this year’s CPC even better. You can contact us at: cpc2016@cbu.ca

Looking forward to seeing this August!

Cheers!

Jason Loxton

P.s. If you’d like a higher resolution version of the logo below for Facebook or other places, drop a line!

P.p.s. If you’re coming from outside of Canada, don’t forget the low Canadian dollar right now! J

Jason Loxton

CPC-2016 Co-organizer

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