



FOSSIL CLUB OF LEE COUNTY

JUNE 2015

Letter from the President

By the time you read this, our river fossil hunting season may be over! Or--it may not!! This year has been a crazy one, as far as water levels in the local rivers and creeks. We had to cancel every canoe trip and river trip we scheduled this year! Some of you have been able to get out recently since the water has FINALLY come down, but with almost daily rains, it's threatening to rise quickly. I've heard of a few good finds, and I ask that you send me pictures and a story so that we can all share in your discoveries. Show and tell is a big part of our club, and we all learn from, and enjoy, seeing each other's fossils.

After a fossil festival committee of Dean Hart, Jeanne Seehaver and myself having a meeting at the Shell Factory with Rick Tupper, the date for our next fossil festival was changed to February 13th, 2016.

This is the day before Valentine's Day. The previous date of February 6 conflicted with the Ft Myers Art Fest, which typically draws upwards of 80,000 people. We did not want to compete with that venue if possible.

Letters to potential vendors will go out shortly, announcing the 2016 Fossil Festival, with follow-up information for those interested in attending. Our festival will be totally outside, under tents, Like the Venice Shark Tooth Festival.

We anticipate a fun, festival atmosphere, with music and activities and excitement. The February date should get us more attendance from the seasonal residents and the normal great weather should help as well. Members will be informed of show developments as they progress and asked to participate as much as possible.

Our speaker last month, Bryan Roberts, gave a very, very nice presentation. He spoke about the fossils of the Green River Formation and besides a nice power point slide show he brought some beautiful world class fossils.

The speaker for this June meeting will be the president of the Southwest Florida Fossil Society, Chuck Ferrera. He has put together an interesting presentation about Florida fossils and also a section of concern to all of us--the loss of fossil hunting locations. I ask that you all attend and listen to his presentation.

The summer months are now upon us. Many members will be taking a vacation somewhere. If you are interested in fossil collecting at your visited locality perhaps check out the FOSSIL PROJECT web site and try contacting a club in the area you are going to. The FOSSIL PROJECT is a community of clubs, professionals, and museums that aim to enhance communications between the three. Give it a look at: www.myFOSSIL.org

To follow on facebook, go to: www.facebook.com/TheFossilProject

The summer months also affords us the opportunity to regroup, organize the collections, build and/or repair any hunting equipment needed for next season, and read up on fossils to learn more about what you have, and how they came



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to be there. Visit local museums with fossils, check out displays in the area, and get with other members to show and tell and share. Fossils can still be an active hobby, even though you may not be in the field collecting them. Between the many online dealers, auction sites such as EBay, Face Book fossil sites, and other online resources, you can keep the interest going all summer long. You can also take your time and write a nice article for the newsletter about your favorite fossil, or collecting trip, or fossil show, or museum display, or anything of interest to you. I am always asking members for an article for the newsletter. I think it's way more interesting when we have contributions from different members. So, write 'em. Send 'em. We'll print 'em!!

Sandy Schwartz designed a fossil collecting bag a couple of years ago, and I have used one ever since. She improved the standard "nail bag" by putting a mesh "screen" in the rear, which allows water and fine sand to fall through, but the fossils to stay. She had donated a couple for the auction and they were very popular. I have contracted a family member to make us some of these, and upon completion, will be available in the club store. The cost will be higher than the typical do it yourself lumber yard nail bags, but these will work so much better! (I mean, almost guaranteed to find fossils! :-))

As of this printing the agenda for the July meeting will be fossil river matrix hunting! We will hunt for fossils (albeit small ones) at the meeting. We do this every couple of years, and it's always a fun meeting.

So, get your tweezers and magnifying glass ready!

Don't forget your show and tell fossils! Bring recent finds as well as ones you want to show off. We all learn from this, so don't be shy!

See you at the meeting!!

Louis Stieffel

SOME OF THE BEAUTIFUL AND RARE FOSSILS FROM THE GREEN RIVER FORMATION! THESE WERE BROUGHT IN AS PART OF THE PRESENTATION BY THE MAY SPEAKER, BRIAN ROBERTS.



Fossil Club Meeting Of MAY 21, 2015

Louis Stieffel president called the meeting to order with 29 members present.

Louis explained how the door prizes and raffle worked and then also explained what is available at the club merchandise table.

Refreshment reimbursement level explained, from the decision arrived at from the recent board meeting. \$40.00 all meetings except

November, January and February which will be \$80.00 because of the influx of snowbird members.

The Seehavers volunteered to do the August refreshments.

Gunther was thanked for the April refreshments, which he donated.

Dean Hart was thanked for the May refreshments, also donated.

Show-n-tell etiquette was discussed such as not picking up someone's fossils without permission due to the fragile nature of most fossils..

Fossil Identification's need to be improved by all members as was demonstrated at the April meeting. Usage of the club lending library was encouraged.

Curtis Klug the designer of our Web page was thanked.

Name tags were up to date and anyone not with a name tag please let Al Govin know. By the June meeting new lanyard name tags will hopefully be available.

Anyone with media contacts please let Dean Hart or Louis Stieffel know for upcoming shows.

At the April 20th board meeting various outreach programs were discussed.

Upcoming Fossil Show was discussed and a meeting with Shell Factory personnel was discussed.

Speaker for evening was Brian Roberts and he spoke about fossil collecting in the Green River shale deposits. He also brought along some beautiful specimens.

Greenriverpaelo.com recommend as a source of information.

June meeting will have Chuck Ferrara as a speaker from the Southwest Club.

July meeting we will possibly have a micro matrix fossil hunt at the meeting.

August meeting will be a show and tell as well as exchange, trade or sell meeting.

Memorial day weekend will have a membership drive at the Shell Factory and Dean Hart is looking for some volunteer help for the club booth.

Show and tell was held. Participants were Gunther Lobisch, Dean Hart, Brenda Klaas, Jack Boyce and Louis Steiffel.

