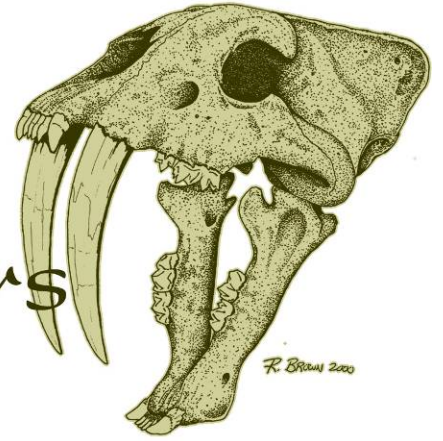


# NEWS

## Florida Fossil Hunters



Florida Prehistorical Museum, Inc. dba/ Florida Fossil Hunters  
Volume 21, Number 3

March 2011

### OSC Fossil Fest March 19th

*Instead of a regular meeting*  
**- Double Fossil Bucks for volunteers -**

#### *From the Shark Room*

Florida Fossil Hunters will be working with the Orlando Science Center this month at the Fossil Fest. This is the 5th (or 6th) year for this great opportunity for us to show our friends at OSC that we appreciate all they do for the club, by us going all-out to make this event educational, fun and festive.

Our club strives to be a family oriented and educational experience. In the past, we had an "education day" before our annual fossil fairs. These weren't as effective as we hoped because we had to limit the number of schools that could participate. Also those volunteers that worked that day ended up to be the ones who did the majority of fossil fair volunteering so they were all on the edge of burn-out by Sunday night. When the Fairgrounds began to insist on us paying for the extra day, it was the final straw. So that event was discontinued.

Now the Fossil Fest at OSC is one of our club's greatest opportunities to not only get exposure for our club, but also to educate the public about the wonders of Florida's past.

So far, Dave Dunaway, Ed Metrin, Melissa Miller, and Bonnie and I will be bringing in fossils from our collections for this event. Word is that even the elusive Jeremy Smith (the tall one) will be there with an assortment of things.....BIG THINGS.

We still need more volunteers to help out at the tables for a couple hours or the whole day. If you haven't signed up already, you can call us at 352-429-1058 or email [bjrb48@netzero.com](mailto:bjrb48@netzero.com) Most of our fossils are labeled and have info, so don't feel you have to be an expert to volunteer.

See you there.  
Russell Brown

*The event runs from 10 am to 4 pm. We'll be there early for set-up. We'd like everything ready for the OSC guests when they open the doors and can use your assistance if you can get there early as well. Believe me when I say that Bonnie is ready to pull out MY hair by the time it starts, so please help.*

### Coming Events

#### UPCOMING MEETINGS at the Orlando Science Center

#### SUNDAY

**Tuesday, March 8th**  
Next Board Meeting - 7 pm

**Saturday, March 19, 2011**  
Orlando Science Center  
Fossil Fest

**Saturday, April 16, 2011**  
2:00pm Kids Fossil Blast  
3:00pm Club Meeting

#### May

*Watch for more info on the  
Peace river Dig Weekend*

*For more info...  
[www.floridafossilhunter.com](http://www.floridafossilhunter.com)*

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# Fragments

## Orlando Science Center's Fossil Fest 2011

March 19th, 12 noon to 4 pm

Calling for members to volunteer...this is your opportunity to bring the excitement of fossils and Florida's past to the public through our partnership with the Orlando Science Center.

We plan on having several educational stations/exhibits - the more, the merrier. Some displays are already in the cases there at the Orlando Science Center and members will be bringing additional fossils and replicas from their collections as well. Those of you who would like to bring items to display, contact us as soon as possible so we can reserve a table for you.

Even if you don't want to bring display items, we need volunteers who can help at the different displays to talk with guests and answer their questions. We plan on having different themes at different tables: shells & corals, marine mammals, sharks, carnivores, reptiles, other mammals, etc.

We've authorized Dave Dunaway to pay double fossil bucks for volunteers. With your help, we can make this year's event successful and have fun at the same time.

Thank you.

