



FOSSIL CLUB OF LEE COUNTY

DECEMBER 2015

Letter from the President

MERRY CHRISTMAS!

The Fossil Club of Lee County will hold their Christmas spectacular on December 17th! This meeting will be back at the Fellowship Hall! We profusely thank the Shell Factory for graciously allowing us to meet last month at their facility. I encourage all of you to stop by there and see the fossil museum!

Speaking of the Shell Factory, that is also the location of our Fossil festival, on February 13, 2016! This will be a fun day for all the members, and we hope to spread the word through the community of what we are all about. So, get ready to volunteer and have some fun.

Our speaker last month, Eleanor Gardner, who is also the fossil project coordinator, gave a great presentation on fossil birds. We learn a lot from our speakers, as most have a different twist on things than we thought about. January speaker will be dinosaur expert Walter Stein.

Al Govin and Mike Cox are putting together a walk-in river trip for December 19. Details are not formalized, but information will be available at the meeting. This will be a good opportunity for new members to learn how we collect fossils in the river. As long as the water level is low enough, we plan on having a nice day!

FOSSIL PERMIT!! This is important! State law says you need one, and so do we! If you plan on participating in a club trip you must have a permit. We have some blank forms available, or you can get the link through our website. www.fcolc.com

We are invited to man a club table at the Gumbo Fest, on January 31, at the Shell Factory!! We will be given a chance to share our club with a LOT of folks!! Who wants to help??

Fossil Festival--date is February 13th. Place--The Shell Factory. Time: 9-5.
Coordinator: Staci Marshen Come one-come all!! Pass a good time!!

Make sure you guys send me pictures and a short story about your fossil finds! Everyone likes to see that in our newsletter! One or two pics, and a short paragraph about the hunt.
Send to: cape187@earthlink.net

Our annual fossil auction is coming soon. It's held at the March meeting!! If you have anything you would like to donate, you can bring it to this meeting.

Continued on page 2

Continued from page 1

See me, as I'm the auctioneer. I will also take donations at the January meeting, and possibly February's also, but that is all. After that lot numbers must be assigned and auction lists printed, etc. So please donate, it's for a great cause!

I want to thank a few members. Thank you to Aimee for all her donations to the club. She regularly gives to the dollar raffle table as well as the auction. And, Aimee lives out of town! Thank you Aimee. Mike Siciliano, our vice-president, donates a LOT of items to both, but especially the dollar raffle, and then he collects money and calls out the winners! Ray Seguin, the oldest fossil club member in the state, has donated items for the door prize for years! Many of his home-made wood turnings are prized, and proudly shown, in members homes! And, he gives fossils to the raffle as well as the auction! Al Govin, who has taken on the job of both Secretary as well as Treasurer, and trips coordinator. My wife, Leslie, has worked many tireless hours over the years, doing all sorts of club jobs! She keeps me straight with club information that I can't find and is always helping me and anyone else that she can. Leslie does the paperwork for the auction, comprising the bidder list and keeping me straight! And Leslie mans the kids activity table at the fossil festival. Dean Hart has put in a lot of effort, especially on the fossil shows, but also helps out in any area he can. Dave and Jeanne Seehaver run the club store, and jump in also wherever needed. Staci Marshen is coordinating the fossil festival, and finding out that it's a team effort, which we are all willing to be part of. We have other members, like Gunther, Joe, Cindy, Rick, Robin, Mike C., Eric, Jim, the Bonita Beach Gang, Marc, Marcia, and many more, who contribute. Some, a lot! It takes everyone together to have this great club. So, do what you can, and--thanks!

The Tampa Bay Fossil Fest will be March 12 and 13. The Cape Coral Fossil Show will be April 2. The Venice Shark's tooth festival will be April 8, 9 and 10. So, mark your calendars!

In leaving, a couple of thoughts. First, " **this is a hobby that you must get out of your comfort zone to really enjoy!**" and " **Fossils/Paleontology is a Science. Research is required for correct information. Google is not research. Great for ordering a pizza or finding your way around. Libraries are still around. Great place to visit**"

Enjoy.

Thank you,
Louis Stieffel
President
Fossil Club of Lee County



FCOLC MEETING MINUTES

November 19, 2015

Louis Stieffel called meeting to order.

Meeting held at Shell Factory due to conflicting dates at Zion Lutheran Church.

58 members were present.

Louis discussed temporary nature of this meeting location.

Louis discussed newsletter, if anyone not getting it contact Al Govin.

A volunteer was requested to cook turkey for December meeting and Jim Manderfield and his wife Vicki were the lucky volunteers.

Al Govin volunteered to cook ham again this year.

Louis gave kudos's to the Shell Factory and Captain Fish bone's restaurant, and also asked members to frequent both.

Upcoming fossils shows from other sources were mentioned.

River trips for 2015/2016 were discussed by Al Govin and Mike Cox. Tentative plans are for trips the following dates. 12/19/2015, 1/23/2016, 2/13/2016 & 3/19/2016. One of the trips in 2016 will be a canoe trip. Details of the various trips can not be definite until the river levels of the Peace River become clearer. Hopefully it will not be a repeat of last year with high water levels and all trips cancelled.

Florida Fossil Permits were discussed at length. They will be a requirement on all future club trips. Al Govin handed out renewal forms as well as first time permit forms.

Show and Tell was held with many fine specimens shown

Door Prizes were awarded.

A fossil bird presentation was held by Eleanor Gardner from Gainesville, FL, followed by a question and answer period.

Ms. Gardner also discussed the Fossil project and its' current goals. Members enjoyed her excellent presentation!

Snacks were furnished by Mike Siciliano and Louis Stieffel.

Dollar auction was held.

Minutes by Sec/Treas Al Govin

Fossil Club of Lee County Meetings
Are held the third Thursday of the month, at the Zion Lutheran Church Fellowship Hall. 7pm.
7401 Winkler Road, Ft Myers, Florida.

