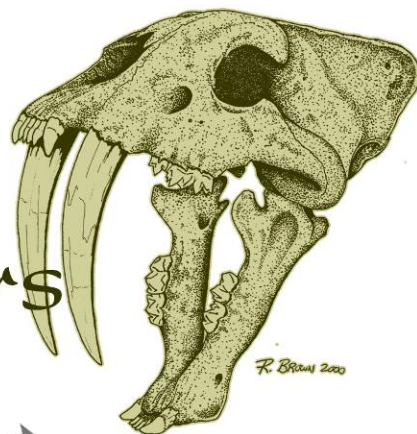


NEWS

Florida Fossil Hunters

Florida Prehistorical Museum, Inc. dba/ Florida Fossil Hunters
Volume 25, Number 4

April 2015



From the President.....

Hope everyone is ready for summer. It's going to be a hot one... even more reason to head to Peace River or your favorite creek for some cooling down and fossil hunting. Yes, the Peace River IS low enough, so get your family together and go, go, go.

One April 4th, 2 dozen members did just that and we had a wonderful canoe trip down the Peace. The skies were blue all day and the water was low and clear. Some of the better finds were: a few nice Meg teeth, from a 3 inch found by Mark Voke to a pristine 1-1/2 inch one found by Michael Sharpe. Also there were deer, tapir, & horse teeth; deer antler, bison toe bone, plenty of shark teeth and the rare (ha-ha) dugong bone.

As we paddled down the river, we saw plenty of fossil hunters celebrating the wonders of the Peace. Don't wait..... plan your trip soon.

A special thanks goes out to Mark Voke for bringing 7 canoes for club members to use for a super-low price. Thank you, Mark. You really brightened up the day of those who don't own a canoe or kayak.

Dave Dunaway has a trip planned for those who wish to join him at Wauchula's Crews Park for a "wade-in" on Saturday, April 11th. See inside for details.

I ask anyone who is planning to go to the river, to invite your fellow members to join you in the experience. Email Bonnie and she will send out the message to the members.

I'm sure all of you enjoyed Victor Perez's talk on sharks at the March meeting. He has promised to come back when he is finished on his current research on sharks in Panama.

Our Women in Paleontology program is fast approaching. Help us get the word out and come to this fantastic event of Saturday, May 16th, which includes guest speakers, displays, and more. This will be instead of a regular meeting in May.

For this month's meeting on April 18th, we will have Brian Andres from the University of South Florida who will give a presentation on Pterosaurs (flying reptiles). Hope you can come and hear the latest on these winged wonders.

Unfortunately, Bonnie & I have to be in Marianna for a Florida Paleo Society board meeting. Several other club members will handle our usual duties at the meeting. Seems like work or something often gets between us and what we enjoy.

Meanwhile, get to the Peace River.
I'll see everyone on May 16th at Women in Paleontology.

Russell Brown
President

Join Our Facebook group, Search:
Florida Fossil Hunters



Coming Events

UPCOMING MEETINGS at the Orlando Science Center

Saturday, April 18th
3 pm Meeting & Speaker

Saturday, May 16th
NO CLUB MTG
10 am- 4pm
Women in Paleontology
FFH & OSC

June and July
NO CLUB MTGS

NEXT CLUB MTG
Saturday, August 15th

More events listed on back page

For more info...
www.floridafossilhunters.com

Table of Contents

Fragments	2
Kids Fossil Blast	2
Peace River	2
Field Trips and Events	3
Women in Paleontology	4
The Strange South American Mammals	5
Paleobiology	6
Vulcan Mine Trips	6
Contacts and Membership Info	7
Calendar	8

Fragments

Meeting - Saturday, April 18th 3:00 to 5:00 pm

We have a great speaker lined up: Brian Andres, Ph.D. The title of his talk is: "Death and Taxa: Determining the evolution of the most successful and most extinct flying vertebrates"

Dr. Andres is an Assistant Professor at the University of South Florida and the first vertebrate paleontologist in its history. He specializes in figuring out the Tree of Life, specifically the evolutionary relationships of the pterosaurs. Along the way, he has had the opportunity to name six species new to science, travel to 60 museums around world, and dig for fossils in some of the most remote places on the globe.