Minutes by Al Govin secretary/treasurer.

OFFICERS

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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

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](mailto:FCOLC@c/o%20Al%20Govin%2016331%20Estuary%20Ct.,%20Bokeelia,%20FL,%2033922)

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.

Fossil Pearl

Fossil pearls are very rare. In twenty years plus of collecting invertebrates I've only found two. I know of very few found by other collectors, but if you wash your sediment from the shells you find you may discover one yourself. Here is a story of the first one ever found in Australia.

<http://www.msn.com/en-us/news/world/2000-year-old-natural-pearl-found-at-remote-australian-site/ar-BBkCP1b>

Second First Floridians First Americans Conference will be in the Monticello, Florida Opera House on October 1, 2, 3, 2015. We will present 22 speakers and an Exhibit hall will include displays of pre-Clovis artifacts and an artifact identification booth where private collectors can learn the age of their finds. Because of the stature of the Page-Ladson site, our speakers include Dennis Stanford of the Smithsonian, Michael Waters of TAMU and others, some of the foremost Paleolithic scholars in the Western Hemisphere. The Conference is free to the public.

Registration is open at <http://www.firstfloridiansconference.com>.

Contact: Anne H. Holt, Coordinator, ahholt@ahholt.com, 850-576-0721

June regular meeting speaker

The speaker for the FCOLC regular June, 2016 meeting will be Chuck Ferrera. Chuck is the president of the Southwest Florida Fossil Society.

He has put together a presentation about fossils, collecting and why they are interesting. He also will discuss the issues of fossil collecting areas being made unavailable to collect in anymore, and why.

Chuck is an interesting, spirited speaker and I urge all of you to attend and listen to what he has to say. As a fellow club member, he has a lot of ideas and knows firsthand what we are all about.

OUR SPEAKER BIO:

CHUCK FERRARA THE PRESIDENT OF SFFS HE HAS ALWAYS HAD AN INTEREST IN THE OUTDOORS AND SCIENCE, WHICH STARTED WHEN HIS DAD WOULD TAKE HIM METAL DETECTING WHEN HE WAS IN THE BOY SCOUTS. HAD A STRONG INTEREST IN THE MARINE AND EARTH SCIENCES . JOINED THE SOCIETY IN 1999. WORKED HIS WAY UP AND BECAME THE CURRENT PRESIDENT. HE IS SELF TAUGHT. HAS A SPECIMEN DONATED TO THE SMITHSONIAN. CONDUCTS MANY TALKS FOR OUTREACH AND EDUCATION . CURRENTLY IS OVERSEEING THE SOCIETY'S TRANSITION TO NOT FOR PROFIT . HAS BEEN THE FIELD TRIP COORDINATOR FOR MOST OF THAT TIME TAKING MEMBERS OUT SHOWING, SHARING, LEARNING TOGETHER. HIS PRESENTATION WILL BE ON "FLORIDA FOSSIL ADVENTURES -RIVERS ,MINES ,DIVING AND THE FUTURE OF FOSSILING " THIS POWERPOINT WILL HIGHLIGHT THE FUN THAT MEMBERS HAVE OUT FOSSIL COLLECTING, THE PLACES YOU GO AT DIFFERENT LOCATIONS, WITH LOTS OF PICS , AND WHY FLORIDA IS SUCH A GREAT FOSSIL LOCALITY. THE LAST PART OF THE PRESENTATION WILL HIGHLIGHT ETHICS ,POLITICS, THE FOSSIL PROJECT AND WHAT THE FUTURE HOLDS .YOU DON'T WANT TO MISS THIS GREAT PRESENTATION!

This June, the Alabama Museum of Natural History is hosting the 37th Museum Expedition, an in-residence, full-immersion field camp designed for science enthusiasts to participate in field research and experience a full field camp. This year Expedition will focus on paleontology in Greene County, Alabama. The sites we are visiting are deposits laid by Late Cretaceous seas which covered much of the state. We offer three weeks of camp: one for middle school students, one for high school students, and one for the general public. If you are interested in finding out more about Expedition, please visit <http://almnh.ua.edu/summer-expedition.html> or call 205-348-7550.

We look forward to hearing from you soon!

Sincerely,
The Alabama Museum of Natural History

TAKING CARE OF OFF-SEASON BUSINESS!

With the river levels rising again, our short hunting season THIS YEAR will be shutting down for several months. Now is the time to prep and organize your fossils and make proper labels for them.

It is also a good time to check your fossil permit and make sure its current or if you need to renew it. The fossil permit is REQUIRED to collect on Florida state lands. If renewing you must send a separate piece of paper stating the finds you made, on state lands.

Invertebrate fossils are exempt. Private property collecting is exempt. The purpose for this declaration is so that the museum can have an idea of what is being collected. In the VERY RARE event that a fossil found is needed for the museum collections,

you may be asked to donate it to them. Please be honest when listing the fossils you found as it is important. Personally, I would be more than happy to donate a fossil, if needed. Better in that collection than in mine! I would feel honored to have a fossil in that fantastic collection!

The fossil permit information is in this newsletter on the page titled "Websites & Locations of Interest". A fossil permit cost \$5. What a deal!!

NATIONAL FOSSIL DAY--2015

I wanted to make an official invitation to the Fossil Club of Lee County, as a National Fossil Day Partner with the National Park Service, to attend this year's NFD Mega event at the South Florida Museum in Bradenton. The museum has officially set the date for **Saturday October 3rd 2015**. I wanted to make sure we got on your organization's calendar early in the year to help make sure this year's event is even bigger than the last!

Thank you again for your time, and your continued support of paleontological education!