OFFICERS

Louis Stieffel, President
239-851-7499,
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DIRECTORS

Charles O'Connor....239-246-5526
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Dave Seehaver
Jeanne Seehaver
Don Lindsey
Jim Manderfield

COMMITTEES

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

From our family to yours
Merry Christmas

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Websites & Locations of Interest

Fossil Club of Lee County: www.fcolc.com

[FCOLC c/o Al Govin 16331 Estuary Ct., Bokeelia, FL, 33922](http://www.fcolc.com)

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](http://www.flmnh.ufl.edu/) www.flmnh.ufl.edu/

[The Fossil Project](http://www.myFOSSIL.org) www.myFOSSIL.org

[Randell Research Center](http://www.flmnh.ufl.edu/RRC/) PO Box 608, Pineland, FL www.flmnh.ufl.edu/RRC/

[Smithsonian Natural History Museum](http://www.mnh.si.edu) www.mnh.si.edu

[Southwest Florida Museum of History](http://www.MUSEUMofHISTORY.org) 2031 Jackson St., Fort Myers www.MUSEUMofHISTORY.org

[The Bailey-Matthews Shell Museum](http://www.shellmuseum.org), 3075 Sanibel-Captiva Rd, Sanibel, FL www.shellmuseum.org

[Cracker Museum at Pioneer Park](http://www.hardeecounty.net/crackertrailmuseum/about.html) in Zolfo Springs, FL Tel 863.735.0119

www.hardeecounty.net/crackertrailmuseum/about.html

[Cape Coral Friends of Wildlife Burrowing Owls](http://www.ccfriendsofwildlife.org)

www.ccfriendsofwildlife.org

[Calusa Nature Center and Planetarium](http://www.calusanature.org) 3450 Ortiz Av, Fort Myers Tel 239-275-3435

www.calusanature.org

[Imaginarium 2000](http://www.i-sci.org) 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/vpppermit.htm>

Peace River Water Levels

<http://waterdata.usgs.gov/fl/nwis/rt>

[Picking Up Isolated Native American Artifacts](http://www.flheritage.com/news/faq.cfm) 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.

CHRISTMAS meeting!!

Every year we have a special Christmas meeting for December. For those who are new to the club, it's a pot luck meeting! Bring a dish to share. Some items are provided: a Turkey (cooked and delivered by Jim and Vicki Manderfield), the ham, (cooked and delivered by AL Govin), the plates and utensils, (the club), and the drinks, (delivered and iced by David & Pat Rosenquist).

We ALL thank them for their help and generosity!

Everyone else, try to bring a dish to share! If for any reason you can't, come anyway!!

We will have a short (very short!) business meeting, then we all enjoy each other's company, and eat and tell tall tales about finding fossils!!

Also, what's Christmas without gifts? So, we have a gift exchange! It is **Bring a Gift-Get a Gift!!** Make it FOSSIL, or Non-Fossil, but please mark it somehow, so there is no mix-up. And, wrap the gift, but do not put a name on it. Don't worry about if yours is better or not than any others--the giving is what is important! During the festivities, everyone who brought a gift will be asked to pick one, so, if you bring one, you get one.

As always, bring any show and tell you want to bring. However, there will be no \$1 raffle this month!

And don't forget any auction donations! Just a couple months away!

The fellowship hall is decorated and ready for us!! See all of you guys there!!



The Oatmeal <http://theoatmeal.com>

Bone Valley

Most of a post from Face Book, shared by [Frank Garcia](#) , on October 2. For those of us who wonder about the fossils found in the Phosphate mines, in the area we call Bone Valley. And for those who wish we were there!

Unfortunately there are no pictures to accompany this story!

Bone Valley, Bone Valley. What does it mean? A geological term given by scientist to an area in central Florida that contained at one time, one of the richest phosphate ore beds in the world. It's a geological layer formation that contained some of the best phosphate pebbles that help make the best fertilizer so that farmers can grow abundant food worldwide. Phosphate is mined in many countries today. Florida was one of the biggest producers of it. And the reason the name "Bone Valley" was given to the formation was because the phosphate rich layer was the product made by the help of a combination of sea water that contains phosphorus in it and the decomposition of prehistoric land and sea animals. Yes, it contained many, many bones and teeth and etc in those layers. Phosphate mining started in Florida before 1900. Most was done IN the Peace River near Arcadia. I have dove down 15 feet there at the KOA Park and there are still railroad steel wheels from the cars that hauled the phosphate ore out of the river back when. But the Bone Valley story is far from digging and making fertilizer out of that rock being mined. It's a glamorous one about men going out and into the phosphate spoil piles left by the huge draglines in central Florida. There are 4 key figures in the annals of fossil hunters that stand out in the Bone Valley story. Joe Larned, Larry Martin, The Kruger family, Rick Carter, (Ricky Carter is his son) and myself. There were a few others who made some cool finds but not to the extent these few made. I first met Joe Larned in 1969 at Curtis Hixon Hall Gem and Fossil show in Tampa as he proudly displayed his small travel trailer with some of the most incredible phosphate vertebrate fossils I ever saw back at that time. I asked him point blank if he could take me into those ponderous mines one day and he quickly said "yes, you can meet me in

Bradley Junction Fla this Saturday and I'll take you and a couple of other people into the mines near my house". What a start to our friendship! Joe Larned was originally from Texas and was a master story teller in just about any category you could think of. He was sharp as a tack and great at anything as I discovered throughout our many years I knew him. Joe eventually built a cool museum in Bradley with tin walls and of course a tin roof. His many cool fossils he discovered near his home was displayed for all to see and did many that drove through that little town, saw his many phosphate treasures. His best find I think was a partial Rhino skeleton and his huge 7 inch megalodon tooth. So, after meeting Joe and him giving me the start I needed, I was off and running through the muck and mire of Polk County phosphate mounds and pits. Joe interestingly enough hunted the mine he worked at as I hunted ALL of them. So after 15 yrs of having the mines nearly all to myself, there came a fella from Orlando named Larry Martin. I remember him hitch hiking to Joe's museum one day and that is where him and I met. He loved megalodon teeth and made necklaces with them as well as sold and traded the big ones off. In time Larry would find many wonderful fossils but he will be remembered for finding the best known Bone Valley articulated megalodon set of teeth from the SAME shark on a spoil pile one day in Polk County. Through the years he would find many outstanding fossils from those mines but his legacy in Bone Valley, was that incredible megalodon articulated collection from one fish! The great shark Man, Dr. Gordon Hubbell acquired Larry's classic meg collection some time later and now comfortably sits in the Doctor's museum. A few years later after Larry, here came the Kruger family of Sefner Florida. A family with 10 children and Mom and dad made a dozen.

