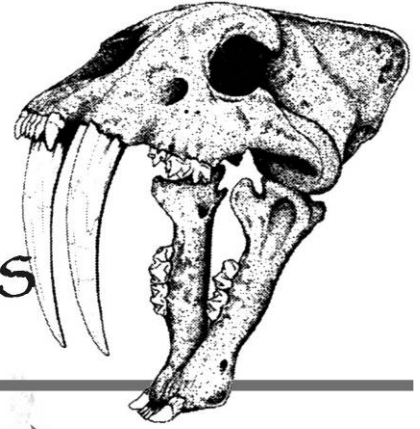


# NEWS

## Florida Fossil Hunters



Volume 20, Number 2

February 2010

### Prez Sez

*"In the end, it was not guns or bombs that defeated the aliens, but that humblest of all God's creatures, the Tyrannosaurus rex."* - from *Futurama: Bender's Game* (2008 movie)

That has nothing to do with the rest of this letter, I just really like it when classical literature is spiced up with dinosaurs. (H.G. Wells does, too.)

This is a pretty big month for the Florida Fossil Hunters. Our regular meeting day/time falls on the same day as the Science Center's Fossil Fest, so rather than have the meeting, we're taking an opportunity to play heavy-duty show and tell. Let me know if you'd like to have an educational display at Fossil Fest Four! February 20<sup>th</sup>, 2010 from 11:00 – 4:00! I'm going to overstep my bounds here, and say that volunteers will receive **double fossil bucks** for the short-notice inconvenience. If you have a high-schooler in your home who needs service hours for graduation, they are welcome to assist as well. Please arrive at the Science Center between 8:00 and 9:30 for setup. Doors will open at 11:00 AM. *Volunteer Contact Information on Page 3.*

We will also be producing the first major educational document for public learning in over fourteen years. Your Fossil Hunter Board has been working diligently to revise an early learning tool from the club's beginnings. Originally intended as a membership welcome packet, this 24-page work contained many useful tools—several identification charts, site and quarry maps, glossaries and historical information, and an application for a fossil hunting permit. Much of the information has been overturned by the general scientific community, and the quality of the craftsmanship is very dated. We are expecting to use the Fossil Fair event to release at least a first draft of the new guide, tentatively entitled: *"The Prehistoric Adventure: Fossil Hunting in Florida."* It will also be available on our website in PDF format, which if you're reading this now... is not a problem for you.

Our next official meeting will be on March 20<sup>th</sup> at 2:00 pm, in the Founder's Room at Orlando Science Center. This will be the first of our "Adult Blasts" with a talk from accomplished dinosaur hunter *Walter Stein*, who will share with us some of his adventures in paleontology. We will also conduct a short class activity-Introduction to PaleoArt. I'll be conducting this class after Mr. Stein's talk. There will be a small, manageable list of supplies that you might wish to have with you—those will be posted on the website in early March.

*Hope to see you soon!*

Jimmy Waldron, President, Florida Fossil Hunters.com

**NEXT MTG**  
**MARCH 20th**  
Orlando Science Center

**Orlando Science Center**  
**FOSSIL FEST**  
**02-20-10** See page 2 for details.

### Coming Events

#### MEETINGS SATURDAY

at the Orlando Science Center

**February 20, 2010**

OSC FossilFest and Kids Blast  
see pg 3 for more info.

**March 20, 2010**

3:00pm Meeting

**April 17, 2010**

2:00pm Kids' Fossil Blast

3:00pm Meeting

*For more info...*

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

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# Fragments

## **Piece on the Peace**

The Zolfo gauge was at 6 feet on February 1st, so you'll be able to find areas to dig. The water is cold so bundle up in your wet suits. The gravel and fossils have been moved around by the high water earlier in the season....that's good for finding new treasures.



## **Tampa Bay Fossilfest 2010**

The Tampa Bay Fossil Club will be holding its annual fossil fair on Saturday, March 20th from 9 am to 6 pm and on Sunday, March 21st from 10 am to 4 pm. There will be fossils, shells, minerals, exhibits, kids' activities, silent auctions and door prizes.

It will be held at the Florida State Fairgrounds near the intersection of US 301 and I-4, just east of Tampa. There is a fee for parking....\$4 or \$5.

