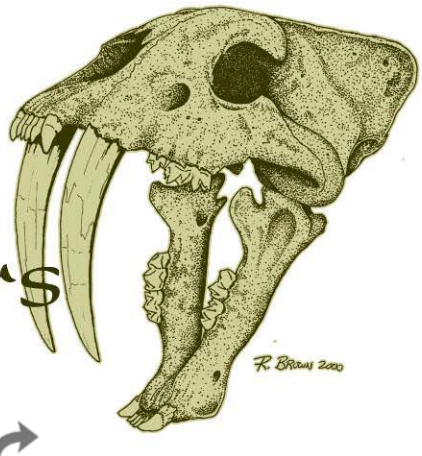
NEWS
Florida Fossil Hunters

Florida Prehistorical Museum, Inc. dba/ Florida Fossil Hunters
Volume 26, Number 3

March 2016



From the President.....

Welcome all members, new and old. Winter is waning and Spring is right around the corner. Hopefully water levels will fall so time to get your gear together and make plans for the 2016 collecting season.

If you didn't get to the last meeting, you missed our wonderful speaker, Sarah Allen, Paleobotanist. She gave us a presentation on her work at the Blue Rim Site in Wyoming and Hell Creek plant fossils, and what they tell us. You can go to her website to learn more - www.flmnh.ufl.edu/museum-voices/bluerim/

This was a prelude to our Women in Paleontology event to be held on May 7th at the Orlando Science Center. Like I said at the meeting, this program could be the biggest mark our club contributes. It's getting a lot of attention and gets larger each year. Get in on the fun and volunteer to support your club and the ladies. I'm planning on bringing Bonnie's collection and I would like as many women members as possible to attend. Contact Cindy Lockner or Bonnie if you would like more info.

After our March meeting, members Valerie First, Dave Dunaway, and Ed Metrin displayed fossils and talked to the guests at OSC's Science Night Live which had a record crowd. The next Science Night Live - over age 21 event - will be on Saturday, June 11, from 8 to 11 pm.

Meanwhile, there is still a lot fossil events and fossil hunting happening all around. Check the Calendar of Events and details this newsletter.

At the March meeting, we'll be going over everything about the Peace River... what you need, tips from the old-timers, screens, places to put in, maps, etc. Looking for trip leaders for the BIG Dig when the water level drops. And, as always, bring in what cool stuff you've been finding, buying, etc. for all of us to see.

See you at the meeting.
Russell Brown
President

Join Our Facebook group, Search:
Florida Fossil Hunters

Coming Events

UPCOMING MEETINGS
at the Orlando Science Center

Saturday, March 19th
2 pm Kids Fossil Blast
3 pm Meeting

Saturday, April 16th
3 pm - meeting

More events listed on back page

For more info...
www.floridafossilhunters.com

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Fragments

Fossil & Mineral Shows

Tampa Bay Fossil Club: Fossil Fest on Mar 12th & 13th. Sat 9am - 6pm, Sun 10am - 4pm. Admission is $7. Kids 12 & under get in free. Florida Sate Fairgrounds, intersection of I-4 and Hwy. 301, just east of Tampa. There is a charge for parking. (I think it's $7). Fossils, minerals, exhibits, etc. www.tampabayfossilclub.com

Venice Shark's Tooth Festival Apr. 8th - 10th, at the Venice Airport Festival Grounds, 610 E. airport Ave, Venice, FL. Admission is $4. Kids 12 & under get in free.

Central Florida Mineral and Gem Society is hosting a Rock, Mineral, Gem, Jewelry & Fossil Show on April 22nd, 23rd and 24th, 2016 at Florida National Guard Armory, 2809 South Fern Creek Ave., Orlando, FL 32806. Show time: Fri. 1 pm to 6 pm, Sat. 10am to 6pm and Sun. 10am to 5pm. Vendors offering beads, minerals, gemstones, custom jewelry, fossils, artifacts, metaphysical stones, etc. Silent Auction and Door Prizes. Demonstrations: faceting stones, cabochons and wire wrapping. Family Activities. Contact: phayes3@cfl.rr.com. Admission: Adults $5, Students $2. Website: www.cfmgs.org.

