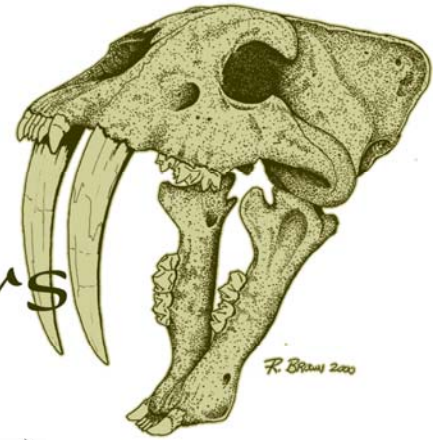


NEWS

Florida Fossil Hunters

Volume 20, Number 4

April 2010



Prez Sez

Greetings Fellow Fossil Fanatics,

Every once in a while, amateur explorers happen upon profound discoveries which overturn common scientific understanding. Now, paleontologists and zoologists are working together with local hunters to solve a mystery surrounding one such discovery—the photographs of a live *Saber-Toothed Tiger*.

You may be aware of the recent laws concerning Pythons and other invasive animal species in the Everglades. March 8th was the first day of Florida's hunting season for Burmese pythons, as the state attempts to enlist experienced hunters in fighting the huge, non-native snakes. The promise of a unique and giant trophy has prompted a slew of inexperienced hunters to test their skills as well.

One such hunter was Chad Crawford from Lake Mary, who made base camp "Python-1" in a remote swamp near Fakahatchee Strand Preserve State Park. Using nightvision equipment, and a motion-sensor, he hoped to spot the nocturnal snakes hunting food. Instead, his camera picked up images of an unexpected nocturnal predator - a remnant *Smilodon*, photographed for the first time in human history.

Due to the grainy nature of the photos, and the wide time gap in the fossil record, it's impossible to narrow down the exact species of *Smilodon*, (*barbourfelis*, *fatalis*) but the long canine saber-teeth which give the animal its moniker are clearly visible in both pictures, raising still more questions.

Paleontologists and zoologists at the University of Florida could not be reached for questions, but the departments have been studying the images closely to determine the animal's size and more importantly—where it's been all this time!

For more on the story, please turn to page 6 of the newsletter.

PREZ SEZ, *Cont.*



Coming Events

MEETINGS SATURDAY

at the Orlando Science Center

April 17, 2010

2:00pm Kids' Fossil Blast
3:00pm Meeting

May 15, 2010

3:00pm Meeting

June 19, 2010

2:00pm Kids' Fossil Blast
3:00pm Meeting

For more info...

www.floridafossilhunter.com

Table of Contents

Fragments	2
Piece on the Peace	2
Kids FossilBlast	2
VP Report	3
Vulcan Mine Field Trip	3
New Human Species Discovered... 4	
Breaking News About Dinosaurs... 5	
Dinosaur Skull Changed Shape During Growth	6
Membership Application	7
Calendar	8

NEXT MTG

APRIL 17th

Orlando Science Center

VULCAN MINE

APRIL 10th

See page 2 for details.

Fragments

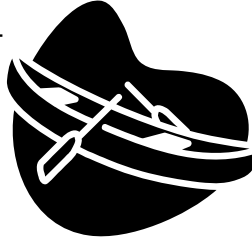
FPS Spring Meeting

The Florida Paleontological Society will be holding it's spring meeting in Naples this year on April 23rd through 25th. As part of the weekend's events, there will be a field trip to a quarry, a dinner and an auction.

If you are interested in becoming a member and participating, check out the Society at www.flmnh.ufl.edu/fps/

Piece on the Peace

It starts with a few raindrops. Then it becomes a down-pour. The water runs off the already saturated ground and gathers in streams which feed into the river. The water level rises and the torrential current races its way to the Gulf of Mexico.



At the end of March, that was the situation on the Peace River. The water level had overflowed the bank in some places inundating the bushes and tress along its course. IF we get no or little rain for the next couple weeks, we should be able to go digging there soon.

Venice Shark Tooth Festival

This year's Festival will be held on April 9th through April 11th. The hours are: Friday, 4 pm to 9 pm; Saturday, 10 am to 9 pm; Sunday, 10 am to 5 pm. The cost is \$3 per person. Kids under 12 can get in free.

There will be lots of shark teeth, as well as fossil, vendors. There will also be arts and crafts vendors and a Food Court. Entertainment will be provided by live bands and special activities for the kids.