Paul Roth

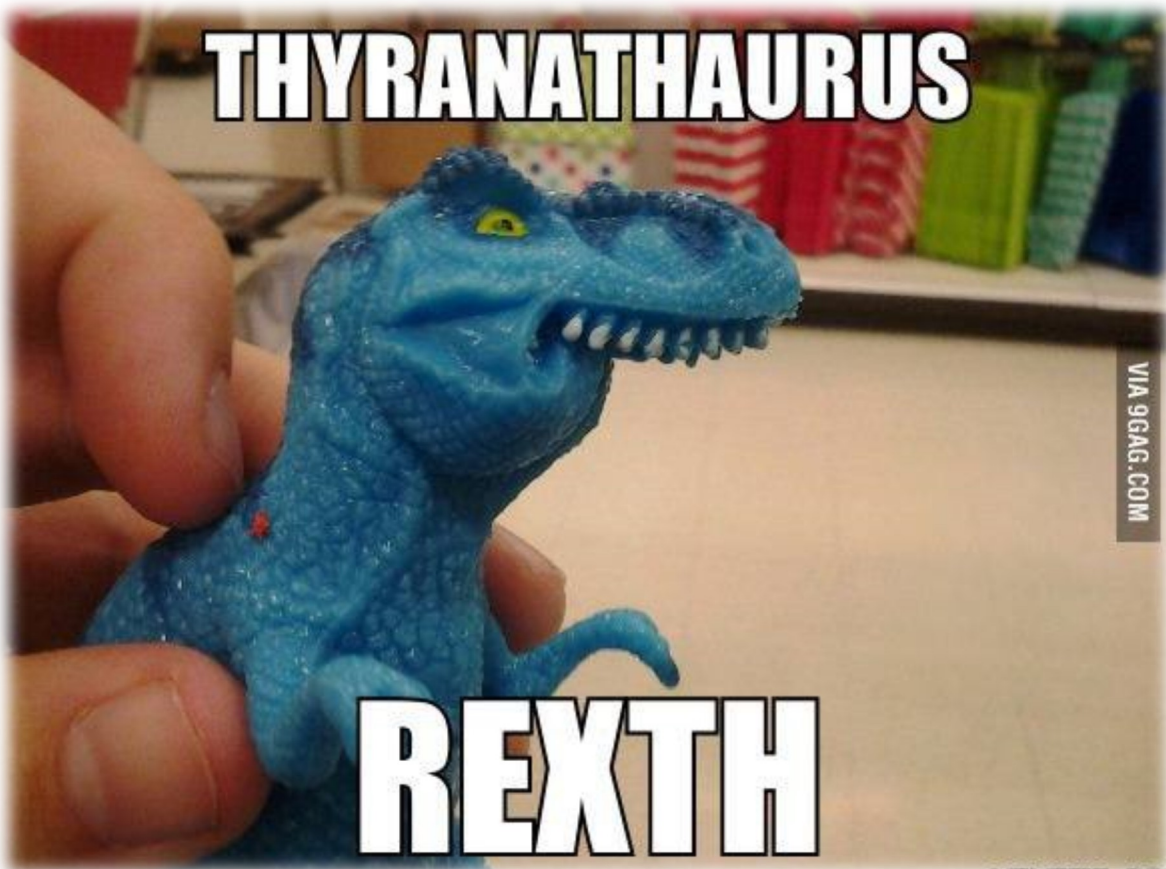
Interesting fossil shark tooth information.

Here is a theory on *Chubutensis*, size and evolution. <http://community.blackriverfossils.org/Forums/tabid/55/forumid/1/threadid/332/scope/posts/Default.aspx>

chubutensis vs. megalodon - Shark Teeth - Black River Fossils

community.blackriverfossils.org

Discuss Fossil topics on Black River Fossils Forums.



From Facebook.

RIVER LEVELS!!

This picture, taken towards the end of May, shows the water level in this creek almost too low to hunt. It's hard to screen wash if there is no water!

Now, with the rains starting, these creeks and rivers will be getting so deep and fast we will not even be able to get in them. So--since the rains are so sporadic for this time of the year, and the normal heavy rains are not here yet, you should try to get out and hunt while you can! This creek is now about four foot deep!



FOSSIL HUNTING PROBES!!

Many of us use probes while hunting. One of the simplest and most effective one seems to be a old golf club with the end cut off.

The handle is comfortable and the point penetrates the ground to feel underneath. These also double as a holder of your screen in the water and a makeshift support to hold the screen to look through it.

I saw this group at a thrift store the other day, for a buck each. I'm sure almost every thrift store has some. My choice is a driver, since it's longer. I also prefer the graphite ones as they are strong but very light.

Using a hacksaw to cut the bottom end off, leaves the grip as the handle and the smaller point at the bottom. But, like with sifting screens, there are other ideas on this. Dave Seehaver likes his grip end cut off so that he can use the club end (in this case a wedge) as the handle. I say--whatever works!!

Louis



It's not always about the fossils!

This scene was spotted near Horse Creek, while preparing to start fossil hunting. A rare sighting of a Canadian Goose stalking the elusive Flamingo! Until you see this in the wild you don't even know it happens. You just can't make this sort of tale up! Keep your wits about you in the wild!!