Earth Day Celebration
Lake Lotus Park, Altamonte Springs
Sunday, April 24th, 10 am - 2 pm
Come join us for an Earth Day Celebration at Lake Lotus Park, 1153 Lake Lotus Park Rd., Altamonte Spr. 32714. Florida Fossil Hunters will have a display set up and we've donated fossils for their "kids' dig pit". There will also be guest speakers, nature exhibits, guided ranger tours, and food/drinks, etc. Come join Valerie, Russell, & Bonnie and volunteer and enjoy the activities.

OSC Fossil Fest 2016
Working with our friends at the Orlando Science Center, we're planning on a Fossil Fest some Saturday in September. This is an educational event with lots of extra displays, hands-on experiences, and mini-lectures. This will be a golden opportunity for our club to do outreach to the public plus advertising for our Fossil Fair, National Fossil Day at the Bradenton Museum, and OSC's Neanderthal Ball. These outreach to the public events are a large part of what our club is about, so - like always - I'll be asking for members to volunteer. A definite date and more info will come later.

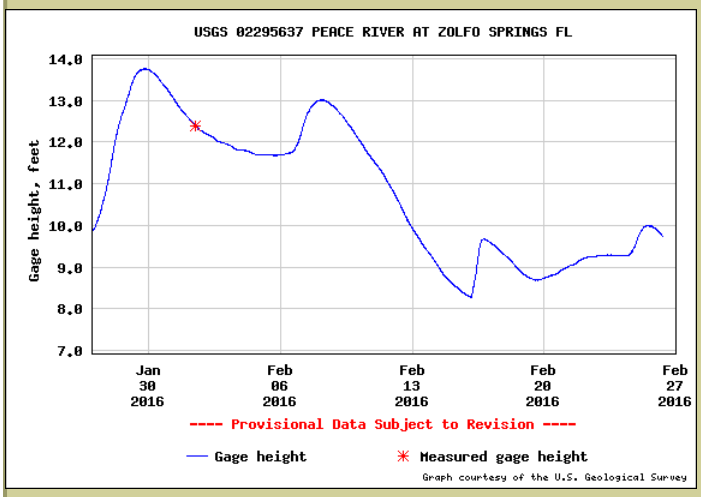
Kids' Fossil Blast

It's time to get dirty! On Saturday, March 19th at 2 pm, we will be excavating some real fossils and documenting the process. Bring a phone or camera (if you have one) to take pictures of "your dig". Be on time for this one or you'll miss the fun.

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

Piece on the Peace River

River level is slowly coming down. Some folks have been hunting in some creeks already. We are hoping to have a club trip to the Peace this Spring. Probably canoe/kayak from Rea Rd. to Wauchula's park. Keep an eye out for emails and in future newsletters.



VULCAN MINE

MAR 12th & APR 9th

See page 6 for more details.

Women in Paleontology 2016

Mark your calendars .....
this year's program will be on
Saturday, May 7th,
at the Orlando Science Center.

Cindy Lockner is spearheading the event, so contact her at clockner@comcast.net to sign-up to volunteer, or you can email Bonnie at bonnierussell62@gmail.com

We hope to make this event as fantastic as last year's.

Reminder: Check your Florida Fossil permit expiration date.

2016 Membership Renewal
still a bargain at only
$17 per household

Can You Dig It?

Mar 12th 10:00 am - 3:00 pm
Dig into geology and discover the Earth at your feet! Enjoy hands-on activities and watch demonstrations of volcanic eruptions. Explore the Museum and check out displays and activities on geology, fossils, gems, minerals and much more from Florida and around the world! A free, fun event for all ages!

Can You Dig It? is presented by the UF Dept of Geological Sciences and the Florida Museum in collaboration with the Gainesville Gem and Mineral Society.