It's being held at the Venice Municipal Airport Festival Grounds. Directions: Take I-75 south to exit 193. Turn right on Jacaranda Blvd. Turn right onto Center Rd. and go 2.5 mi. Cross over the bypass then turn right onto Tami-ami Tr. After crossing the bridge, turn left onto Avenida del Circo. Turn left onto Airport Ave. and follow the signs to the festival grounds.

Tampa Bay Fossil Club's Peace River 2010

The Tampa Bay Fossil Club has a get-together each year at Peace River. You don't have to be a member of their club to participate. This year's fossiling and camping adventure will be held on the weekend of April 24th and 25th at Pioneer Park in Zolfo Springs. Fossil hunting will begin at 8:30 am on Saturday....you don't need to have a canoe but bring your own equipment. A BBQ dinner (\$10 per person) will be held at 4 pm with an auction to benefit the Club afterwards. Camping is available at Pioneer Park, 231 Wilbur C. King Blvd., Zolfo Springs, FL 33890, ph: 863-735-0330.

To sign up or get further information, call Michael Searle at 813-909-9358 or email him at fossilnerd@msn.com

Meetings and Goals V.P. Report

April Meeting Program

This month's meeting will be focusing on everything "Peace River." It's been a long wait for the warmer weather and I know every fossil hunter wants to go to the Peace.

1) At the meeting, we'll have the common fossils of Peace River for those of you who want to see what can be found there. This will help you pick out fossils more easily... especially you first-timers. I'm asking that members who attend please bring in any Peace River fossils you'd like to show off or have identified.

2) A small workshop will be held on "How to build your own screen for fossil hunting", covering various screens to fit your needs.

3) We'll have a discussion about where to put in with canoes or, for fossil hunters who don't have one, areas easily accessed for walking in.

4) Dave Dunaway will be going over our May Peace River Weekend Dig during the meeting including where, when, what to bring, etc.

Weather permitting, hopefully we can all get down to the Peace River several times this year. Before you go, be sure to check the water level via the link on our website. Take an extra bucket with you for scrap fossils for the Kids' Pit at our Fossil Fair in October.

Russell Brown

Kids' Fossil Blast

At the next Fossil Blast on Saturday, April 17th at 2 pm, we will investigate how things are preserved in amber and examine some samples.

Big Discovery In Orlando

The Florida Department of Transportation contacted Bonnie and I last Thursday morning, April 1, stating that they had hit a huge bone bed and shell layer and asked if we could come out and see what exactly they'd dug through.

We proceeded to the site, just off the 429 and Hwy. 50, going down a small dirt road no bigger than a trail and pulled into an area where a pond the size of several acres was being dug. There were several large piles of shells with blackish-looking sticks and logs poking through them.

Getting closer we realized that the "sticks" were all fossilized bones. "My God", I thought. There were leg bones and jaws...large and small, some broken, some complete. It looked like "Cockroach Bay" reincarnated.

The foreman said we could get as much material out as possible in the next two months until they had to resume work in that part to complete their job on time. In just two hours we set out three

mammoth jaws and tusks. The largest tusk is just under 14 feet! The teeth are a caramel-pink and the prettiest that I have ever seen.

Camel, horse, and tapir were the most common mammals. Several sloth cores and bones came from the side of the pond. The carnivores that I could ID look like large lion teeth and maybe some Dire Wolf.

There are more bones than you could conceivably look through.....to move a bone, you have to dig out 5 or 6 other bones to free it up. I believe the bone layer is about 8 to 9 feet thick and about 70 yards long.

The foreman said he'd let anyone in to collect as much as they like as long as you obey the safety rules. I advise you to bring a large vehicle.

Good luck.

Russell Brown

P.S. Happy April Fools. See you at the meeting.

VULCAN MINE FIELD TRIPS

Join us in fossil hunting at the Vulcan Mine near Brooksville. Meet us in the circle driveway by 8:30 am to sign releases. They will escort us in around 9 am. Groups will be escorted out at noon and 2 pm for those that want to stay longer.

We have access to Vulcan on Saturday, April 10th and Saturday, May 8th. The trip leader for April is Dave Dunaway, who can be reached at 407-786-8844.

*For insurance purposes, you **MUST be a member** of the Florida Fossil Hunters to join us on the field trips.*

NO EXCEPTIONS. Meet on the driveway loop near the entrance to Vulcan Mine by 8:30 am to sign releases before we are led into the mine.