Skull of Giant Pliocene Sea Cow Discovered at Otay Ranch, May 2000

On 23 May 2000 Pat Sena, a field paleontologist with the San Diego Natural History Museum, discovered a complete skull of the giant Pliocene sirenian (sea cow) [*Hydrodamalis cuestae*](#) at a construction site at Otay Ranch in Chula Vista. This extinct species of marine mammal lived in the North Pacific region during latest Miocene through late Pliocene time, approximately 6 to 2 million years ago. It is estimated that *H. cuestae* reached a maximum body length of about 9 meters (30 feet) and probably weighed close to 10 metric tons. *Hydrodamalis cuestae* is a fossil species considered to be ancestral to Steller's Sea Cow (*Hydrodamalis gigas*). A population of approximately 2000 individuals of *H. gigas* was discovered in 1741 living around Bering Island and Copper Island in the Aleutian Archipelago. Less than 30 years later this species was extinct, the victim of overhunting by Russian sailors. *Hydrodamalis gigas* was almost as large as its fossil ancestor and was a marine herbivore, feeding primarily on brown and red algae. The extinct species of *Hydrodamalis* were cold adapted sirenians related to the still living Dugong of the tropical Indo-Pacific region. On 23 May 2000 Pat Sena, a field paleontologist with the San Diego Natural History Museum, discovered a complete skull of the giant Pliocene sirenian (sea cow) [*Hydrodamalis cuestae*](#) at a construction site at Otay Ranch in Chula Vista. This extinct species of marine mammal lived in the North Pacific region during latest Miocene through late Pliocene time, approximately 6 to 2 million years ago. It is estimated that *H. cuestae* reached a maximum body length of about 9 meters (30 feet) and probably weighed close to 10 metric tons. *Hydrodamalis cuestae* is a fossil species considered to be ancestral to Steller's Sea Cow (*Hydrodamalis gigas*). A population of approximately 2000 individuals of *H. gigas* was discovered in 1741 living around Bering Island and Copper Island in the Aleutian Archipelago. Less than 30 years later this species was extinct, the victim of overhunting by Russian sailors. *Hydrodamalis gigas* was almost as large as its fossil ancestor and was a marine herbivore, feeding primarily on brown and red algae. The extinct species of *Hydrodamalis* were cold adapted sirenians related to the still living Dugong of the tropical Indo-Pacific region. On 23 May 2000 Pat Sena, a field paleontologist with the San Diego Natural History Museum, discovered a complete skull of the giant Pliocene sirenian (sea cow) [*Hydrodamalis cuestae*](#) at a construction site at Otay Ranch in Chula Vista. This extinct species of marine mammal lived in the North Pacific region during latest Miocene through late Pliocene time, approximately 6 to 2 million years ago. It is estimated that *H. cuestae* reached a maximum body length of about 9 meters (30 feet) and probably weighed close to 10 metric tons. *Hydrodamalis cuestae* is a fossil species considered to be ancestral to Steller's Sea Cow (*Hydrodamalis gigas*). A population of approximately 2000 individuals of *H. gigas* was discovered in 1741 living around Bering Island and Copper Island in the Aleutian Archipelago. Less than 30 years later this species was extinct, the victim of overhunting by Russian sailors. *Hydrodamalis gigas* was almost as large as its fossil ancestor and was a marine herbivore, feeding primarily on brown and red algae. The extinct species of *Hydrodamalis* were cold adapted sirenians related to the still living Dugong of the tropical Indo-Pacific region.



Figure 1. View of newly discovered sea cow skull encased in plaster and burlap field jacket. Note that the skull is still partially entombed by sandstone and cobble matrix. The large central opening in the skull is the nasal passage. Scale is in cm.

The new skull is the most complete and best preserved specimen of *Hydrodamalis cuestae* known and was discovered in Pliocene-age marine sandstones of the San Diego Formation as exposed at Otay Ranch. Otay Ranch is being developed by the Otay Ranch Company as a planned community. The fossil was discovered as graders were constructing the Village 1 West phase at Otay Ranch. Recovery of the specimen took about four hours and was conducted by Museum staff (Richard Cerutti, Scott Musick, and Pat Sena) under contract to the Otay Ranch Company. Recovery did not interfere with the construction schedule. The skull is now being prepared in the fossil preparation lab at the Museum.

Text and photographs: Dr. Tom Deméré



Figure 2. View of partially uncovered skull after 4 days of preparation. View is from the right front side and shows the large narial opening and rectangular brain case. The skull measures 79 cm (31 in.) in length.

FOSSIL IDENTIFICATION:
UNIDENTIFIED SHARK TOOTH TURNED
OUT TO BE PEANUT BUTTER!! THAT'S
ONE YOU DON'T SEE IN THE BOOKS!



Huge Dinosaur Thighbone Found on Washington Beach

by Laura Geggel, Staff Writer | May 20, 2015 03:10pm ET



The study's two authors, Christian Sidor, Burke Museum curator of vertebrate paleontology, and Brandon Peacock, University of Washington graduate student, compare the recently found fossil (right) with a cast of a *Daspletosaurus* femur (left).

Credit: Photo courtesy of the Burke Museum

A fragmented femur bone hidden underwater for millions of years has become the first evidence that a dinosaur once roamed Washington, a new study finds.

And not just any dinosaur: This beast was a theropod — a two-legged, mostly meat-eating group of beasts, such as *Tyrannosaurus rex* and *Velociraptor*, that are related to modern-day birds, the researchers said.

Scientists found the 80-million-year-old fossil of the dinosaur when they were searching for ammonites — extinct marine invertebrates with spiral shells — and other fossilized animals. They had focused their field-work in the San Juan Islands, an archipelago located a short ferry ride away from the Seattle area. [[See Images of the Fossil of the First Dinosaur Found in Washington](#)]

In April 2012, when the tide was out, they noticed a fossilized bone embedded in the marine rock. The researchers immediately contacted paleontologists at the University of Washington, who sent out a team in May of that year to excavate the fossil with a rock saw.

"The rock there is tremendously hard, so it took them a full day to excavate it," said Christian Sidor, a co-author of the study and a curator of vertebrate paleontology at the Burke Museum at the University of Washington.

Sidor and his colleagues spent about a year and a half preparing the fossil, and "for the longest time, I was unconvinced that we were going to be able to say anything else besides 'It's a large bone,'" he told Live Science. "What was exposed on the surface really had no anatomy. I couldn't tell if it was a dinosaur, couldn't tell if it was a marine reptile, couldn't tell anything about it."