Imagine the damage they could do out in those mines back then. They didn't hunt that many years as the children grew, so did their interests on other things. But Mom and dad hunted on and one day in an Agrico mine in Polk County, out on top of pure looking sugar sand mounds of spoil, that family found 75 rhino teeth, 3 rhino jaws, 2 elephant Gomphothere jaws and a long tusk to boot. A memorable day for sure. I have one set of Rhino jaws that they found that day including a baby rhino jaw that I traded work for at MOSI when they de-commissioned their fossil collection a few yrs ago. Rick Carter oh Rick Carter. I think Rick was probably the best in Bone Valley for a decade or so. He found so many crucial Cats, dogs, 3-toed horse teeth, sloths and two incredible crocodile skulls ever found anywhere. I had a hand in digging up one of those skulls. I had found a cool vert column one day at IMC mine but didn't find any more until Rick came along a week later and discovered a little portion of a giant croc skull where I found those verts and called me up and wanted to know if I would give him a Gomp (elephant) tooth for whatever was buried at that spot. So I traded with him and I dug up a nearly five foot croc skull by myself a day before I was to fly to the Smithsonian on business. My career in the mines was exciting but had a pretty good run from 1979- 1989 where I found several whale skulls complete with one having a nearly complete skeleton. During that run I found the world's largest dolphin skull, found a rare amebelodon elephant site on IMC property that yielded two skulls, one complete set of jaws both sides with lower and upper tusks. Biggest giant sloth claw ever in a phosphate mine at 18" around the curve. Found the only known prehistoric giraffe skull of it's type any were. A nice sperm whale jaw with 17 teeth. Then came the dugongs as I was working for the Smithsonian collecting several nice skeletons for them. I was very lucky to have lived the Bone Valley experience for many, many years. Probably more time than Joe or anyone else. But the crucial discoveries that Larry and Rick made through the years in Bone Valley will no doubt make them hall of famers! I wish

I had more room to write but then, you'll have to read my book, "Sun Rise at Bone Valley". After Joe Larned passed away a few years ago, what was left of his collection went to the city of nearby Mullberry where it bears the name, Mullberry Phosphate museum. In ending, Joe, Larry, Rick, Signe Kruger and myself belong to an exclusive fraternity that cannot ever be equaled in Bone Valley, ever again. In the first picture you see 4 guys in a mine and the first one is, Joe Larned, third is Rick Carter. Second pict is Larry Martin on his ranch in New Mexico and the third guy photo is Rick Carter again. The rest of the photos are a collection of wonderful fossils that were collected by me and others. Ya can't miss me dressed up in a tuxedo and Santa suit as I made some cool slide shows to music that kept audiences filling all the seats as well as standing room only. Imagine that, FOR FOSSILS!!! You'll also see Rick Carter's astonishing Hexameryx horn cores he donated to the U of Fla. And of course, Larry Martin's fantastic meg discovery at the end. One more note of importance, is a picture of me with a fella wearing a green jacket. That is none other than Gray Gordon, former Vice President of Cargil phosphates, but more important, the BEST Public Relations man I ever had the pleasure to work with. He made it possible for me to work on those properties owned by Cargil as well as letting me bring in the Tampa Bay Fossil club for two weekends INSIDE a mine as well as two weeks working on a crucial dugong dig in another mine. That will never happen again because he retired a few years ago. And when he did, so did my "way" into those mines. Today, some clubs are being let in, but not deep down inside those cuts that truly yield the best unbroken fossils in their natural situ. Those days are gone but the work "our" fraternity did is legend. Thank you Joe, Larry and Rick! You guys were the BEST in the history of the famous Bone Valley!

Frank

FOSSIL FINDS OF THE MONTH

Great find, Clay!!



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-million-year-old lake. Their findings reveal two new species of amphibians that lived during the Early Permian on Gondwana, a supercontinent 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 278-million-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 knowledge 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, said in a statement. "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 anneae* (tih-MOAN-yuh ann-AYE), in reference to Brazil's Timon municipality and Ann Warren, a specialist in Temnospondyli, a diverse group of primitive, four-legged amphibians.

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 nazariensis* (pro-KOO-ee naz-ar-ee-en-sis), from pro^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 modern salamanders, 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 fossils," 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 [@LauraGeggel](#). Follow Live Science [@livescience](#), [Facebook](#) & [Google+](#). Original article on [Live Science](#).

Fabricated Fossils

By: Jason Spalding

A brief look into the various levels of fabricated, fake, forged, and repaired fossils. We have a passion for fossils, but how can we spot the various techniques used to fabricate fossils?



Let me begin by saying, that there is nothing wrong with purchasing and owning replicated or fabricated fossils. I personally own several. When there is an elusive fossil that you just can't find or afford, owning a replica is the next best step. When we make a purchase of an "authentic specimen", only to be unknowingly sold a non-authentic specimen, then there becomes a problem. With the ever growing ability to purchase items online, it makes it difficult to tell the difference between authentic and fabricated specimens. Purchasing in person, we can hold, touch, and ask questions about the specimen. Whether you are a fossil novice or a seasoned fossil veteran, education is key to differentiating between real and fake. The information continues to grow, but there is still very detailed specifics that can be researched. I would highly encourage further investigation on your part after the basics that I will cover in the following article. Also, if you know something that is not mentioned, tell a fellow fossil hunter, as word of mouth is also a great means of communication.

Common Problems

It is not as simple as real or fake. Some types of fossils are often more fooled around with than others. It is even possible to have real fossils within a fake matrix substance, which is common with mosasaur teeth, which I will talk more about later. Often times fossils are repaired with a synthetic substance in order to make a complete fossil. This is often for museums where pristine full specimens are preferred. Looking at the graph (pg.2), we can see the various categories of fossil condition. This makes it clear to see the "grey" areas. Ideally, the dealer should mention the true condition during a purchase. Let's be honest though, we only wish everyone could be fully educated with their merchandise. This is why educating yourself can help you



avoid something you would rather not place in your collection. I know your thinking by now whether any of this is relevant because, "I find all my own fossils". You are correct. There is nothing more fun than going fossil hunting. It provides an authentic time and natural fossils. Not all people are lucky to live in a fossil rich area. Some rely on purchasing only from dealers online or in person.

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Which Fossils are Frequently Replicated?