Directions: From Orlando take Hwy. 50 west to Brooksville. Turn right onto US 98 north and go approximately 10 miles. Vulcan Mine is on the left (west) side of 98 and the address is 16313 Ponce De Leon Blvd.

This is mostly surface collecting with a little digging. Bring a small trowel or rock hammer or screwdriver to pry out specimens and bring a bucket to collect. Bring small containers and paper towels/toilet paper to store fragile fossils.

Wear a hat, sturdy shoes, long pants (some of the rocks are sharp) and sunscreen. Bring lots of water and some snacks/lunch to eat.

We find mostly echinoids. Sometimes sea urchins, pieces of bone, and shark teeth are found. We also find chert rock. This is the material that the Indians used to make arrowheads and tools. This is one of the few places where kids are allowed in to fossil hunt. Be sure to stay with them since this is a working mine and there are steep cliffs and small sinkholes as well.

ALL PARTICIPANTS MUST BE ESCORTED OUT OF THE MINE. YOU CAN NOT LEAVE ON YOUR OWN SINCE IT IS EASY TO BECOME LOST AND THEY DO NOT WANT FOLKS WANDERING AROUND THE MINE WHILE THEY ARE WORKING.

New Human Species Discovered:

Mitochondrial Genome of Previously Unknown Hominins from Siberia Decoded

ScienceDaily (Mar. 25, 2010) — An international team of researchers from the Max Planck Institute for Evolutionary Anthropology in Leipzig has sequenced ancient mitochondrial DNA from a finger bone of a female found in southern Siberia. She comes from a previously unknown human species, which lived about 48,000 to 30,000 years ago in the Altai Mountains in Central Asia.

The mitochondrial genome that was inherited from the mother and passed on to the descendants is an indication of a new wave of emigration from Africa. It differs from the *Homo erectus* ancestors of Neanderthals and *Homo sapiens*, according to a study published in the journal *Nature*.

The first group of hominins, which left Africa about 1.9 million years ago, was *Homo erectus*. Archaeological findings and genetic data suggest that at least two other groups subsequently left Africa: First, about 500,000 to 300,000 years ago, the ancestors of Neanderthals. After that, 50,000 years ago, anatomically modern humans. Direct descendants of *Homo erectus* could have survived until less than 100,000 years ago in Indonesia. Earlier representatives of *Homo erectus* and *Homo heidelbergensis* lived in northern latitudes -- for example, more than 125,000 years in the Altai Mountains in southern Siberia. Neanderthals also lived at that time in Siberia.

Johannes Krause, Svante Pääbo and colleagues from the Max Planck Institute for Evolutionary Anthropology in Leipzig have now sequenced mitochondrial DNA from a tiny piece of a finger bone. The bone was found 2008 in the Denisova Cave in the Altai Mountains in southern Siberia. They compared the ancient DNA from the mitochondria, the "power plants of the cell," with the mitochondrial DNA of Neanderthals and living humans. It turned out that the mitochondrial DNA of the hominins from South Siberia differs markedly from that of all previously known hominins.

As shown by a detailed analysis of the mitochondrial genome, these hominins shared a common ancestor with modern humans and Neanderthals about 1.0 million years ago. In addition, the age of the fossil suggests that these unknown people in Southern Siberia lived close in time and space with Neanderthals as well as with modern humans.

Editor's Note: *The above information has been adapted from a news release, originally written in German (<http://www.mpg.de/bilderBerichteDokumente/dokumentation/pressemitteilungen/2010/pressemitteilung201003232/presselogin/>) and translated into English via Google Translate (<http://translate.google.com>).*

Breaking News About Dinosaurs

Proto-Dinos

Fossils of a proto-dinosaur called *Asilisaurus kongwe* were discovered in Tanzania that dispels some of notions about how the earliest dinosaurs looked. Until now, paleontologists have generally believed that the closest relatives of dinosaurs were small, had two legs and were carnivorous. The fossils of at least 14 *Asilisaurus* individuals allowed the researchers to assemble almost the entire skeleton. These animals stood up to 3 ft. high and 10 ft. long, walked on four legs, and most likely ate plants or were omnivorous.

They are part of a newly recognized group called "silesaurs". They had triangular teeth, and a lower jaw with a beak-like tip, suggesting that they were specialized for an omnivorous and/or herbivorous diet. They lived during the early Triassic, along with a number of primitive crocodylian relatives (crurotarsans). Both the silesaurs and crocodylians continued to live along the dinosaurs as they evolved.