Russell & Bonnie

[bjrb48@netzero.com](mailto:bjrb48@netzero.com) | 352-429-1058

### Members Welcome

Next Board Meeting - Tuesday, March 8th, 7 pm  
Dave Dunaway's house, 600 Ferne, Longwood  
407-493-4253

If you've ever wondered what a Board meeting is like or thought of becoming a Board member but were unsure what it entails....or maybe you have a great idea or would just like to have some input in the club's plans for the future...then please feel free to come to the Board meeting. We could really use some new perspectives. Thanks. Russell Brown

### FPS Spring Meeting and Dig

The Florida Paleontological Society has scheduled the spring weekend event for April 9th through 10th. It will include a fossil hunting trip to a shell pit in Bradenton that has yielded some really good specimens...even some vertebrate fossils. It's a great opportunity to socialize with folks throughout the state that are just as intrigued by fossils and the past as we are. If you're not a member of FPS, visit [www.flmnh.ufl.edu/fps](http://www.flmnh.ufl.edu/fps) for more info.

### April Meeting

Our April 16th meeting will feature David Letasi, retired paleontologist and historian, who will give a presentation entitled "The Apex Predators from Florida's Ice Age". His program will explore their hunting strategies and interaction with early humans. He will also have rare carnivore fossils.

### Piece on the Peace

The Peace River is reading less than 5 ft. at the Zolfo Springs station. This means that areas we normally can't hunt in because of deep water are within reach. Grab your shovels and sifters and get out there to find your own treasures while the water is low.

### Archaeology at the Library

The Orange County Library is running a series: What You Need to Know About Florida Archaeology

Mar. 8th, 6 pm at the North Orange Branch:

The History of the Human Skeleton

Mar. 15th, 6 pm at the West Oaks Branch:

Forensic Anthropology; How the Dead Died

Mar. 22, 6 pm at the Main Branch:

Windover: An Archaic Mortuary

For more info go to [www.ocls.info/Programs](http://www.ocls.info/Programs)

See page 5 for more info on  
Shows, Festivals, etc...

## Kids' Fossil Blast

### Kids' Fossil Blast

Our next Kids' program will be at 2 pm on April 16th, when we will recreate the habitats of some of the animals from Florida's past.

Future Kids' meetings are scheduled for April 16th and June 18th and August 20th. For more info, email Bonnie at [bjrb48@netzero.com](mailto:bjrb48@netzero.com) or call 352-429-1058.

## Field Trips

### Field Trip to Yankeetown

I'm trying to get some more small boats/ canoes, etc. for a trip up to Yankeetown, Florida. Our targets are several small spoil islands just far enough from the boat ramp that you can't access by wading across. These spoil islands offer an assortment of fossil echinoids and sand dollars, besides being a beautiful place to experience nature... watching the birds, dolphins, and fishing, etc. We could bring a grill and have a cook-out on the islands, too.

I would definitely like a club trip there but we can't do this alone with one canoe. If you think you could help us out, please call (352-429-1058) or email us [bjrb48@netzero.com](mailto:bjrb48@netzero.com)

Thank you.

Russell and Bonnie

Note: Inside our membership booklet and on our website, there is more info on where and what you can find at Yankeetown.

### Vulcan Field Trips ?

**There will be no club group going to Vulcan in March.** Most of us will be at the Tampa Fossil Fest!

We need a **volunteer** to be trip leader for the Saturday, **April 9th** Vulcan dig. Allan of Vulcan Mines does a fine job of telling folks what can be found, so mostly the trip leader is needed to answer questions about how to get there, how to look for fossils, and to handle the paperwork (which I will give to you). The only skills you need are enthusiasm and the ability to get up early enough to be there before 8:30 am.

If you want to lead the group in April, let me know and I'll set it up, get the paperwork to you, and email the membership for you.

Thanks,  
Bonnie Cronin  
352-429-1058 or [bjrb48@netzero.com](mailto:bjrb48@netzero.com)

### Help Unearth History

Register now for the next Thomas Farm fossil dig: Hummingbird Challenge VII, ran by the Florida Museum of Natural History Ornithology Curator David Steadman.

When: March 30 - April 3, 2011

Where: Thomas Farm site, Gilcrest Co. (45 mi. NW of Gainesville)

Cost: \$180 (2 nights) \$240 (3 nights) \$300 (4 nights)

Cost includes refreshments, meals, access to the Thomas Farm facilities (picnic shelter, kitchen, shower, campground, nature trail), short evening lectures by Museum scientists and guided nature walks on the 40 acre preserve. They also train you in digging techniques so the inexperienced are welcome as well as seasoned diggers.