Onsite food vendor: High Springs Orchard and Bakery

For more info, call 352-273-2064 or www.flmnh.ufl.edu/calendar/grid/can-you-dig-it/#sthash.QiDhvfnH.dpuf

S.E.G.S.A. Speaking of outreach....
The South East Geological Society will be having their meeting/conference March 31st and April 1st in Columbia, SC. Dr. Bruce MacFadden has asked our club, as a participant in FOSSIL, to make a presentation on its various outreach projects. Cindy Lockner, Bonnie & myself are working on a poster to illustrate our different outreach activities. I'll be giving a report on what we see and learn after the event. We are excited and proud to be part of this endeavor.

Florida Museum of Natural History, Gainesville

Archaeology Workshop:

Canoe

May 22nd 2:00 pm - 4:00 pm
Florida Museum - 3215 Hull Road, SW 34th Street and Hull Road Gainesville, FL 32611

Rivers were once the highways of prehistoric Florida, but how did Native Americans make the canoes they used to navigate the waterways? Archaeologists will explore ancient dugout canoes of Florida and discuss the methods used to craft them. Join the Florida Public Archaeology Network during this free workshop for all ages. Pre-registration is required. For more information, call 352-273-2064.

- See more at: http://www.flmnh.ufl.edu/calendar/grid/workshop2/?eID=2089#sthash.LXdWL5zy.dpuf

Walking and Talking Evolution

An excerpt of the Minda Berbeco January 2016 ***National Center for Science Education*** *interview with Valerie First, a Florida Fossil Hunters Super Volunteer, for the entire blog post, visit http://ncse.com/blog/2016/01/walking-talking-evolution-0016863*

Valerie First is a docent at the Central Florida Zoo and Botanical Gardens, in Sanford, Florida, and the Orlando Science Center. She earned her BA degree from the University of Florida and is a member of the Florida Fossil Hunters, Tampa Bay Fossil Hunters, the Florida Paleontological Society, and American Association of Physical Anthropologists. Over the years as a docent, she has had to battle misconceptions about evolution and been confronted by a public unsupportive of the science. She sat down with us recently to share how she addresses evolution within her community, and why she feels it is so important.

Q. How do you approach evolution when talking with the public?
A. I talk in six minutes intervals MANY times during the day as a docent—this gives me very little time to get a lot of information across. As a result, I have to find good ways to demonstrate really big ideas, so I use fossils to talk about everything from diapsids/synapsids to humans. By the time I get to hominid "links", evolution is starring them in the face.

The reaction from my audience is either "wow that is so cool" or "wow that is crazy"—and by "crazy", they mean that this is all new information to them. I am always amazed that this is the first time many of my audience members have heard about evolution. It drives my passion for being out there on the street talking science with all sorts of people. People ask if I am a teacher and I tell them: "we are all teachers."

Q. What sorts of challenges have arisen as you address evolution? How do you deal with that?
A. A lot of people are proud to tell me they "believe" in evolution and ask me how I deal with those that do not. They say it must be hard to talk about it every day. I tell them that an important purpose in life is to bounce ideas off each other and "evolve" intellectually. People that hold religious beliefs are happy to find out that religion is a separate subject and takes nothing away from science and vice versa. A simple point: bibles are not science books.

I have had people named "Genesis", listen to what I have to say and then say "cool!" I've had very distinguished-looking audiences who tell me they do not "believe" in evolution. I have talked with children whose parents are creationists. I find out because I hear the parents tell the kids that they will have to have "a discussion" with them on the way home. At least they have now heard about evolution.

I deal with these challenges through my presentation style. I talk with authority, annunciate clearly and accent every second or third word as I point out features. I do not change my talk by second guessing what some might object to.

Q. What would you say to others who are nervous about talking about evolution with a skeptical audience?
A. What I would like is for other people to not be afraid. I have talked in schools and I will occasionally have a student with questions that challenge evolution. I listen and answer and that's usually it. It's not nearly as scary as it sounds.

Q. What do you think is the most important thing you convey about evolution?
A. That we are related to all life and to each other. That seems to be lost in all the killing and arguing going on today. I feel in my talks that I am reconnecting people.