## **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 Tamiami Tr. After crossing the bridge, turn left onto Avenida del Circo. Turn left onto Airport Ave. and follow the signs to the festival grounds.

# Kids' Fossil Blast

February's Fossil Blast will be in a different format. I'll be giving half hour presentations at noon, 1 pm, 2 pm and 3 pm at Orlando Science Center's Fossilfest Four. We'll be investigating the evolution of the Proboscians.... mammoths, mastodons and elephants. Adults who are kids at heart are welcome to join us, too.

# TIME TO RENEW

## your Florida Fossil Hunters 2010 Membership.

On March 1st, I'll be deleting those folks who haven't renewed their memberships from our mailing lists. Be sure to get your dues in by then.

## **Vulcan Mine Field Trips**

Join us in fossil hunting at the Vulcan Mine near Brooksville on Saturday, February 13th and Saturday, March 13th. As usual meet in the circle driveway by 8:30 am to sign releases. They will escort us in around 9 am. They usually escort the group out at noon and sometimes let those that want to dig longer stay till around 2 pm.

Trip leader for February 13th is Bonnie Cronin. You can contact her at [bjrb48@netzero.com](mailto:bjrb48@netzero.com), or by phone at 352-429-1058. She will have her cell phone (321-279-2592) on the field trip.

*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.**

## Conflicts and Volunteering V.P. Report

Wishing everyone a most prosperous year in fossil hunting, among everything else. We all could use a good new year. The Board is working hard to make this year productive and fun at the same time. There will be guest speakers, field trips, auctions and other things for the members to enjoy. Even if you are not on the Board or can't make all the meetings, you are still invited to share your knowledge, ideas and time. Let us know if there is someone you think would be a good guest speaker or any other ideas on club activities.

I know as well as anyone, that we can't please everyone when it comes to the day and time of club meetings. One of the biggest changes affecting the club is the fact that we no longer meet on the third Wednesday from 7 pm to 9 pm. I myself cannot make all the meetings due to work, but I always try to help as much as possible. I would hate to see this temporary inconvenience divide the club. I'm sure that as time goes by, we will once again be able to meet on Wednesdays.

I ask that those of you who can't make the meetings, for whatever reason, to please not forget that our club has been through a lot to get this far in attaining the original goals of the Florida Fossil Hunters. In the past few years we gained more members, a great place to meet, a larger, better Fossil Fair, better displays, a super website and more public exposure.

Please feel free to get with me regarding any of your concerns. I've worked hard along with many other members to try to make this club an educational, family-orientated organization. We all have been affected by the changes, but just as the Peace River is sometimes too high to dig, it still fulfills its purpose and flows to the ocean. The Florida Fossil Hunters have been here since 1991 and I believe we're on the path to becoming more successful than our founders could have imagined.

Let's all move forward, working together to make our club stand out as an example of what can be accomplished by a group of nuts.

*Sincerely,  
Russell Brown*



## Orlando Science Center Presents: February Fossil Fest

The annual Fossilfest will be held on Saturday, February 20th from 11 am to 4 pm. Since this falls on our scheduled meeting day, the club will be taking this great opportunity to share our knowledge of fossils with the public and acquainting them with Florida Fossil Hunters in lieu of a standard meeting.

All members are encouraged to participate by bringing in your favorite fossils to show folks and talk about your fossil hunting and collecting experiences or by volunteering at the membership table. If any of you would like to hold demonstrations of fossil prep techniques or ID skills or any other activity, that would be very welcome, too.

I still remember the thrill of discovering the club and all you wonderful people who share the same interests in fossils, minerals, geology and Florida's history. There are still people out there with the same passion just looking for a group like ours.

Let's reach out and welcome these people into our club and ignite some curiosity in them.

***To reserve a table ...or part of one, email Jimmy at [jwaldron@osc.org](mailto:jwaldron@osc.org) or call and leave a message for him at 407-514-2163.***

# Color of Dinosaur Feathers Identified

*ScienceDaily (Jan. 28, 2010) — The color of some feathers on dinosaurs and early birds has been identified for the first time, reports a paper recently published in Nature.*

The research found that the theropod dinosaur *Sino-sauropteryx* had simple bristles -- precursors of feathers -- in alternate orange and white rings down its tail, and that the early bird *Confuciusornis* had patches of white, black and orange-brown coloring. Future work will allow precise mapping of colors and patterns across the whole bird.