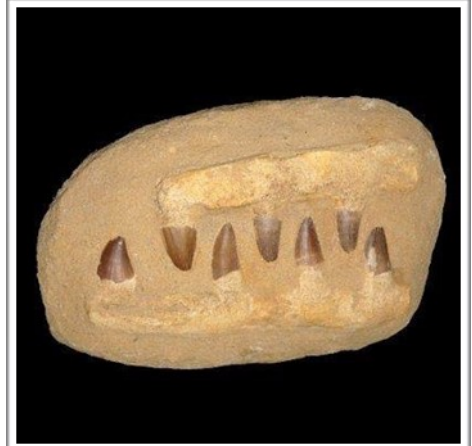
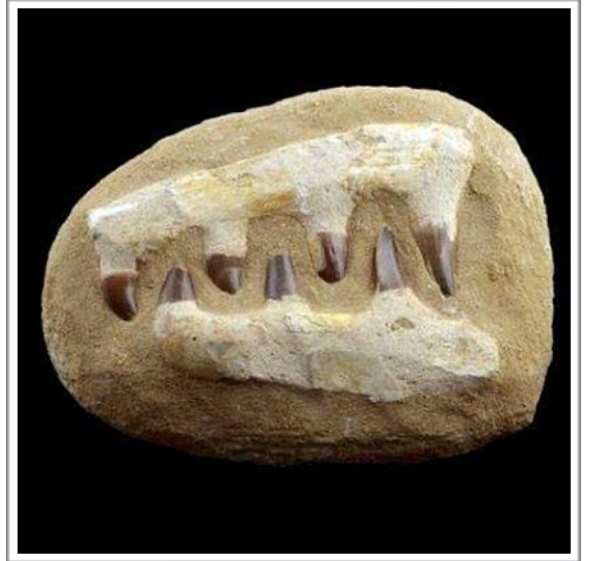
Some good news in this debacle is that not all fossils species are targeted. When investigating a fossil, two major things to consider are species and locale. Some more targeted items are fossils from China. Exporting fossils from China is illegal, therefore most are replicas. Also included are Moroccan trilobites, amber with vertebrate inclusions, dyed mammal bones, ammonites that are carved out of lime stone, Mosasaur teeth with roots, and Mosasaur jaws. When we consider pieces such as sharks teeth, it is easy to distinguish a replica from a natural tooth. Color, weight, and other details give the truth away quite fast. With a little bit more knowledge on Mosasaur teeth we can identify falseness. Some trilobites are a bit more difficult. There are some minor signs of impurity, but some are so well done that they have to be cut in half to tell. In the photos provided, we can see the resins and matrixes of the piece.

Condition	Explanation
Natural	Completely natural, except for measures to preserve (e.g. strengthening fragile matrix) the integrity of the piece.
Improved	Subject only to a treatment of the surface, such as slightly recoloring or treatment with a contrast-enhancing layer. Also very light polishing of the surface to give shine.
Restored	Restauration on a limited scale, such as filling in missing small chips, cracks or parts of shells.
Composed	The correct reassembling of disarticulated parts of the same individual, with documentation of the original condition of the find.
Reconstructed	Adding missing parts that have not been preserved.
Manipulated	Covering the fossil with a colored layer or plaster, often to hide preparation damage or missing parts. Highly polished fossils can also be regarded as 'manipulated'.
Assembled	Merging fossils or parts of fossils that are not originally found together, often in an artificial matrix.
Replica	Often a cast of an existing original fossil. Replicas are perfectly legitimate if they are marketed as such. It is deception when the replica is presented as real.
Art	Fully artificial totally fake, not based on an existing fossil.

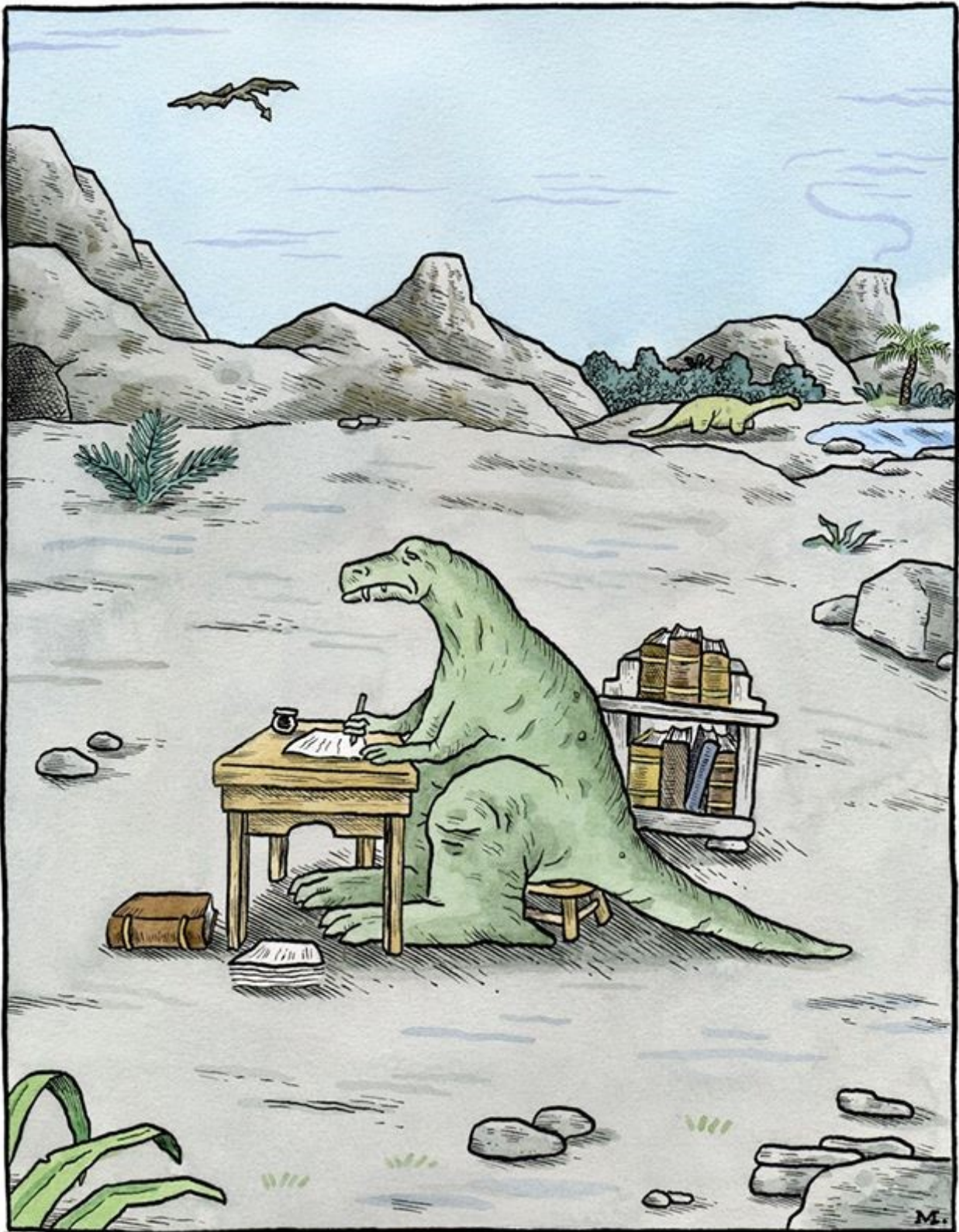
Pristine trilobites are molded with plastics and then placed into a matrix consisting of sand, rock, glues, etc. Add color as needed. The end result is a sellable high dollar piece. If you are in the market for a natural trilobite fossil look for a few signs. Some pieces have pores where air bubbles were created during molding. This of which can be seen in the first photo. Colors in the matrix will vary as well. Color in the trilobite itself can also vary. Shininess is not always a giveaway of plastics. This can sometimes happen from abrasives to clean it. One other way to tell the difference is a slight nibble or bite on the trilobite. Don't eat it now, but your tooth will leave an indent if molded. Many of us have a few or a lot of trilobites in our collection. Many US trilobites are generally safe. These fabricated trilobites are generated in other countries, more so in Morocco.