The fossil, embedded in marine rock at Sucia Island State Park in the San Juan Islands, gets a look by Adam Huttenlocker, at the time a University of Washington graduate student and Burke Museum paleontologist. Credit: Photo courtesy of the Burke Museum



But once they removed the fossil from the rock and flipped it over, the researchers saw several telltale signs that the fossil was half of the left femur (thighbone) of a theropod dinosaur. It measures 16.7 inches long by 8.7 inches wide (42 by 22 centimeters) but would have been almost 4 feet (1.2 meters) long — or slightly smaller than a *T. rex* thighbone — before it broke, the researchers said.

Several clues suggest the fossil belonged to a [theropod](#), Sidor said. For instance, the fossil once had a hollow middle cavity, which was unique to theropods during [the late Cretaceous period](#). (Now, the hollow portion is filled with rocks and fossilized clams, Sidor said.)

"That's one really great diagnostic feature for carnivorous dinosaurs, or theropods," Sidor said. "You always hear about *T. rex* having hollow bones or *Velociraptor* having hollow bones. Modern birds have hollow bones, and that's one of the features that links birds and theropod dinosaurs."

Moreover, the bone has a feature positioned closely to the hip, called a fourth trochanter — another indication it belonged to a theropod, he said.

But, "that's it," Sidor said. "We're lucky we got what we got." [[Wipe Out: History's Most Mysterious Extinctions](#)]

The researchers were able to paint a more detailed picture of this creature by analyzing its surroundings. They uncovered the specimen near fossils of the [clam species](#) *Crassatellites conradiana*, which lived in shallow water, the researchers said. These clams suggest the dinosaur died near the sea, was tossed around by the waves and found its nearly eternal resting place among the clams, they said.

A Washington first

The finding makes Washington the 37th U.S. state known to have dinosaur fossils, the researchers said.

There are a variety of reasons dinosaurs aren't in all 50 states. Hawaii, for example, doesn't have dinosaur fossils because dinosaurs died out 65 million years ago, or some 59 million years before the Hawaiian islands formed, Sidor said.

Some states, such as Florida and Louisiana, were underwater during the age of the dinosaurs, or were scraped clean by [ice-age glaciers](#), making evidence hard to find, he said.

In Washington's case, active plate tectonics and a vast amount of urban development have made it difficult for scientists to find dinosaur fossils there, the researchers said. However, researchers have uncovered isolated dinosaur skeletons and bones in neighboring areas, including those of ankylosaurian and hadrosaurian dinosaurs in the coastal or marine Cretaceous rocks of Oregon, California and south central Alaska, the researchers said.

It's unclear what species of dinosaur the Washington fossil belongs to, Sidor said. It's not a *T. rex*, which lived about 15 million years after this dinosaur roamed Earth, he said. Perhaps it belonged to [atyrannosauroid](#), a group of dinosaurs that were active in North America during the Late Cretaceous, Sidor said.

The new study shows that, "one of the fun things about paleontology is there are always cool little surprises, cool fossils, even if they're not necessarily the most Earth-shattering discoveries on the planet," said Andrew Farke, a paleontologist at the Raymond M. Alf Museum of Paleontology in Claremont, California, who was not involved in the study.

"It's incredibly cool in showing that there's potential everywhere for finding dinosaurs," Farke said. "My hope is this really inspires people up in Washington and the surrounding areas to look at their world a little differently."

The study was published online today (May 20) in the [journal PLOS ONE](#)

This is a posting in the Fossil Forum by Jack Boyce, about a hunting trip he made with Joe Larkin. Joe found a nice one in the Peace that day!

Posted 30 May 2015 - 05:07 PM

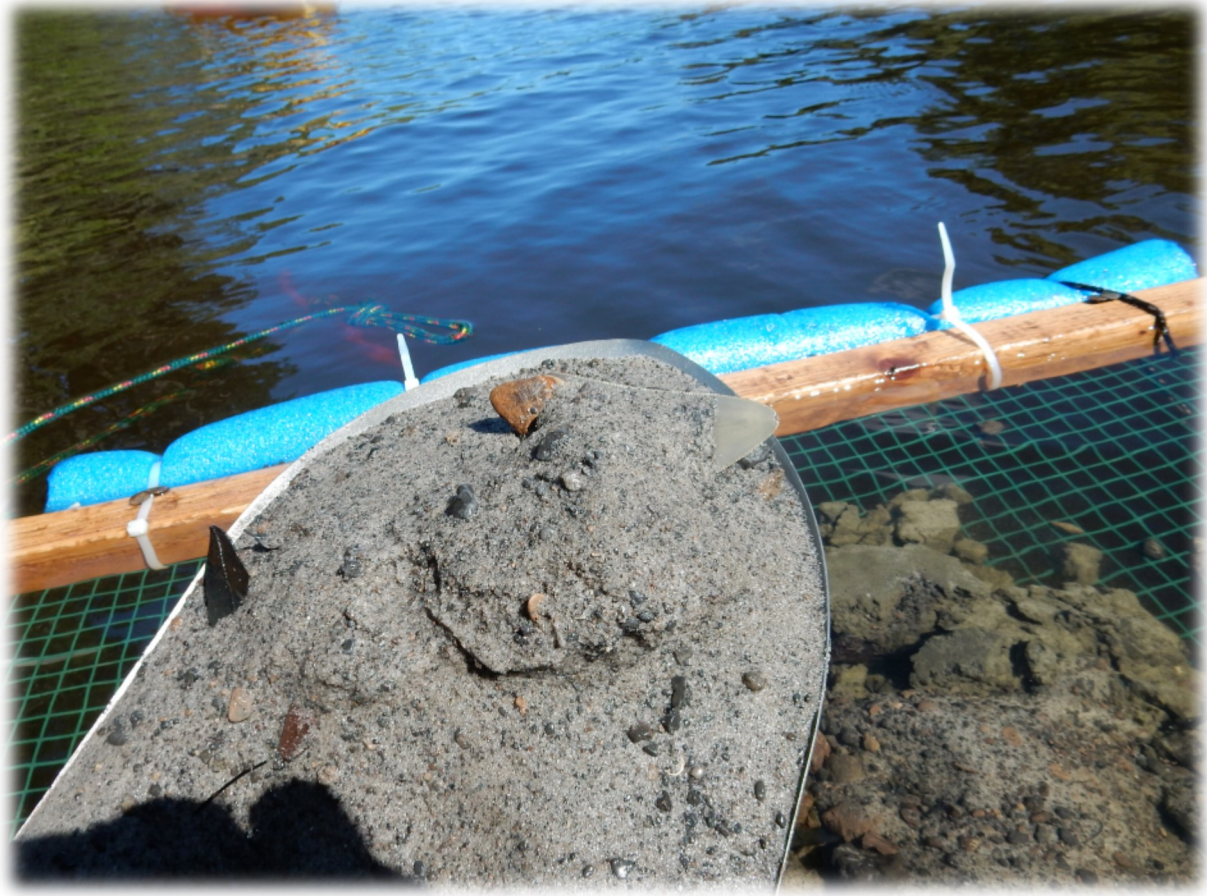
I have a number of fossil hunting partners and each one is my favorite. TFF member Jlar7607 or Joe is really busy with his job and can only get out on Saturdays. We have had some not so memorable Saturday hunts like last Saturday when it seemed like there were hundreds of Air-boaters on the river and almost no fossils in the river.