FOSSIL Website Testers

VOLUNTEERS NEEDED

The folks at the FOSSIL Project want to test out their new website and have asked if volunteers from our club would help them. It would be scheduled on Saturday, April 18th before our regular meeting. You just need the basic computer skills. We'll be uploading photos, creating profiles, etc. Nothing that would require "Geek" level skills. If you are interested, please let Bonnie know at bonnierussell62@gmail.com

Women in Paleontology, May 16 at OSC

The plans for the Women in Paleontology program are coming together quite nicely. We have three very excited graduate students from the University of Florida's grad program signed up and a lot of interest from the FOSSIL Project as well. This is going to be a stellar event and I encourage all of you who have contact with girls and young women to tell them about it. The Orlando Science Center is looking into having a badge program available for Girl Scouts to tie in with this event, too.

If you are interested in volunteering for this event, contact Bonnie at bonnierussell62@gmail.com or Cindy Lockner at clockner@comcast.net. The club will have fossils on display and we'll be spreading the good news of fossil hunting as amateurs and professionals.

Kids' Fossil Blast

There will NOT be a kids' program at the April meeting. There will be activities for kids at our "Women in Paleontology" program in May.

Kids' Fossil Blast is an informal, hands-on experience with real fossils, casts, etc. aimed at kids ages 5 to 14.

Piece on the Peace River

We are hoping to have several club trips this Spring to the Peace to hunt for fossils.

On Saturday, Apr. 11th, Dave Dunaway will spearhead the fossil hunting at Wauchula. south of the East Main St. (Rte 64A) bridge. He will be at the City Park there from 8 am to 3:30 pm, so you can arrive anytime.

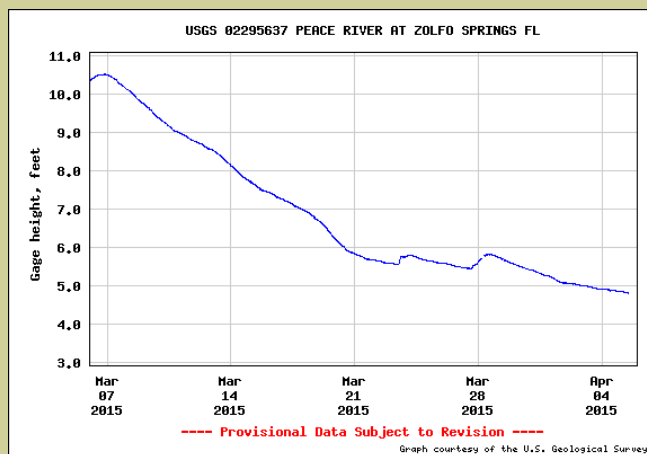
This is an area that you don't have to use a boat to fossil hunt. Park your car at the park, then carry your gear south along the river until you see people. There you can just wade in to dig and sift in the shallow areas.

Dave is going to grill hot dogs for lunch and will bring the condiments. Please bring a dish of snacks to share with the group. Let Dave know what you are bringing so we don't end up with 10 versions of potato salad.

Directions: South on Rte 17 to Wauchula, turn left onto East Main St. and follow it to the river. There will be a park with a boat ramp on the left (north) side of the road. The address of the park is 1322 East Main St., Wauchula, 33873. GPS: N:27.5507, W: -81.7936

Bring the usual things: sunscreen, hat, shovel, sifter, bucket for fossils/wet clothes, a fanny pack or something you can wear and put your finds in, water, drinks, snacks, chair for the lunch, dry clothes and shoes, towel, etc. Do NOT wear sandals. Best footwear is an old pair of sneakers (with socks) or dive boots. There is glass and sharp rocks in the river. I don't know if the restroom works.... last time I was there, it was not functioning, so be prepared to hike into the trees & bushes with some TP.

To sign up
call Dave
on his home
phone at:
[407-786-8844](tel:407-786-8844).



Florida Fossil Hunters News

A T. rex Named Sue

Jan. 24 – Sept. 13, 2015 | \$7.50 adults, \$6.50 Fla. residents and seniors, \$4.50 ages 3-17 and free for Museum members and UF students with a valid Gator 1 card

Students who receive an 'A' or 'E' grade in science can provide their most recent report card at the front desk and receive a free admission with the purchase of a paid adult admission. The offer is valid for the Butterfly Rainforest exhibit, the featured exhibit, when available, or a value admission for both exhibits.