Our next example is that of an assembled fossil. If one didn't know this however, it could be quite a let down after purchasing. Areas of Morocco are littered with Mosasaur teeth. Most often found though are teeth alone. They are found with no roots and even more rarely found as a whole jaw. Some fossil dealers in Morocco take other mammal bone fragments, often those of goats, and use them to create roots and assembled jaws. Looking at the photos, we can see real teeth placed in two different matrix substances to create the jaw. Depending on your perspective, it is either a waste of money or a cool conversation piece.

Other than spending time with my son, the thing I love most about fossils and fossil hunting is the constant learning. It never fails to provide something new and exciting.



As mentioned before, I encouraged you investigate it further. Whether you hunt, trade, or buy, it is important to know exactly what we have, purchase or sell.



That nagging feeling that he would not be immortalized by his brilliant writings, but by something banal as his footprint or a tooth.



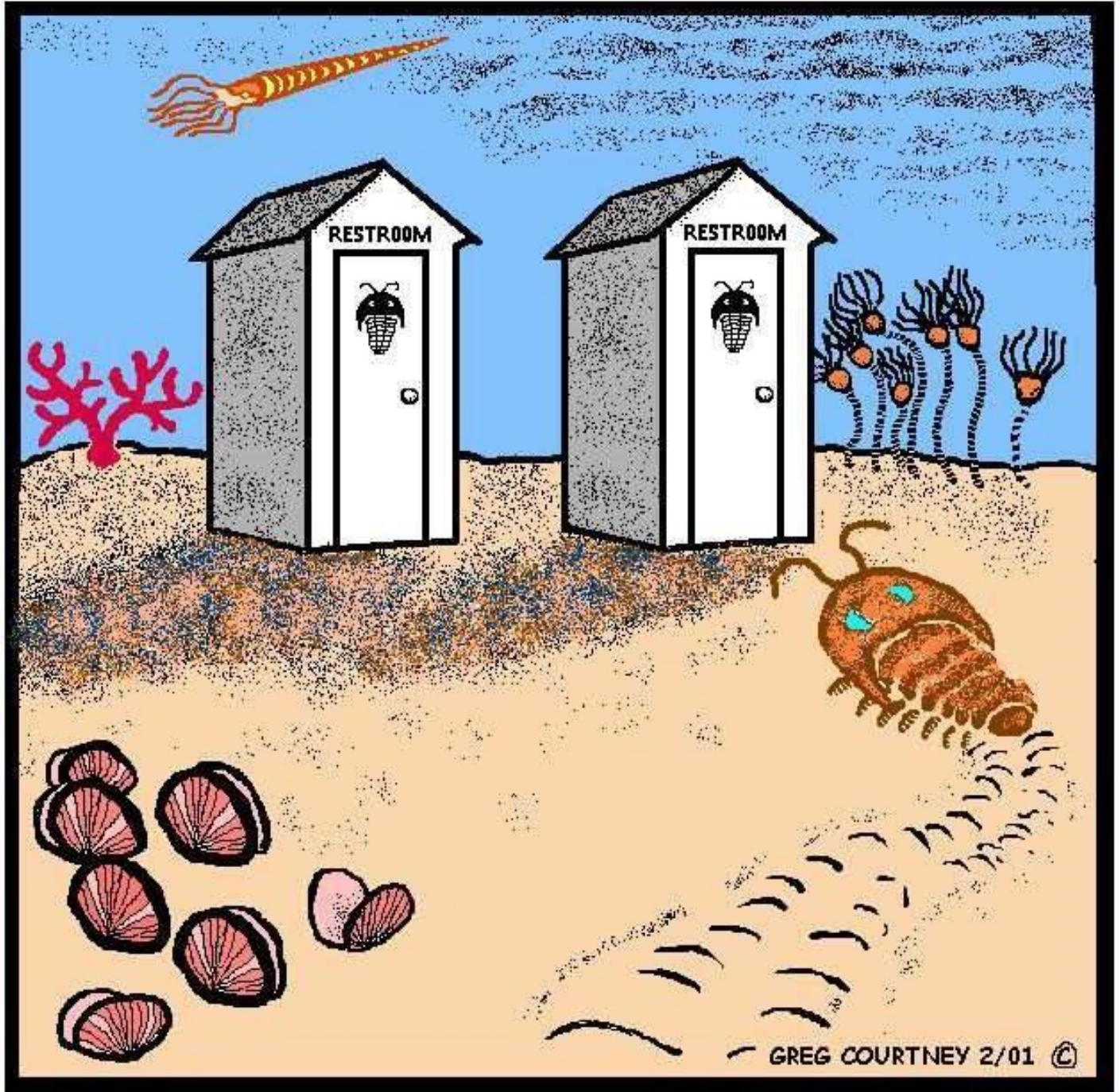
Thesaurus.

A big roach

101 million year old, ancient cockroach Blattoptera could reach the size of a domestic house cat.



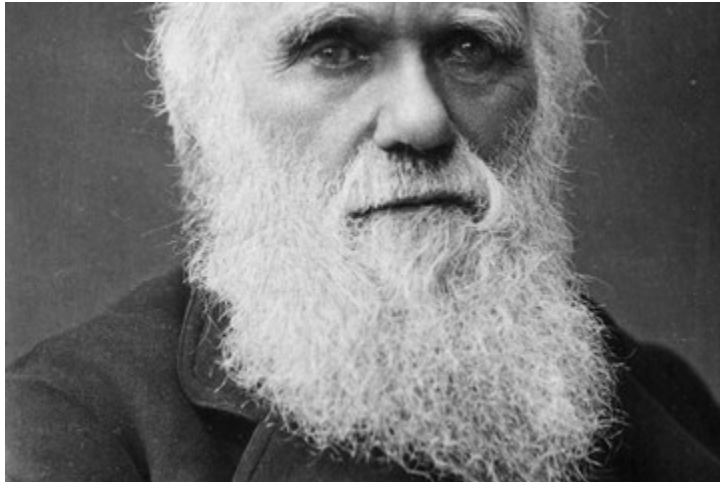
F@SSIL GRUBBING



ONLY THEY KNOW WHICH IS WHICH
(PALEONTOLOGISTS STILL CAN'T TELL THE BOY FROM THE GIRL TRILOBITES)

Darwin's 'Origin of Species' Voted Most Influential Academic Book

by Tia Ghose, Senior Writer | November 11, 2015 11:17am ET



Women's rights, the foundations of capitalism and the warping of space-time can all take a backseat to meticulous descriptions of long-beaked finches, at least if public opinion is any measure.