For more info on the this year's dig and the exciting discoveries in years past, go to: [www.flmnh.ufl.edu/sciencestories/2011/fossil\\_digging.htm](http://www.flmnh.ufl.edu/sciencestories/2011/fossil_digging.htm)

### Florida Fossil Hunters Library Gone "Extinct"

#### At the Dawn of our club....

The members of Florida Prehistorical Museum, Inc., now known as Florida Fossil Hunters, began to donate books so a library was started. Over the years, we've accumulated a large number of books and also allotted \$50 per year for the purchase of new books. This library was setup as a way for members to acquire data on paleontology and related subjects. and ID fossils. Members could check out these books.

The computer Epoch....

Suddenly out of cyber-space, an extremely large internet ushered in the new age of instant access to data, which has made carrying 400 lbs. of books around a pain in the past.

Discussion was brought up at the board meetings of possibly doing away with the Library except for a small selection of books that we would keep. During the February meeting this was put to the membership and it was decided to sell off the books at a meeting and/or the Fossil Fair. As we get a complete list, we'll publish it for all to see what is available.

Russell Brown, President

# Oldest Fossils of Large Seaweeds, Possible Animals Tell Story About Oxygen in an Ancient Ocean

*ScienceDaily (Feb. 19, 2011) — Almost 600 million years ago, before the rampant evolution of diverse life forms known as the Cambrian explosion, a community of seaweeds and worm-like animals lived in a quiet deep-water niche under the sea near what is now Lantian, a small village in Anhui Province of South China. Then they simply died, leaving some 3,000 nearly pristine fossils preserved between beds of black shale deposited in oxygen-free waters.*

Scientists from the Chinese Academy of Sciences, Virginia Tech in the U.S., and Northwest University in Xi'an, China report the discovery of the fossils and the mystery in the Feb. 17 issue of *Nature*.

In addition to perhaps ancient versions of algae and worms, the Lantian biota -- named for its location -- included macrofossils with complex and puzzling structures. In all, scientists identified about 15 different species at the site.

The fossils suggest that morphological diversification of macroscopic eukaryotes -- the earliest versions of organisms with complex cell structures -- may have occurred only tens of millions of years after the snowball earth event that ended 635 million years ago, just before the Ediacaran Period. And their presence in the highly organic-rich black shale suggests that, despite the overall oxygen-free conditions, brief oxygenation of the oceans did come and go.



*These images are part and counterpart of a macroscopic Lantian fossil, probably a seaweed, with differentiated morphologies including a distinct root-like holdfast to secure the organism on sea bottom, a conical stem, and a crown of ribbon-like structures. Scale bar is 1 centimeter.  
(Credit: Photo by Zhe Chen)*

"So there are two questions," said Shuhai Xiao, professor of geobiology in the College of Science at Virginia Tech. "Why did this community evolve when and where it did? It is clearly different in terms of the number of species compared to biotas preserved in older rocks. There are more species here and they are more complex and larger than what evolved before. These rocks were formed shortly after the largest ice age ever, when much of the global ocean was frozen. By 635 million years ago, the snowball earth event ended and oceans were clear of ice. Perhaps that prepared the ground for the evolution of complex eukaryotes." **(Continued on page 5)**

### **Oldest Fossils of Large Seaweeds, (Continued from page 4)**

The team was examining the black shale rocks because, although they were laid down in waters that were not good for oxygen-dependent organisms, "they are known to be able to preserve fossils very well," said Shuhai. "In most cases, dead organisms were washed in and preserved in black shales. In this case, we discovered fossils that were preserved in pristine condition where they had lived -- some seaweeds still rooted."

The conclusion that the environment would have been poisonous is derived from geochemical data, "but the bedding surfaces where these fossils were found represent moments of geological time during which free oxygen was available and conditions were favorable. They are very brief moments to a geologist," said Xiao. "but long enough for the oxygen-demanding organisms to colonize the Lantian basin and capture the rare opportunities."

The research team suggests in the article in *Nature* that the Lantian basin was largely without oxygen but was punctuated by brief oxic episodes that were opportunistically populated by complex new life forms, which were subsequently killed and preserved when the oxygen disappeared. "Such brief oxic intervals demand high-resolution sampling for geochemical analysis to capture the dynamic and complex nature of oxygen history in the Ediacaran Period," said lead author Xunlai Yuan, professor of palaeontology with the Chinese Academy of Sciences.

Proving that hypothesis awaits further study. The rocks in the study region are deposited in layered beds. The nature of the rock changes subtly and there are finer and finer layers that can be recognized within each bed. "We will need to sample each layer to see whether there is any difference in oxygen contents between layers with fossils and those without" said co-author Chuanming Zhou, professor of palaeontology with the Chinese Academy of Sciences.