- At 90 percent complete and exquisitely preserved, Sue is the most celebrated member of its species, permitting more detailed studies of the biology, growth and behavior of T. rex than had previously been possible
- A T. rex skeleton is made up of more than 250 bones. Sue was found with most of those bones. She's missing only a foot, one arm, and a few ribs and vertebrae.
- Only two complete T. rex forelimbs have ever been found—and Sue's is one of them!

Florida Museum of Natural History Events of Interest:

May 3rd, 2:00 to 4:00pm

Archaeology Workshop: Pottery

Join the Florida Public Archaeology Network for a family-friendly workshop for all ages. Learn to identify different types of pottery found throughout Florida and discover how archaeologists use these clues to study people of the past. The workshop is free but pre-registration is required.

May 17th 1:00 pm - 4:00 pm

Ask a Scientist: International Museum Day

Science is all around you! Take advantage of this opportunity to talk one-on-one with Museum and UF researchers. Bring your questions and find answers during an afternoon of discovery and learning celebrating museums.

Florida Museum - 3215 Hull Road, SW 34th Street and Hull Road Gainesville, FL 32611. For more info go to www.flmnh.ufl.edu or call 352-273-2064.



Fossil & Mineral Shows

ORLANDO

Central Florida Mineral & Gem Society will have their show on: April 10th - 1 pm to 6 pm, April 11th - 10 am to 6 pm, April 12th - 10 am to 5 pm. It will be at the National Guard Armory, 2809 South Fern Creek Ave., Orlando, 32806. Adults - \$5; Students - \$2. For more information and a \$1 off coupon, go to www.cfmgs.org

VENICE BEACH

The annual Shark's Tooth Festival will be held at the Airport Festival grounds, 120 E. Airport Ave., Venice, 34285.

Hours: Apr. 10th - 4pm to 9pm, Apr. 11th - 10am to 9pm, Apr. 12th - 10 am to 5 pm.

Admission: \$3; children 12 & under free

In addition to lots of shark teeth and fossils, there are food and craft vendors.

Want to Earn \$1,000 Fossil Bucks?

This is an easy way for six volunteers get some fossil bucks on Saturday, April 18th, our meeting day.

Lisa Lundgren with the myFOSSIL organization will be conducting website usability testing with the Florida Fossil Hunters on April 18th. In previous testing, they've discovered that the whole process takes approximately two hours per person. They have two laptops on which they will conduct the testing (these laptops must be used because they have recording software which allows us to see mouse clicks/user interaction). So, they request that the Florida Fossil Hunters test the website in waves, so some participants aren't just waiting around for their fellow users to complete the testing.

Here's what an example would look like:

- 11am-1pm: Two members test
- 1pm-3pm: Two other members test
- 3pm-5pm: Two other members test

Please let me know if you want to be one of the volunteers as soon as possible. Call me at [352-429-1058](tel:352-429-1058) or email bonnierussell62@gmail.com

National Fossil Day Celebration

Mark your calendars! We have been invited to participate in the Fossil Day celebration at the South Florida Museum in Bradenton on Saturday, October 3rd.

SAVE THE DATE

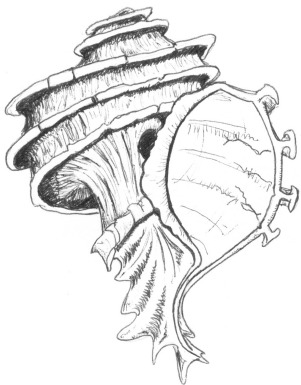
Fossil Fair 2015: Nov. 7th & 8th

Florida Fossil Hunters News

Women in Paleontology

Orlando Science Center
May 16th, 2015
10:00am-4:00pm

From 9 to 90 –
you can touch the past,
and change the future.
Meet with female
professionals in
Paleontology,
Anthropology,
Paleontology Students
from the University of Florida,
and amateur fossil enthusiasts
and collectors from the
Florida Fossil Hunters.



For more information
contact us by email at
info@floridafossilhunters.com,
or visit our website at
www.floridafossilhunters.com

10:00-11:00 Meet and Greet, view fossil collections,
receive a fossil for you to keep!