"On the Origin of Species," Charles Darwin's famous tome on evolution, has been voted the most influential academic book in history, according to an online survey answered by the public.

The biology bombshell edged out competitors such as "The Complete Works of William Shakespeare"; "On the Vindication of the Rights of Women," by Mary Wollstonecraft Shelley; "The Wealth of

Nations," by Adam Smith; and even physics classics such as the theory of general relativity by Albert Einstein and "A Brief History of Time," by Stephen Hawking.

A group of academic booksellers, publishers and librarians conducted the survey in advance of Academic Book Week in the United Kingdom. [[Creationism vs. Evolution: 6 Big Battles](#)]

Controversy and consensus

Darwin's famous book made a splash when it was first published in 1859, and it has been making waves ever since. The book, which emerged from the naturalist's observations as he traveled aboard the ship HMS Beagle, lays the groundwork for modern evolutionary theory, the process by which organisms change as a result of heritable changes. In Darwin's theory, species emerge through natural selection, where genetic changes lead some in a population to be more fit for their environment than their competitors. Over time, those with the genetic change may outcompete or outbreed their counterparts, causing those changes to become widespread. In one of the most iconic examples in the book, Darwin noted that, over time, the finches of the Galapagos Islands had evolved long or short beaks, depending on whether they needed to dig deep to access the food inside the cactus fruit.

From almost the instant the book was published, it sparked controversy, with many taking issue with its implications for religion and the origin of human beings. In the United States, for instance, conflicts arose when public schools began teaching the theory of evolution after World War I, with Tennessee passing a law stating that no theories of human origins taught in public schools could contradict the Bible. The law was tested in the famous Scopes Trial, and stayed on the books until 1968, when the Supreme Court ruled such laws contradicted the separation of church and state.

Despite the controversy, the theories laid out in the classic book have been validated time and again, and there is now broad scientific consensus that evolutionary theory explains how species, including humans, got to be the way they are. Despite this near-unanimous agreement among scientists, roughly half of Americans continue to reject the notion that humans evolved from earlier primates.

Academic Book Week is a week of activities, held from Nov. 9 to Nov. 16, related to the Academic Book of the Future project, launched in 2014 by the Arts and Humanities Research Council and the British Library to brainstorm what that future book looks like with the backdrop of open-access publishing and the evolution of digital publishing.

Follow Tia Ghose on [Twitter](#) and [Google+](#). Follow Live Science [@livescience](#), [Facebook](#) & [Google+](#). Original article on [Live Science](#).

RIVER FOSSIL HUNTING TRIP!!

We have a walk-in Peace River trip planned for December 19. If this crazy weather and unseasonal rains straighten out, we will do it. If the river is still too high it may have to be put off. The final decision will be announced at the December 17 Christmas meeting, as well as the exact place on the river that we will meet.



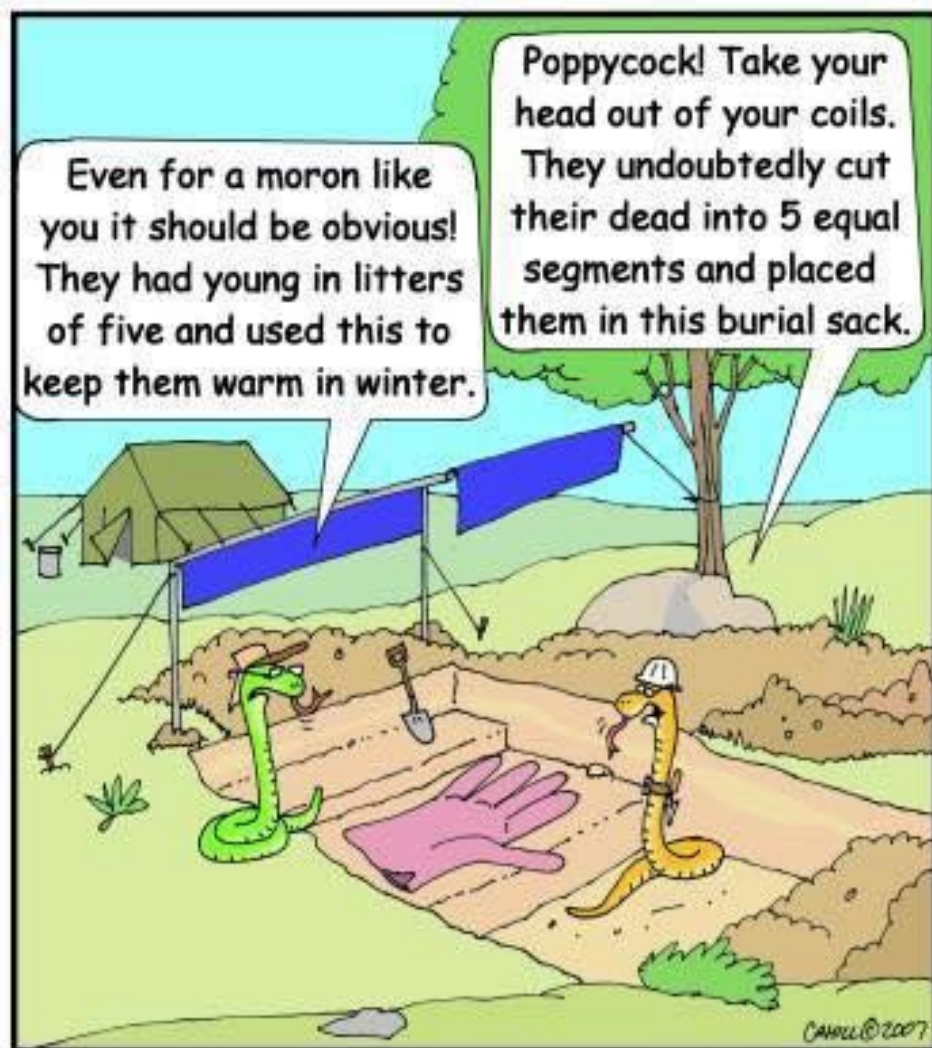
By: Christopher Pitts in a facebook post

Community outreach!!

If any member is interested in doing a possible presentation at the Fort Myers Beach Library, here is the communication about it from the library's coordinator. SHARE your knowledge and fossil passion!!

Tell others about the great hobby and science of paleontology and SW Florida fossil collecting!! Maybe a couple of members want to join together on this?

Louis



Yet another clash of theories between
noted snake archeologists

Aimeee's Corner!!

Dreaming of Weekend Fossil Trips...