Then there was days like today. We met early with the intention of going long on one of these last few days of the season. For those of you who have not gone hunting with Joe, he digs like a machine processing about twice as much gravel as I do. That is impressive.

We were having an OK day after an hour. A horse tooth, a whale vert, a couple of slightly broken Makos, and a handful of high quality Bulls and Duskys. A couple of the Duskys had brown roots, aqua blades and crisp serrations.

Before you look ay the photos and congratulate me, please understand that I was just the bystander and photographer!! JOE found this tooth. I am pleased to report that I was gracious, but also envious!!! This is the highest quality Meg I have ever seen found in the Peace River. If anyone has seen or heard of a better one, please post it!!
SS





FOSSIL SIFTING SCREENS!!

There are a lot of different styles and configurations of fossil hunting sifting screens. It seems they are as many versions as there are fossil hunters! I've seen them made from solid PVC with wire mesh screen wire-wrapped on, to fancy kitchen strainers, to works of engineering taken to a level of artistic design. I saw a unique one on Saturday that the Seehavers had put together, using plastic soda bottle crates. I also saw a different sort of construction on a screen a few weeks ago that made me look twice, Yes-this is an all nail constructed screen, even nails attaching the screen. I've seen some very small ones, to super large ones. I remember Ray Seguin saying that he wanted to make a very large one with super large floats attached so that he could paddle it down the river to where he wanted to hunt! They all work, though, if you can shovel the treasures into them! With the season winding down, it's a good time to plan on building one to use next year.

Louis



FOSSIL FINDS OF THE MONTH

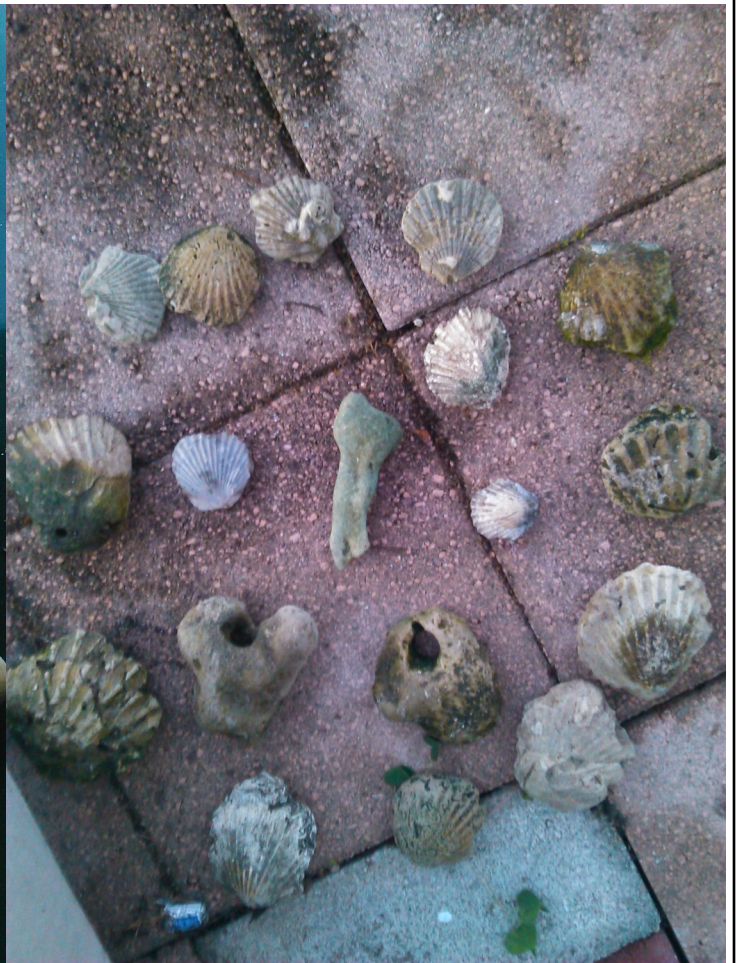


Part of a collection I recently purchased. 6 1/4". Both sides are nice! Louis

WHAT YOU SEE HERE IS A MAILBOX FIND. I ACQUIRED THIS MASTODON TOOTH FROM A GUY IN IOWA. HE WORKS AT A PIT AND FOUND THIS, ALONG WITH A FEW OTHER FOSSILS. HOWEVER, WHAT YOU SEE HERE IS IT WRAPPED IN BUBBLEWRAP AND PLACED INTO A PLASTIC JAR AND FILLED WITH WATER! HE SAYS IT SHOULDN'T EVER DRY OUT, SO HE SHIPPED IT THAT WAY. WELL, I HAD TO CUT THE CONTAINER APART TO GET IT OUT, AND NOW IT'S SLOWLY DRYING. I HOPE IT DRIES NICELY AND DOESN'T CRACK MUCH. BECAUSE HE ALSO SPRAYED IT WITH A LACQUER TO KEEP IT FROM DRYING. IT'S NEVER A DULL MOMENT IN THE FOSSIL WORLD!!