Another important element in my talks is time. Some people in my audience think dinosaurs and "cavemen" were around at the same time. They think mammoths are dinosaurs. I hear these misconceptions all the time, so during my talk I emphasize that there were no people 65 million years ago. Not on this planet anyway!

Q. Any last thoughts?
A. I love working in this niche and would love to see people doing this in our museums and zoos. It is so rewarding. I have had some teachers that love having me come and talk to their students, while others have told me that they are fearful of repercussions. That is a shame, but will hopefully change with time. Of course we must be tactful or we will be made extinct from these places of learning, and what may evolve from these niches is continued ignorance!

What lies within:

New micro-CT scanner allows inside view of even the tiniest fossils

February 4th, 2016 | By Emily Mavrakis

Encased in hard rock, the bones of many fossilized mammals are only partially visible for scientists to study. A poor attempt to take apart the rock and view the complete fossil may damage the bone, but micro-CT scanning technology has safeguarded the fate of these specimens, many of which are tens of millions of years old.

“You can essentially cut into the specimens in a non-destructive way with a micro-CT scanner,” said Jonathan Bloch, curator of vertebrate paleontology at the Florida Museum of Natural History. “And it allows you to look at the internal anatomy of fossil skulls.”

The new micro-CT scanner at the University of Florida’s Nanoscale Research Facility will allow Bloch and other scientists to closely view and study specimens as small as a micron (one millionth of a meter).

Holding a tiny *Notharctus* skull in his hand, Bloch explained the scanner can digitally recreate the 45-million-year-old lemur-like primate’s brain, which could give insight into how its body structure differs from modern primates.

“Once you have an image of the brain, you can follow nerves and blood vessels from the brain through the rest of the skull to determine where they go,” he said. “It allows us to test ideas about what these holes and grooves and things are on the surface of fossil bones.”

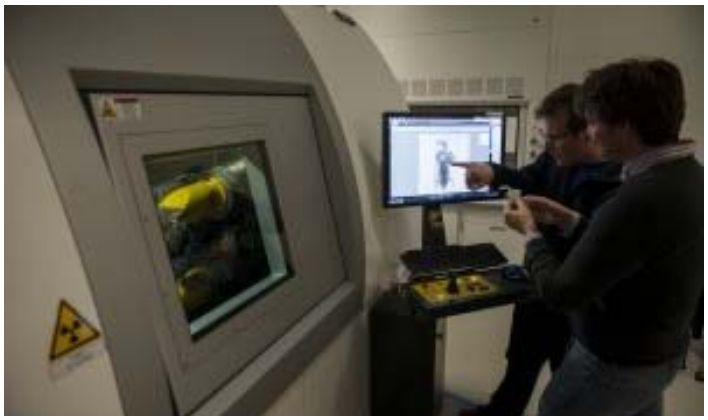
Florida Museum Associate Curator of Herpetology David Blackburn plans to use the scanner to merge together what looks like a series of puzzle pieces—fossilized frog bones from 25 million years ago—which he keeps ready for scanning in a small box in his office.

“These are parts that we think are all from the same species,” Blackburn said, holding up a bone about 1 centimeter long. “We don’t have a complete one, but we can virtually put it back together.”

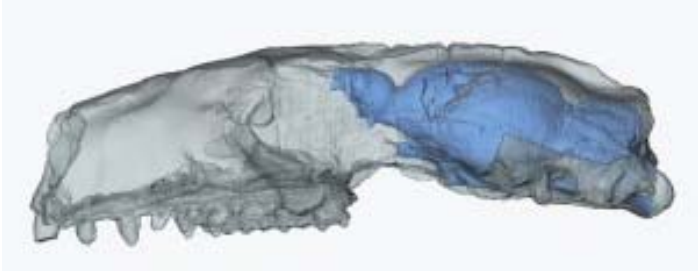
“It’s such a great way of sharing our research,” Blackburn said. “We can virtually take specimens apart. We can zoom into any piece of it, we can go inside pieces of it.”

The scanner works a lot like a traditional X-ray machine one might use at a doctor’s office, but instead of taking an image from one direction, thousands of images are taken from different angles so they can be combined to produce a 3-D picture, Blackburn said.