Why Dinosaurs Won the Lottery at the Triassic/Jurassic Extinction

A bit more than 200 million years ago, the Earth looked far different than it does today. Most land on the planet was consolidated into the supercontinent Pangea. There was no Atlantic Ocean, and the rulers of the animal world were crurotarsans...creatures closely related to modern crocodiles. Then North America and Africa began to drift apart, creating a basin that would become the Atlantic Ocean. Fissures cleaved the area, triggering massive outflows of lava covering more than 3.5 million square miles...an area roughly equal to the continental United States. (Lava rocks have been found in bore holes under Florida dating to this time). The volcanic eruptions lasted about 600,000 years.

A team of researchers from Columbia University, Woods Hole Oceanographic Institution and Academia Sinica from Taiwan analyzed fossils and carbon signatures from two ancient basins in the U.S. as well as England. The fossils via pollen counts and carbon ratios told a clear tale: half of all the flora species perished. For animals, the scientists linked footprints to establish that crurotarsans perished as well. By the time the lava flows ended nearly all the species were gone.

Freed from their competitors, the early theropods became dominant. Theropod footprints found after that time show that they became larger.

How did the dinosaurs escape the climatic catastrophe of high carbon dioxide and low oxygen levels? Other researchers have established that the dinosaurs, like today's birds (which evolved along with the dinosaurs), had a special breathing structure unlike mammals or crocodiles, enabling them to thrive in low oxygen conditions. This same structure allows birds to migrate over the Himalayas.

It's no wonder that the dinosaurs became massively huge once the oxygen levels climbed back up.

APRIL FOOL'S!

A creative writing course and a little Photoshop can go a long way! The story on page one was concocted using real (doctored) photographs of a mountain lion taken in Oklahoma—a slightly larger version of our own Florida Panther...just bigger. Chad Crawford (actually of Lake Mary) is the host of a new show about finding fun things to do in the Florida—including an Emmy* Award Winning episode on Fossil Hunting starring our own Russell Brown and yours truly! It should air this summer. Details forthcoming.

A resounding thanks to Alex Kittle & Roger Portell of the Florida Natural History Museum in Gainesville. Their patience and expertise in identifying our fossils was a wonderfully welcome experience. We look forward to seeing them again soon!

Our next meeting will take place at Orlando Science Center on April 17th, with a Kid's Blast class and a special presentation on one of our favorite fossiliferous** localities—the Peace River. Join us at 2:00 for an experience you won't soon forget!

Happy Hunting!

Jimmy Waldron
President, Florida Fossil Hunters.com

*: Daytime Emmy, so it doesn't count.

** : It is too a real word.

Dinosaur Skull Changed Shape During Growth

ScienceDaily (Apr. 1, 2010) — The skull of a juvenile sauropod dinosaur, rediscovered in the collections of Pittsburgh's Carnegie Museum of Natural History, illustrates that some sauropod species went through drastic changes in skull shape during normal growth.

University of Michigan paleontologists John Whitlock and Jeffrey Wilson, along with Matthew Lamanna from the Carnegie Museum, describe their find in the March issue of the *Journal of Vertebrate Paleontology*.

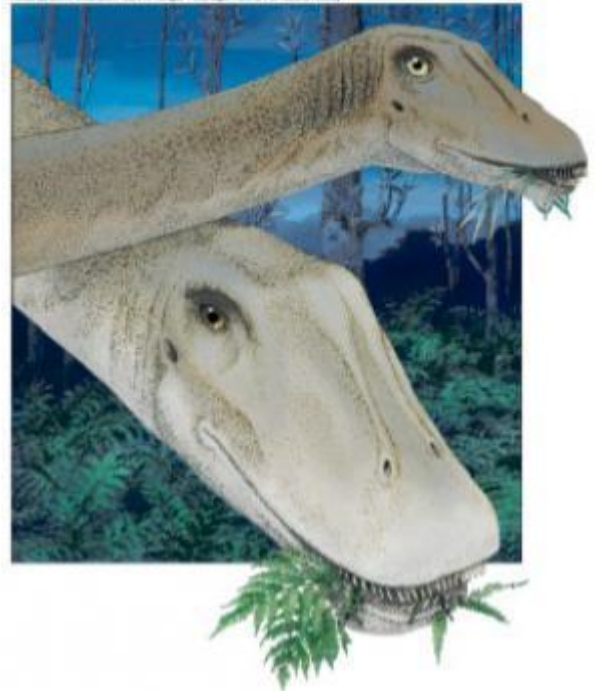
The fossil offers a rare chance to look at the early life history of *Diplodocus*, a 150 million-year-old sauropod from western North America.