Some of Mike Cox's recent finds.



FOSSIL FINDS OF THE MONTH



FOSSIL GIANT TORTOISE SHELL FOSSILS RECENTLY FOUND IN A LOCAL CREEK BY MIKE SICILIANO AND LOUIS STIEFFEL. THEY WERE STACKED UP ON THE BANK ON A TIMBER, AS THEY WERE FOUND.



Two nice Mako shark teeth found by Mike Cox!!



Mystery tooth, found by Dean Hart!
A pre-molar for a carnivore.
From a _____???



Do they really get THIS big?? :-)

FOSSIL FINDS OF THE MONTH



On possibly the last river/creek hunt of the year for me since the rains are here, I was very happy to find this SUPER RARE SHORT-FACED BEAR MOLAR. To me it looks like an upper M2 from an extinct Tremarctos sp. bear. The roots were never fully developed and along with the lack of wear on the crown I believe it to be an uninterrupted molar.



RECENT FINDS OF AL GOVIN! ALONG WITH A TAPIR PREMOLAR, AND A BIG, BEAUTIFUL, PERFECT HORSE INCISOR IS A RARE GIANT ARMIDILLO PHALANX!!

FOSSIL FESTIVAL--2016

The date for the fossil festival is set for February 13, 2016. It will be held at the Shell Factory. Hours will be 9am to 5pm. This year will see the festival as an outside event,

with music and food and activities and fossils and minerals for show and for sale !!

The announcement will be sent out shortly to fossil dealers across the state! Other organizations will be sent press releases and we are hoping to create a true festival atmosphere and have lots of folks enjoy the activities!

As usual, to be successful, we will ask for participation from all of you. Volunteers in the past always enjoyed themselves and we expect the same again.

More information will be released as we get plans solidified and dealer commitments. We are excited to put on this annual event and know all the club members will be a part of it!

Dean Hart, Louis Stieffel

Louis

Our final fossil hunting adventure, before the summer rains set in, was a combination of perfect weather, great companionship and a beautiful meandering “old Florida” creek. Louis, Leslie and Al graciously invited David & I to join them to explore the possibilities of the Horse Creek bottom and, over the course of day, we shoveled and sifted and picked a number of treasures. As true novices to this hobby, we appreciated the opportunity to learn “hands-on” about how to “flip” the contents of our screen and, then, how to identify our finds! (Apparently, our golf club “probe” is only good as a cane - we cut off the wrong end - but that can be easily remedied before next season!) Now we are busy comparing our treasures to images in “Florida Fossils”, in an ongoing effort to learn. Hey Louis - we are getting ready for the next “Fossil ID Game”!



Jeanne Seehaver



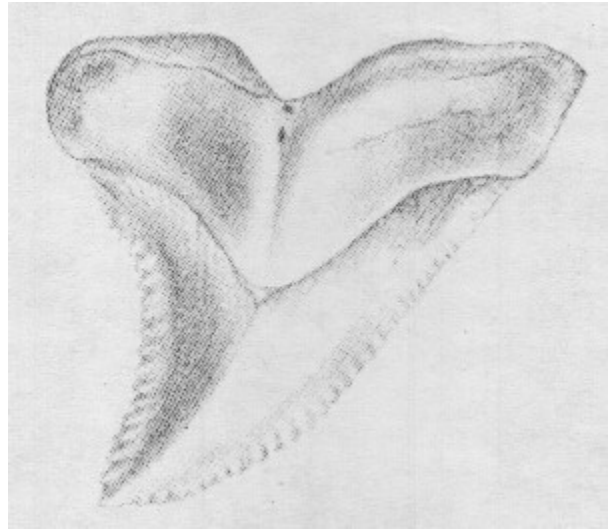
A rare picture of Mike Siciliano actually digging for fossils!! Mike is usually casually floating around while diving Venice for his fossils.

FOSSILS OF CALVERT CLIFFS

From a flyer by Wallace L. Ashby, illustrated by Mary A. Parrish

Calvert Cliffs is located in the largest fossil-bearing deposit of Miocene marine sediments exposed on the East Coast of North America -- the Calvert Cliffs of Maryland. Most of the shells and bones on our beach are fossils. Shark teeth and whale vertebrae are prized finds. Rarer specimens include almost complete skeletons of whales and porpoises, bird bones, and remains of land mammals such as mastodon, peccary and small Miocene horses.

These sediments were laid down 10 to 20 million years ago during the Miocene Epoch, when the Atlantic Coast was repeatedly submerged beneath the sea. Studies of fossil animals and plants indicate that in those times, a warm shallow ocean covered this area. Cypress swamps lined the shore. A river wound slowly toward the sea through sand dunes dotted with scrub oak and pine. The climate was somewhat warmer than now. Shells and bones of dead animals sank to the bottom of the sea and were buried in sand and mud, building up over many thousands of years layer upon layer of fossil deposits. Millions of years later, the ocean retreated and what once was sea bottom is now exposed in the cliff face.



Calvert Cliffs extend for more than 30 miles from just north of Chesapeake Beach to Drum Point, rising in places to more than 100 feet in height. Three major intervals of deposition are represented. Sediments deposited during the earliest interval make up the Calvert Formation, which includes the bluish clay the lowest one-fourth of the cliff in the vicinity of Scientists' Cliffs. The Choptank Formation, deposited later, includes the yellow sands and clays in the higher levels of our cliffs. The youngest formation, the St. Mary's, lies farther south; it isn't found at Scientists' Cliffs. The formations dip toward the southeast at an average rate of about 11 feet per mile.