Florida fossil hunters have the opportunity to collect beautiful shale plant fossils within the confines of a long weekend. The 11 hour drive from Ft. Myers to the tiny town of Trenton in north Georgia might put off some people, but FCOLC members are made of stronger stuff. The

digging site, an old coal mine dump overgrown with trees, is extremely easy to access and is located in the geologic province known as the Appalachian Plateau.

The rocks of this area are sedimentary and contain fossils belonging to the Paleozoic era, deposited in a shallow sea that covered most of north America between the Cambrian and Pennsylvanian periods (504-300 million years ago).

I recently took a short detour on a long road trip in order to check out this location and it did not

disappoint. The GPS on my phone got me to Trenton and I talked with some locals at a convenience store to fine-tune the directions I'd downloaded from the internet. Just another unassuming pile of dirt with a fantastic trove of shale treasures hidden inside.

This particular shale, however, was some of the most fragile shale that I've handled to date, and

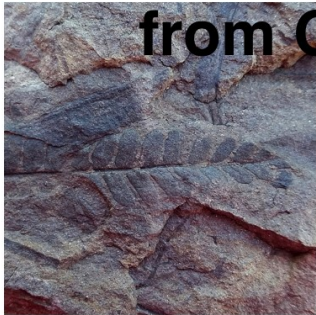
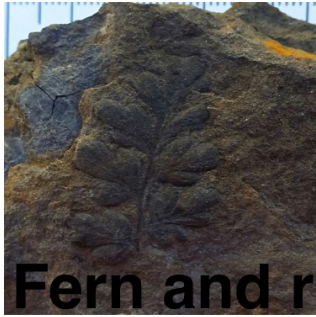
after dealing with the Green River Formation shale of Wyoming, that's saying something! I only

had a couple of hours, as usual, so I started pulling chunks of shale out of the muddy hillside,

splitting them with a rock hammer (although a putty knife would've done the trick), and hoping

for something good. The majority of the dark shale where I was digging was composed of compressed layers of an unidentified plant material resembling palm fronds, but the rarer pieces

of tan shale yielded an impressive variety of fern leaves, rush stems, primitive tree bark, etc. that create a tantalizing vision of the ancient swampy forest that once covered the land. I've included a few photos to give you an example of what I found. This geologic time period also produced 6' long millipedes and dragonflies with 29" wingspans. Looks like I'll need to plan another visit.



**Fern and rush fossils
from Georgia**



**Pennsylvanian era plant
fossils from Trenton, GA.**



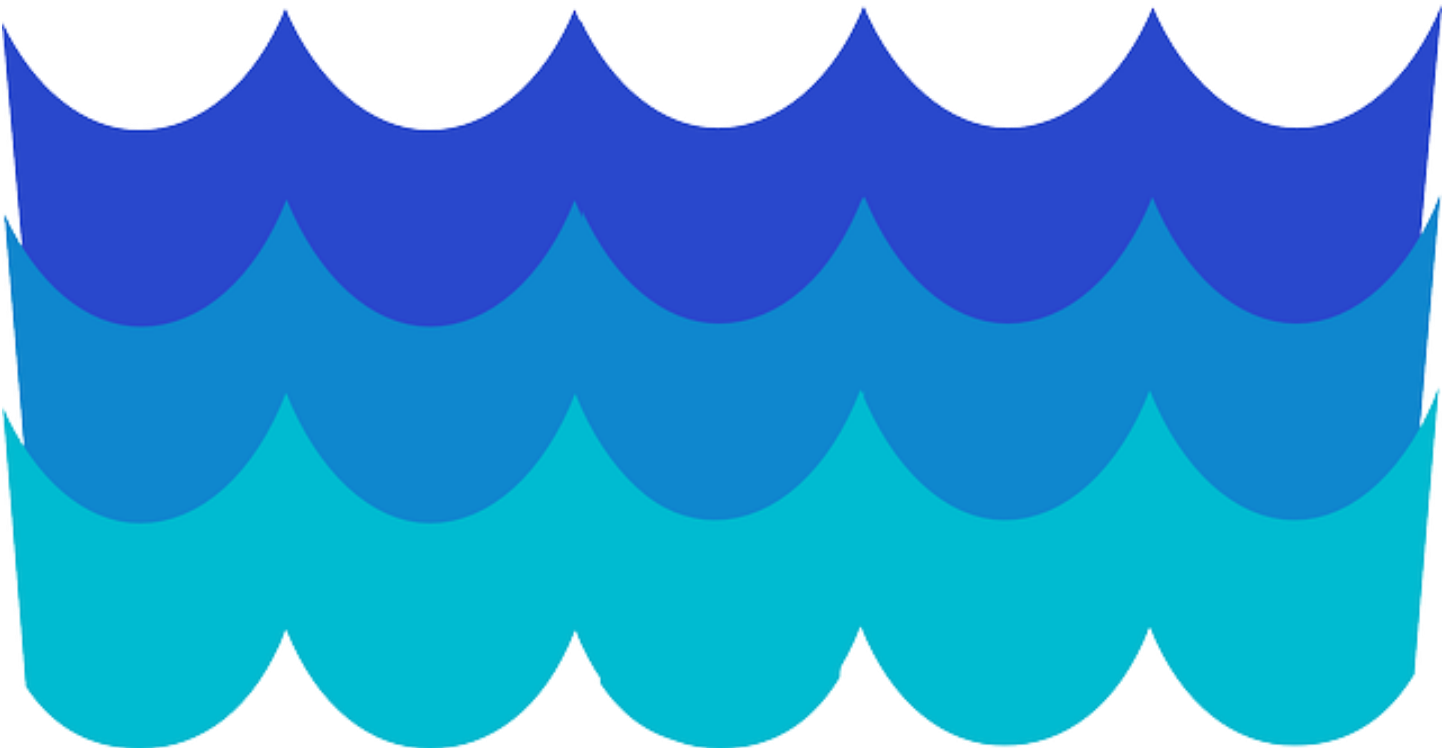
**Shale from Trenton, Georgia, composed of
compressed plant material.**

Aimee, with a beautiful Tampa Bay coral. She and Joe made a trip to the Withlacootchee River and collected some great corals!





SANDSHARK!!



Ancient Tiny Whale Hunted with Pointy Teeth, Oversize Gums

by Laura Geggel, Staff Writer | December 02, 2015 09:17am ET



The sharp and pointy teeth of *Fucaia buelli*. Credit: in *F. buelli*, Marx said.

Before baleen whales developed their iconic bristled filter-feeding structures, they relied on their pointy teeth and a suctioning method to nab and gulp down prey, a new study finds.

The findings are based on the fossilized remains of a newfound species of early baleen whale. Paleontologists Jim Goedert and Bruce Crowley, both researchers at the Burke Museum at the University of Washington in Seattle, discovered the fossilized whale off the northern tip of Washington's Olympic Peninsula.