Presentations

- 11:00-11:30 **Sharon Holte, Ph.D. in Biology, University of Florida**
Florida Paleontological Society Morgan Award
Currently conducting research on: Evolutionary biodiversity of
Miocene carnivorans from Thomas Farm, FL with direct comparisons to other North American faunas.
- 11:45-12:15 **Natasha S. Vitek, University of Florida Paleontology PhD Student**
Talk Title: What About the Fossils Too Small to See?
- 12:30-1:00 **Julia Tejada, University of Florida M.S., Biology Graduate Student** | Vertebrate Paleontology, Paleobiology, Paleoecosystems
Julia is the author of 16 publications, including Paleobiology and Vertebrate Paleontology, and has conducted research in Peru and South America.
- 1:15-1:45 **Lisa Lundgren, University of Florida Science Education PhD Student** | Lisa holds a master's degree in Science Education and bachelor's degree in History with an emphasis on Museum Studies from Montana State University.
Talk Title: The FOSSIL Project: Connecting amateur and professional paleontologists
- 2:00-2:30 **Dr. Ann Spellman, Ph.D. in Marine Biology**
Marine Biologist
Talk Title: What Lies beneath? A presentation of what fossil ancestors and modern day marine life tell us about life on earth and in the sea, both then and now.
- 2:45-3:15 **Shelley Zimmerman, High School Geology Teacher**
Talk Title: Rock Head or Bone Head? The connection between Geology and Paleontology.
- 10am-4pm **View various fossil collections and exhibits**

Florida Fossil Hunters
www.floridafossilhunters.com

The Strange South American Mammals

Science Daily, March 18, 2015

Scientists have resolved pieces of a nearly 200-year-old evolutionary puzzle surrounding the group of mammals that Charles Darwin called the "strangest animals ever discovered." New research led by the Natural History Museum, the American Museum of Natural History and the University of York shows that South America's native ungulates, or hooved mammals -- the last of which disappeared only 10,000 years ago -- are actually related to mammals like horses. Published today in the journal *Nature*, the findings are based on fossil protein sequences, which allow researchers to peek back in time up to 10 times farther than they can with DNA.

Ian Barnes, Research Leader at the Natural History Museum and one of the paper's authors, explained: "Although the bones of these animals had been studied for over 180 years, no clear picture of their origins had been reached. Our analyses began by investigating ancient DNA to try to resolve the problem."

"Fitting South American ungulates to the mammalian family tree has always been a major challenge for palaeontologists, because anatomically they were these weird mosaics, exhibiting features found in a huge variety of quite unrelated species living all over the place," said Ross MacPhee, one of the paper's authors and a curator in the American Museum of Natural History's Department of Mammalogy. "This is what puzzled Darwin and his collaborator Richard Owen so much in the early 19th century. With all of these conflicting signals, they couldn't say whether these ungulates were related to giant rodents, or elephants, or camels -- or what have you."

However, the team soon realized that ancient DNA -- that is, genetic material extracted from fossils -- did not survive in these fossils, because the DNA molecule survives poorly in the warm, wet conditions like those typical of South America. The breakthrough came when the researchers switched to analysing collagen, a structural protein found in all animal bones that can survive for a million years or more in a wide range of conditions. The chemical structure of the amino acids that make up a protein is ultimately dictated by specific coding sequences in the organism's DNA. Because of this key relationship, amino acid compositions of the same protein in different species can be analysed and compared, providing insight into how closely the species are related.

"People have been successful in retrieving collagen sequences from specimens dating up to 4 million years old, and this is just the start," said University of York Professor



Matthew Collins, whose lab did the sequencing work. "On theoretical grounds, with material recovered from permafrost conditions, we might be able to reach back 10 million years."

The scientists used proteomic analysis to screen 48 fossils of *Toxodon platensis* and *Macrauchenia patachonica*, the very species whose remains Darwin discovered 180 years ago in Uruguay and Argentina. "By selecting only the very best preserved bone specimens and with various improvements in proteomic analysis, we were able to obtain roughly 90 percent of the collagen sequence for both species," said lead author Frido Welker, a Ph.D. student at the Max Planck Institute for Evolutionary Anthropology and the University of York. "This opens the way for various other applications in paleontology and paleoanthropology, which we are currently exploring."