The research was supported by Chinese Academy of Sciences, National Natural Science Foundation of China, Chinese Ministry of Science and Technology, National Science Foundation, NASA Exobiology and Evolutionary Biology Program, and a Guggenheim fellowship to Xiao.

*Virginia Tech (2011, February 19). Oldest fossils of large seaweeds, possible animals tell story about oxygen in an ancient ocean. ScienceDaily. Retrieved March 2, 2011, from <http://www.sciencedaily.com/releases/2011/02/110216132032.htm>*

### **Shows, Festivals, etc...**

#### **Suncoast Gem and Mineral Show**

Friday, March 4th, 10 am to 6 pm  
Saturday, March 5th, 10 am to 6 pm  
Sunday, March 6th, 10 am to 5 pm

Where: Minnreg Bldg,  
6340 126th Ave., N.,  
Largo, FL 33773

For more info, check out their website  
[www.sgams.com](http://www.sgams.com)

#### **Tampa Bay Fossil Fest 2011 Fossil and Mineral Show**

Saturday, March 12th, 9 am to 6 pm  
Sunday, March, 13th, 10 am to 4 pm

Where: Florida State Fairgrounds, near the intersection of I-4 and Hwy. 301, just east of Tampa. Enter via the gate on Martin Luther King Blvd. Parking is \$5 per car, \$10 per RV.

What's there: Displays and vendors with fossils, minerals, gems, artifacts, and shells. Kids' games, kids' fossil mine, raffles, door prizes, silent auction, workshops

Admission \$3 per person; children 12 and under get in free. For more info go to [www.tampabayfossilclub.com](http://www.tampabayfossilclub.com).

#### **Venice Shark Tooth Festival**

Friday, April 8th, 4 pm to 9 pm  
Saturday, April 9th, 10 am to 9 pm  
Sunday, April 10th, 10 am to 5 pm

Where: Venice Municipal Airport festival grounds on Airport Ave. across from Sharkey's Pier. From Sarasota, take Rt. 41 south to Rt. 41 Bypass in Venice. Look for signs along the Bypass directing you to the Municipal Airport festival grounds.

What's there: Fossil.. especially fossil shark teeth...vendors, arts & crafts, food vendors, entertainment, and kids' activities.....and then you can go to the beach and look for fossils, too.

Admission is \$3 per person. Children 12 and under get in free. Parking is free.

# Secrets of Dinosaur Footprints Revealed, Thanks to 'Goldilocks'

*ScienceDaily (Feb. 8, 2011) — Terrain thought to be ruled by only the largest dinosaurs to inhabit Earth could have in fact been home to dozens of other creatures, ground-breaking research from The University of Manchester has found.*

Writing in the journal of the Royal Society *Interface*, Dr. Peter Falkingham has discovered that dinosaurs only created lasting footprints if the soil conditions were perfect to do so -- and entirely depending on the animal's weight.

Dubbed the 'Goldilocks Effect' -- as all conditions have to be 'just right' for a print to be created -- this work could help to bring ancient environments to life, by showing how a great number of animals can walk over an area, but only a few leave behind tracks.

The findings mean that hugely-significant prehistoric dinosaur track sites, such as Paluxy River in Texas, USA, or Fumanya, Spain could have been host to a much larger number of dinosaurs and other animals than the tracks themselves show.

Dr. Falkingham, from the University's School of Earth, Atmospheric and Environmental Sciences, led a team using detailed computer modeling to recreate the process of large dinosaurs making footprints in different types of mud.

The team incorporated scientists from a range of disciplines, including vertebrate palaeontologist Dr. Phil Manning and Geotechnical engineer Dr. Lee Margetts, both from The University of Manchester, and biomechanicist Dr. Karl Bates (University of Liverpool).

By using computer modeling to simulate dinosaurs making tracks, the scientists were able for the first time to run dozens of simulations in order to systematically change the conditions of the mud.