"Adult sauropod skulls are rare, but juvenile skulls are even rarer," said Whitlock, a doctoral candidate in the U-M Museum of Paleontology. "What we do know about the skulls of sauropods like *Diplodocus* has been based entirely on adults so far."

"*Diplodocus* had an unusual skull," said Wilson, an assistant professor in the Department of Geological Sciences and an assistant curator at the U-M Museum of Paleontology. "Adults had long, square snouts, unlike the rounded or pointed snouts of other sauropods. Up until now, we assumed juveniles did too."

The small *Diplodocus* skull, however, suggests that major changes occurred in the skull throughout the animal's life.

"Although this skull is plainly that of a juvenile *Diplodocus*, in many ways it is quite different from those of the adults," Whitlock said. "Like those of most young animals, the eyes are proportionally larger, and the face is smaller. What was unexpected was the shape of the snout -- it appears to have been quite pointed, rather than square like the adults. This gives us a whole new perspective on



what these animals may have looked like at different points in their lives."

The researchers believe these changes in skull shape may have been tied to feeding behavior, with adults and juveniles eating different foods to avoid competition. Young *Diplodocus*, with their narrower snouts, may also have been choosier browsers, selecting high quality plant parts.

The discovery also highlights the importance of museum collections for paleontological research.

"Fossils like this are a great example of why natural history museums like ours put so much time and effort into caring for our collections, said Lamanna, an assistant curator of vertebrate paleontology at Carnegie Museum of Natural History. "This little *Diplodocus* skull was discovered in 1921, and more than 80 years passed before we recognized its significance. If the Carnegie Museum hadn't preserved it for all that time, the important insight it has provided into the growth and ecology of this dinosaur would have been lost."

The actual juvenile *Diplodocus* skull, as well as a fully restored, mounted skeleton of an adult, is on display in Carnegie Museum of Natural History's "Dinosaurs in Their Time" exhibition.

Funding was provided by the U-M Department of Geological Sciences and the Geological Society of America.

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 held the third Wednesday of each month at 7:00pm, check the website for the location.

Officers:

President	Jimmy Waldron	(386) 212-5814
Vice President	Russell Brown	(352) 429-1058
Secretary	Glory Kerr	
Treasurer	Sara Morey	(407) 353-8675

Chairs:

Education	Melissa Cole	(407) 834-5615
Field Trips		
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
Auctioneer	Roy Singer	(407) 645-0200
Historian	Valerie First	(407) 699-9274
Librarian	Kathy Munroe	(407) 846-7382
Membership	Joanne Maio	(407) 375-3635
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@liseydreams.com	

Board of	Paul Bordenkircher	(407) 687-3843
Directors:	Russell Brown	(352) 429-1058
	Melissa Cole	(407) 834-5615
	Dave Dunaway	(407) 786-8844
	Ed Metrin	(407) 321-7462
	John Jelks	(407)568-5558
	Roy Singer	(407) 645-0200

Membership Application

Names: _____

Associate Members: _____

Address: _____

City: _____

State: Zip: _____

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: elise@liseydreams.com. Articles can be sent as text in the e-mail or in Microsoft Word files (*.doc).

Florida Fossil Hunters Mark Your Calendar

See page 2 for more information on events.

April 9, 10 & 11

Venice Shark Tooth Festival

April 10: Vulcan Field Trip

April 17

2:00 Kids Fossil Blast

3:00pm Club Meeting

FPS Spring Meeting

Florida Paleontological Society Spring Meeting Naples, April 23rd through 25th.

May 8: Vulcan Field Trip

May 20

3:00pm Club Meeting

Be Green

We are *emailing* the newsletter each month. If you want to participate, just email Bonnie at bjrb48@netzero.com or sign up at the meeting. If you want to continue to receive a paper newsletter in the mail, you don't have to do anything.



Visit us online at www.floridafossilhunters.com

Articles and comments should be sent to: elise@liseydreams.com

Florida Fossil Hunters

Post Office Box 540404

Orlando, Florida 32854-040



Florida Fossil Hunters News