At 30 million to 33 million years old, the newly identified species of whale is one of the oldest and smallest known baleen

whales to swim around Earth's oceans, said Felix Marx, a postdoctoral fellow at the National Museum of Nature and Science of Japan and the study's lead researcher. [[Whale Album: Photos Reveal Giants of the Deep](#)]

The whale measured just over 6.5 feet (2 meters) long, making it much smaller than today's smallest baleen whale, the 21-foot-long (6.4 m) pygmy right whale, and almost 14 times smaller than the 90-foot-long (27.5 m) blue whale, the largest modern baleen whale.



R. Ewan Fordyce studies the remains of the ancient whale, including its skull, teeth and vertebrae. Credit: Courtesy of R. Ewan Fordyce

Moreover, the newfound whale skeleton has 17 preserved teeth — a finding that reveals information about how these early whales hunted and fed, Marx said.

He and his colleagues named the new species *Fucaia buelli* after the Strait of Juan de Fuca, where they found the whale, and Carl Buell, an illustrator known for drawing living and extinct marine animals.

Toothy whales

Modern baleen whales don't have teeth.

"Instead, they filter small animals directly from the water using a series of comblike baleen plates suspended from their upper jaws," Marx told Live Science in an email.

But the baleen whales' ancestors — including *F. buelli* — did have teeth, raising the question of how baleen whales lost their teeth without losing the ability to hunt and feed during the transition to baleen-only feeding. Some studies suggest that ancient whales had teeth and then developed baleen before losing their teeth.

"However, *Fucaia* now shows that the transition was probably more complex," Marx said. "The teeth of *Fucaia* are so large that they line the entire upper jaw, and thus simply leave no room for baleen. Wear on the teeth also shows that the upper and lower teeth sheared against each other as the mouth opened and closed; thus, any baleen that might have been present would constantly have been caught between the teeth."

Even without baleen plates, *F. buelli* would have been a successful hunter, Marx said. The researchers sug-

gested that the whale used its teeth and a suctioning technique to capture prey, or at least it caught prey with its teeth, and then sucked it to the back of its mouth to swallow it.

"Suction feeding is common among living marine mammals, and seen in many [living] toothed whales and dolphins, as well as the gray whale," Marx said.

Two key features suggest that *F. buelli* used this suctioning to filter food from the water, he said. First, the fossils indicate that the whale had large gums, which could have helped the creature seal off the sides of its mouth when its jaws were slightly opened.



Researchers found the fossil whale off of Washington's Olympic Peninsula, and named the genus after the Strait of Juan de Fuca. Credit: Marx FG, Tsai C-H, Fordyce RE. R. Soc. open sci. 2015

"The effect of this would be to reduce the size of the mouth opening, and thus to concentrate the flow created by suction at the tip of the snout," Marx said. [[Marine Marvels: Spectacular Photos of Sea Creatures](#)]

Secondly, living whales create suction in their mouths by using strong muscles to pull the tongue and throat backward and downward. Fossil evidence suggests that some of these muscles were well developed in *F. buelli*, Marx said.

This suctioning technique could have eased the transition from toothy to baleen-only whales, he said.

"As whales evolved better suction, they were able to catch smaller prey than teeth alone could handle but, at the same time, needed a more efficient way to expel the water sucked in with the food," Marx said. "This need is perfectly matched by baleen, which developed from the already enlarged gums and provided an easy way to expel excess water while, at the same time, retaining the prey inside the mouth."

The new study is an exciting "solid paper," said Jorge Velez-Juarbe, a curator of marine mammals at the Natural History Museum of Los Angeles County who was not involved in the new study.

"The description is fantastic," Velez-Juarbe said. "I think it helps us understand the early evolution of this group of whales."

The study was published online today (Dec. 2) in the journal Royal Society Open Science.

Follow Laura Geggel on Twitter [@LauraGeggel](#). Follow Live Science [@livescience](#), [Facebook](#) & [Google+](#). Original article on [Live Science](#).

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/>



Find us on:
facebook®

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/>

Unseasonal rains!!

This is my rain gauge I keep in my back yard, here in Cape Coral. Almost 5 inches in about 14 hours! (Good thing it was no more, or the wasp nest that found its' way inside would have got drowned out!) This was a couple of days into December, when we normally have dry weather.

Normally, at this time of the year we are preparing to start fossil hunting in the local rivers and creeks, but, like last year, normal is not normal anymore! All the rivers and creeks rose swiftly and are still high! Let's hope for less winter rains this year, and getting back to our seasonal pattern.



11th ANNUAL

SAT.FEB.13.2016. 9^{AM}-5^{PM}

FOSSIL FESTIVAL

THE SHELL FACTORY 2787 N.TAMIAMI TRAIL
FORT MYERS.FL.33903

- Silent Auction and Grand Raffle
- Fossils and Minerals for Sale
- Kids Dig
- Games
- Food and Fun
- Free Fossil Museum & Exhibits



The
Fossil Club
of
Lee County

www.fcolc.com

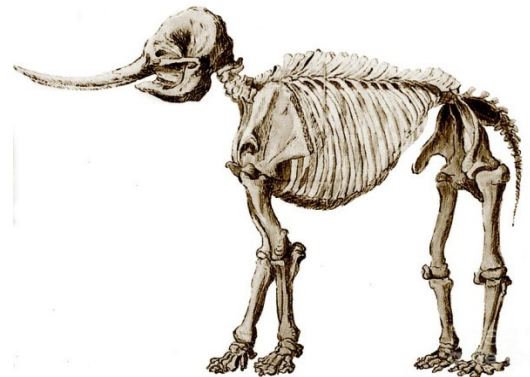


FOSSIL SHOW

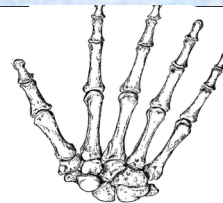
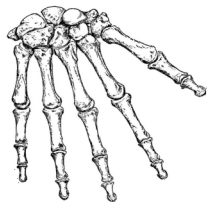


**Saturday, April 2
10:00 a.m. – 4:00 p.m.**

Come to Rotary Park Environmental Center to learn about Florida's pre-historic past and maybe take a piece home with you. Come to shop or talk with experienced fossil hunters to learn all about the fascinating fauna of Florida's prehistoric times. Something for everyone: fossils, gems, Calusa Indian art, children's activities and more!



**Vendor spaces available!
Call for details and to reserve your space (239)549-4606**



Admission is just \$3 at the door! (Under 10 FREE)

For more information contact: Rotary Park

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

E-mail: rotaryparkinfo@capecoral.net
www.CapeParks.com
<https://www.facebook.com/CapeCoralParks>