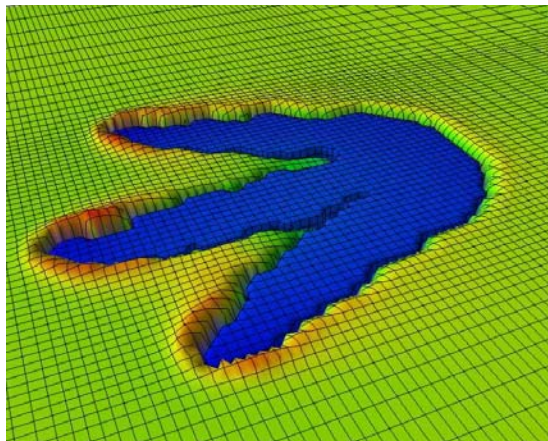
As dinosaurs ranged vastly in weight, from Brachiosaurus, weighing around 30 tonnes, to Compsognathus, which was the size and weight of a chicken, Dr. Falkingham worked out that only the heaviest creatures would leave prints in certain mud conditions.

Equally, in other areas where the mud was deep and soft, only lighter, nimbler dinosaurs would be able to walk

over it and therefore leave prints; larger animals would become stuck and die.

These insights give palaeontologists the chance to re-evaluate the ecosystems which existed more than 100 million years ago.

Dr. Falkingham said: "By using computer modeling, we were able to recreate the conditions involved when a 30-tonne animal makes a track.



"That's very hard to do with physical modeling, more so when you need to do it 20 times in 20 different types of mud.

"But the real advantage of computer modeling is that everything is controllable. We were able to ensure that in every simulation we could look at the effects of each variable (for instance, the shape of the foot, or the weight of the animal) independently.

"As with most scientific papers, this isn't the end of research, this is the beginning.

"Now we can use this "Goldilocks" effect as a baseline for exploring more complicated factors such as the way dinosaurs moved their legs, or what happens to tracks when a mud is drying out."

In Paluxy River, site of one of the most famous sets of dinosaur footprints which seem to show a sauropod being chased by a carnivorous theropod, there are only footprints recording large dinosaurs.

But Dr. Falkingham's findings suggest that many more species probably lived there, walking over the same mud, but their footprints either made no impression or have disappeared over time.

The computer method was based on a technique common in engineering, known as finite element analysis.

This method lets scientists simulate the deformation of a material under load. While in engineering this may be an airplane wing supporting the aircraft, Dr. Falkingham and his co-authors applied the method to mud supporting a dinosaur.

For more info, see the full article at:

[www.sciencedaily.com/](http://www.sciencedaily.com/)

# Florida Fossil Hunters

# Membership Application

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) 493-4253
Secretary	Bonnie Cronin	(352) 429-1058
Treasurer	Sara Morey	(407) 353-8675

**Chairs:**

Education	Bonnie Cronin	(352) 429-1058
Field Trips	<b>OPEN</b>	
Fossil Fair	Valerie First	(407) 699-9274
Fossil Auctions	Dave Dunaway	(407) 493-4253
Fossil Bucks	Dave Dunaway	(407) 493-4253
Fossil Lotto	Ed Metrin	(407) 321-7462
Auctioneer	Roy Singer	(407) 645-0200
Historian	Valerie First	(407) 699-9274
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@liseydreams.com	

**Board of Directors:**

Melissa Cole	(407) 834-5615
Ed Metrin	(407) 321-7462

**NEEDED**  
**NEEDED**

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

## Newsletter Policy

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

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 or .docx).

# Florida Fossil Hunters Mark Your Calendar

See page 2-5 for more information on events.

## March 4 - 6th

Suncoast Gem and Mineral Show

Tuesday, March 8th, Next Board Meeting - 7 pm

## March 12 and 13th

24th Annual Tampa Bay Fossilfest, pg 2

## Saturday, March 19th

Orlando Science Center Fossil Fest, pg 2

## April 8 -10th

FPS Weekend, pg 3

## April 8 - 10th

Venice Shark Tooth Festival

## April 16, 2011

2:00pm Kids Fossil Blast

3:00pm Club Meeting

## May 2011

Watch for more info on the  
*Peace River Dig Weekend*

## TIME TO RENEW

If you haven't renewed your membership for 2011,  
***this will be your last newsletter.***

## Be Green

Email Bonnie at [bjrb48@netzero.com](mailto:bjrb48@netzero.com) to receive the newsletter via email.



Join Our Facebook group, Search:

[Florida Fossil Hunters](#)

facebook

Visit us online at [www.floridafossilhunters.com](http://www.floridafossilhunters.com)

Articles and comments should be sent to: [elise@liseydreams.com](mailto:elise@liseydreams.com)

## Florida Fossil Hunters

Post Office Box 540404

Orlando, Florida 32854-0404



# Florida Fossil Hunters News