With modern techniques, the researchers were able to conclusively show that the closest living relatives of these species were the perissodactyls, the group that includes horses, rhinos, and tapirs. This makes them part of Laurasiatheria, one of the major groups of placental mammals. The molecular evidence corroborates a view held by some leading paleontologists that the ancestors of these South American ungulates came from North America more than 60 million years ago, probably just after the mass extinction that killed off non-avian dinosaurs and many other vertebrates.

Bonnie's note: Which means their mammal ancestors came from N. America in the Jurassic? Was there a land bridge between North and South America between the Jurassic and the Pliocene?

See page 6 for more information on Paleobiology

Florida Fossil Hunters News

Paleobiology (from Wikipedia)

Macrauchenia was a herbivore, likely living on leaves from trees or grasses. Carbon isotope analysis of *M. patachonica*'s tooth enamel, as well as analysis of its hypsodonty index (low in this case; i.e., it was brachydont), body size and relative muzzle width suggests that it was a mixed feeder, combining browsing on C3 foliage with grazing on C4 grasses. Scientists believe that, because of the forms of its teeth, *Macrauchenia* ate using its trunk to grasp leaves and other food. It is also believed that it lived in herds like modern-day wildebeest or antelope, the better to escape predators.

When *Macrauchenia* first arose, it would have been preyed upon by the largest of native South American

predators, terror birds such as *Andalgalornis*, and carnivorous sparassodontids such as *Thylacosmilus* (leopard-sized marsupial carnivore). During the late Pliocene/Early Pleistocene, the Panama Isthmus formed, allowing predators of North American origin, such as the puma, the jaguar and the saber-toothed cat, *Smilodon* populator, to emigrate into South America and replace the native forms.

It is presumed that *Macrauchenia* dealt with its predators primarily by outrunning them, or, failing that, kicking them with its long, powerful legs, much like modern-day vicuña or camels. Its potential ability to twist and turn at high speed could have enabled it to evade pursuers.

VULCAN MINE Field Trip

Saturday, April 11th

Trip Leader:

Villo Galvan

constantlymovingframes@gmail.com

321-947-3806 (h)

321-806-0763 (c)

Saturday, May 9th

Need a Trip Leader.

To volunteer, contact Bonnie

bonnierussell62@gmail.com

352-429-1058

All participants MUST

be escorted into and out of the mine.

**There are NO RESTROOM
FACILITIES AT VULCAN,**

This is one of the few places where kids are allowed in to fossil hunt. Be sure to stay with them since there are steep cliffs, sharp rocks, and small sinkholes.

Meet on the driveway loop near the entrance to the Mine by 8:30 am to sign releases before we are escorted into the mine around 9 am. We get to drive our vehicles in so you can have your coolers, snacks, and equipment handy while you hunt. They usually allow us to dig until noon and sometimes people can stay till 2 pm.

Directions: The trip will take approximately 2 hours from Orlando to Vulcan Mine. From Orlando take Hwy. 50 west (or the 408 west to the FL Turnpike, take exit 272 and then continue west on Hwy. 50) to Brooksville. Follow 50A/98 North through

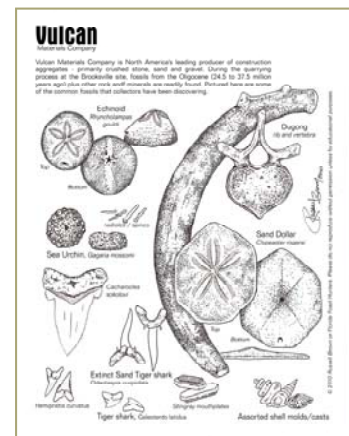
Brooksville and turn right on Ponce De Leon Blvd. (Hwy 98 North). Go approximately 10 miles. Vulcan/Cemex will be on your left. The address is 16313 Ponce De Leon Blvd, Brooksville, for those of you who want to download a map. If you follow the truck route for Hwy. 50, you have to turn right onto 41, and then take the fork to the left to hook up with Ponce De Leon Blvd/98. Be sure NOT to keep following 41 north. You want to take 98 north from Brooksville.