Bones become visible in X-ray imaging because they are the densest part of an animal’s body, but some of Bloch’s work has involved “filling” empty spaces between bones to outline the size and shape of internal organs. The process is significant in understanding differences between the internal development of fossilized animals from millions of years ago and modern species—it enables scientists to make accurate physical comparisons and unlock their historic connections.



David Blackburn and postdoctoral researcher Edward Stanley review a Largen’s clawed frog, *Xenopus largeni,* specimen on UF’s new micro-



Jonathan Bloch and colleagues described the brain structure of this 45-million-year-old primate,*Microsyops,* by using micro-CT technology. Florida Museum of Natural History scan by Jonathan Bloch

“For the first time, we’re allowed to segment out the shape of the brain inside the skull of these fossil animals without removing the rock or the bone itself,” Bloch said.

Another way to view internal anatomies with micro-CT scanning involves infusing a specimen with a chemical like iodine that makes soft tissues appear dense while still intact inside the animal—everything from muscles to nerves and blood vessels.

“We can reconstruct a frog’s muscles, see its nervous system, all of its internal organs,” Blackburn said. “Some of this is useful for describing new species, some is simply of interest to understanding basic biology.”

The new technology also allows scientists to study some of the smallest and most delicate biodiversity, such as the moth eyes and antennae studied by Akito Kawahara, an assistant curator at the Florida Museum’s McGuire Center for Lepidoptera and Biodiversity. (Cont’d pg 6)

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"When you are working with specimens this small, pieces might get lost," Kawahara said. "Our research with micro-CT scanning will help us understand how these eyes and antennae vary without dissecting their structure."

Kawahara said the technology will also help visitors better understand the organisms displayed at the museum.

"To be able to do that without harming any of these really small insects is a great benefit," he said.

The technology may also benefit students in the classroom and members of the public through printed 3-D models of specimens, including the ancient tuatara lizard that is a sister to nearly all living lizard species. Blackburn has a 6-inch tuatara model in his office—about 10 times the size of the original species.

"One plan is to use the technology for generating data for classrooms," Blackburn said. "We might bring the real specimen into an undergraduate class to show it in a lab, but we're certainly not going to let a 5-year-old handle it during a public program. A model can be replaced."

A 3-D specimen model will also allow scientists to complete statistical analyses and more accurately measure the size and shape of different body parts. This capability is important for Blackburn and Bloch, who often try to link the ancestries of fossils in the museum collections with living species.

Micro-CT technology has helped UF assistant anthropology professor Valerie DeLeon and her students research the development of primates and the use of mice as models for human biological behaviors. Like Blackburn, she says access to 3-D specimen models will help students better connect with science.

"A high school science teacher in Alaska could download these 3-D compatible files and print the models to use in their classroom," DeLeon said. "And it's all based on having the CT data to start with."

"One of the really valuable aspects of the micro-CT scanner is it not only creates data for UF researchers to study right here and right now, but it creates this resource of data that will be available way beyond the borders of the university and have a lot of benefit to the research community as a whole," DeLeon said.

VULCAN MINE Field Trip

Saturday, March 12

Trip Leader:
Steve Chambers

stchamb1@outlook.com
cell ph: 321-806-0763

Saturday, April 9th

Need a Trip Leader.

To volunteer, email Bonnie at bonnierussell62@gmail.com or call 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.

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@liseydreams.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'.

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Florida Prehistorical Museum, Inc.
dba/ Florida Fossil Hunters

Florida Fossil Hunters News

Florida Fossil Hunters Mark Your Calendar

See inside for more information on events.

Saturday, March 12th
Vulcan Mine: Trip leader: Stephen Chambers

Saturday, March 12th
FLMNH-Can You Dig It? 10 am to 3pm

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April 22-24
Cen. FL Mineral & Gem Show

May 7th
Women in Paleontology

Save the dates:
Fossil Fair, October 15th & 16th
National Fossil Day, October 1st

Join Our Facebook group, Search:
Florida Fossil Hunters

facebook

Be Green

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

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