The cliffs are continually eroded by wave action which undercuts the base, by landslides and by storms and frost. Fossils falling into the surf are tossed around, cleaned, and then cast back on shore. Virtually all the shark teeth and the fossil bones and shells found on the beach wash or weather out of the cliffs.

Marine Mammals. The Calvert Cliffs deposits are among the world's richest in fossil whales and porpoises. About two dozen kinds have been identified including sperm whale, shark-toothed porpoise, both long and short beaked porpoises, river dolphin and several kinds of whalebone whale. Seal and sea cow bones also are found. Most of the whale and many of the porpoise skeletons are of immature animals, which suggests that this area was a calving ground. Porpoise and whale vertebrae are fairly common. Ear bones wash up occasionally but porpoise teeth are scarce, considering the abundance of skulls and that the jaws of some long-beaked porpoises contained over 300 teeth.

Land Mammals. Remains of land mammals occasionally erode out. The deposits were marine so most of the shells and bones in the cliffs are those of animals that lived in the sea. Bodies of land mammals floated down rivers from time to time, however, and became buried in the sea floor. Pecary teeth and bones, although quite unusual, turn up more often than those of other land mammals. Four species are known from the cliffs. In addition to the peccaries, mastodon, deer, tapir, rhinoceros, camel and horse have been reported, as have wolf, bear, dog, and cat. Some of these Miocene species, all now extinct, are known from the cliffs by a single tooth or two. The mastodon teeth represent the first known appearance of mastodon in North America.

Birds. Most of the fossil birds found in the vicinity of Scientists' Cliffs were pelagic, spending much of their lives at sea. Bones of gannet, auk, loon, shearwater, jaeger, and tropicbird have been reported. Recently, wing bones, vertebrae, ribs and the beak of an extremely large pelican-like bird that stood about six feet tall and had a wingspread of 15 to 20 feet have shown up. A one-half size

scale model of this bird, named Pelagornis but better known as the false-toothed bird, is displayed in the paleontology exhibit of the Calvert Marine Museum in Solomons Island.

Sharks, Rays, and Bony Fish. Shark teeth are the favorite fossils of local beachcombers. They vary in size from barely visible to teeth of the great white shark measuring five inches or more. There are so many that you can almost always find a few by the water's edge. Teeth commonly found on our beach include sand shark, mako shark, silky shark, snaggletooth shark and white shark. The shark in the story "Jaws" was a white shark but less than half the size of the Miocene monsters with five inch teeth, which are estimated to have reached more than 40 feet in length. Shark teeth are found throughout the deposits.

Many kinds of fish in the Bay today frequented the area millions of years ago. Bluefish, weakfish, ocean catfish, sturgeon and black drum were present, as were cod, sailfish, ocean sunfish and other types. Fish remains are plentiful but usually consist of isolated vertebrae, scales and an occasional tooth

Reptiles. Crocodiles, fresh and saltwater turtles, and a land dwelling tortoise have been reported from the cliffs. Crocodile teeth show up fairly often but complete skulls and other parts of the skeleton are rarely found. Fragments of sea turtle shell are among the most common vertebrate fossils in the Calvert Formation.

Mollusks. The Calvert Cliffs are notable for their densely packed beds of mollusk shells - clams, oysters, scallops, and snails among others. Our local shell beds can be seen from all along the beach, with the best view that from about halfway between South Beach and Governor Run.



Mollusks (and diatoms and foraminifera) are especially useful in determining the age of a formation. Geologists use the percentage of fossil species that have survived until today as one measure of age. As shells usually are numerous, percentage distributions of the various species can be correlated with those from other deposits. Some 400 species of mollusk have been identified from the cliffs, of which about 11 percent are still living.

One of the first illustrations of a fossil from America, a snail now called *Ecphora gardnerae*, was published in a 1770 edition of one of Martin Lister's works. This shell may have been collected by Hugh Jones, rector of Christ Church in Port Republic from 1696 to 1701. An active naturalist, he collected and sent back to England many local plants, animals, and fossils. In 1984 the Maryland State Legislature designated this graceful shell the official State fossil.

Miscellaneous Fauna and Flora. Other fossils found on the beach include sea urchins, sand dollars, crab claws, barnacles, coral and a brachiopod. Sea urchins

were considered rather rare until 1938, when a pocket containing hundreds of individuals was found at Scientists' Cliffs in a sandy bed near the base of the Choptank Formation. Paleontologists of the U.S. National Museum placed a large block from this pocket on exhibit there, and another in the Chestnut Cabin Museum where it remains our prime exhibit. Similar colonies at the same level are exposed infrequently. Clean, well preserved sand dollars are found with these sea urchins but not in such profusion. Sand dollars also appear in other beds but these usually are broken and encrusted with barnacles and mollusks.

Carbonized wood is plentiful in the Chesapeake Miocene. Most of the wood in the Scientists' Cliffs area is believed to be cypress. However, investigations of these deposits here and near Washington and Richmond have yielded leaves and pollen of several other species including oak, hickory, pine, elm, and basswood.

MEMORIAL DAY CELEBRATION!!

Fossil table at the Shell Factory on Monday.

I set up at 9AM on Monday at the Memorial Day Bar-B-Que at the Shell Factory. We were in the carports and there were 3 tents in the parking lot in front of us. Don Lindsey came and helped out in the morning. The morning was real slow but we had people come by the table and look at the fossils. At 11 AM they set up a singer in one of the tents for entertainment.. Don went home and shortly afterwards Stacy came. We had more people come to our table in the afternoon. We had many discussions about the fossils and talked about the Museum in the Shell Factory. We also handed out pamphlets on our club and some membership forms. At 4:30 the music stopped and they started to take down the tents so I picked up and went home. Lots of good food and beverages were available all day.

Dean Hart



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This exhibition was created by The Field Museum, Chicago, and made possible through the generosity of McDonald's Corporation.



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