This is mostly surface collecting. Bring a small trowel or screwdriver or rock hammer, and a bucket to put your fossils and rocks into. You may want to bring small containers and tissue for fragile fossils.

Wear a hat, sturdy shoes, long pants (some of the rocks are sharp), and

sunscreen. Bring lots of water and/or drinks and some snacks or lunch to eat. We find mostly echinoids and sometimes sea urchins, pieces of bone, or other fossils are found.

Download ID Sheet from our website.



Florida Fossil Hunters News

Florida Fossil Hunters

is a fun and educational group whose goal is to further our understanding of the prehistory of Florida. We encourage family participation and welcome explorers of all ages.

Membership is \$17 per year. Other household members may be included at no charge.

Meetings are usually held on the third Saturday of the month but may vary with club activities. Check the website for the date and location of the next meeting or call one of the officers.

Officers:

President	Russell Brown	(352) 429-1058
Vice President	Dave Dunaway	(407) 786-8844
Secretary	Bonnie Cronin	(352) 429-1058
Treasurer	Sara Morey	(619) 302-4863

Chairs:

Education	Bonnie Cronin	(352) 429-1058
Field Trips	OPEN	
Fossil Fair	Valerie First	(407) 699-9274
Fossil Auctions	Dave Dunaway	(407) 786-8844
Fossil Bucks	Dave Dunaway	(407) 786-8844
Fossil Lotto	Ed Metrin	(407) 321-7462
Membership	Bonnie Cronin	(352) 429-1058
Newsletter	Bonnie Cronin	(352) 429-1058
	Elise Cronin-Hurley	(407) 929-6297
Photography	John Heinsen	(407) 291-7672
Webmaster	Elise Cronin-Hurley	(407) 929-6297
	elise@lisedreams.com	

Board of Directors:

Melissa Cole	(407) 834-5615
Ed Metrin	(407) 321-7462
Dave Cass	(407) 409-9095
Shelley Zimmerman	(407) 891-1260
Marge Fantozi	
Marcia Wright	
Cindy Lockner	

Membership Application

Names: _____

Associate Members: _____

Address: _____

City: _____

State: _____ Zip: _____ Phone: _____

e-mail: _____

_____ New _____ Renewal

Please list any interests, experience, talents or just plain enthusiasm, which you would like to offer to the club:

Membership is \$17 per year. Our membership year runs from January to December. All renewals are done in December and January.

Please make your checks payable to:

Florida Fossil Hunters
Post Office Box 540404
Orlando, Florida 32854-0404

Associate members are people in the same household, included at no extra charge, 2 adult votes per household.

Newsletter Policy

Articles must be submitted by the first of the month to be included in that month's newsletter. These can be mailed to the above Post Office Box or e-mailed to: bonnierussell62@gmail.com . Articles can be sent as text in the e-mail or in Microsoft Word files (.doc or .docx).

Please note in subject of email 'FFH'.

Florida Prehistorical Museum, Inc.
dba/ Florida Fossil Hunters

Florida Fossil Hunters News

Florida Fossil Hunters Mark Your Calendar

Saturday, April 11th

Vulcan Mine

April 11th

Peace River, Wauchula

April 10, 11, & 12th

Venice Shark Tooth Festival, Venice Beach
Central FL Mineral & Gem Mineral Show, Orl
Orlando

Saturday, April 18th

Meeting & speaker, Brian Andres

Saturday, May 9th

Vulcan Mine

May 9th - June 5th

Smithsonian's "Becoming Human"
Orange Co. Library

Saturday, May 16th

10 am- 4pm

Women in Paleontology
FFH & OSC

Sunday, May 17th

FLMNH, Ask a Scientist

NO CLUB MTGS: June and July

NEXT CLUB MTG: Saturday, August 15th

through Sept. 13, 2015 -

A *T. rex* Named Sue exhibit

Be Green

Email Bonnie at bonnierussell62@gmail.com
to receive the newsletter via email.



Join Our Facebook group, Search:

[Florida Fossil Hunters](#)

facebook

Visit us online at www.floridafossilhunters.com

Articles and comments should be sent to: bonnierussell62@gmail.com

Florida Fossil Hunters

Post Office Box 540404

Orlando, Florida 32854-0404



Florida Fossil Hunters News