Mike Benton, Professor of Palaeontology at the University of Bristol, said, "Our research provides extraordinary insights into the origin of feathers. In particular, it helps to resolve a long-standing debate about the original function of feathers -- whether they were used for flight, insulation, or display. We now know that feathers came before wings, so feathers did not originate as flight structures.

"We therefore suggest that feathers first arose as agents for color display and only later in their evolutionary history did they become useful for flight and insulation."

The team of palaeontologists from the University of Bristol, UK, the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP) in Beijing, University College Dublin and the Open University report two kinds of melanosomes found in the feathers of numerous birds and dinosaurs from the world-famous Jehol beds of NE China.

Melanosomes are color-bearing organelles buried within the structure of feathers and hair in modern birds and mammals, giving black, grey, and rufous tones such as orange and brown. Because melanosomes are an integral part of the tough protein structure of the feather, they survive when a feather survives, even for hundreds of millions of years.

This is the first report of melanosomes found in the feathers of dinosaurs and early birds. It is also the first report of phaeomelanosomes in fossil feathers, the organelles that provide rufous and brown colors.

These discoveries confirm the substantial body of evidence that suggests birds evolved through a long line of theropod (flesh-eating) dinosaurs. It also demonstrates



that the unique assemblage of characters that make a modern bird -- feathers, wings, lightweight skeleton, enhanced metabolic system, enlarged brain and visual systems -- evolved step-by-step over some 50 million years of dinosaur evolution, through the Jurassic and Cretaceous periods.

"These discoveries open up a whole new area of research," said Benton, "allowing us to explore aspects of the life and behavior of dinosaurs and early birds that lived over 100 million years ago.

"Furthermore, we now know that the simplest feathers in dinosaurs such as *Sino-sauropteryx* were only present over limited parts of its body -- for example, as a crest down the midline of the back and round the tail -- and so they would have had only a limited function in thermoregulation.

"Feathers are key to the success of birds and we can now dissect their evolutionary history in detail and see how each feather type -- and the fine detail of feather structure -- was acquired through time. This will link with current work on how the genome controls feather development."

# Neanderthals Had Style

The widely held view of Neanderthals is that they were cognitively inferior to early modern humans. This is being challenged by new research from the University of Bristol. Professor Joao Zilhao and his colleagues examined pigment-stained and perforated marine shells, most likely used as neck pendants, from two Neanderthal-associated sites in the Murcia province of southeast Spain. The analysis of lumps of red and yellow pigments found alongside suggest they were used as cosmetics. The practice of body ornamentation is widely accepted by archaeologists as conclusive evidence for modern behavior and symbolic thinking among early modern humans but has not been recognized in Neanderthals until now.

A *Spondylus gaederopus* (spiny oyster) shell from the same site contained residue of reddish pigmentation.

These types of shells have been also found in European Neolithic sites and thought to have been used for ornamentation...their vibrant red or violet color would have been attention grabbing...and used in trade. The yellow clumps of pigmentation were found to be pure natrojarosite. This iron mineral was used as a cosmetic in ancient Egypt.

Similar items have been found at Neanderthal sites before but have been interpreted as stratigraphic mixing with later early modern human layers. This cannot be the case at this site because it has been positively dated at 50,000 years ago, which is long before Cro-Magnon entered the region.

As more evidence surfaces, it looks like there were fewer and fewer differences between the Neanderthals and Cro-Magnons.

# Early Land Walkers

Fossilized footprints of a 3 meter (9 foot) tetrapod have been found in a quarry in Poland. This pushes back the date for evidence of animals living on the land even back further. The previous record holder was the Tiktaalik, an intermediate form between lobe-finned fishes and tetrapods, which was dated at 380 million years ago. The fossil footprints in Poland have been dated to 395 million years ago, during the Devonian.

The Poland quarry site has marine fossils whereas Tiktaalik fossils have been from fresh water environments. So now we have two different venues for the establishment of life on land. Since tetrapods supposedly evolved from elpistostegids such as Tiktaalik, it also proves that they were around long before even 395 million years ago.

Source: Uppsala University

# New Theory of the Origin of Primates

It's not only those who dig who make contributions to wealth of knowledge about the past. Michael Heads, a Research Associate at the Buffalo Museum of Science has come up with a new model for primate origins.

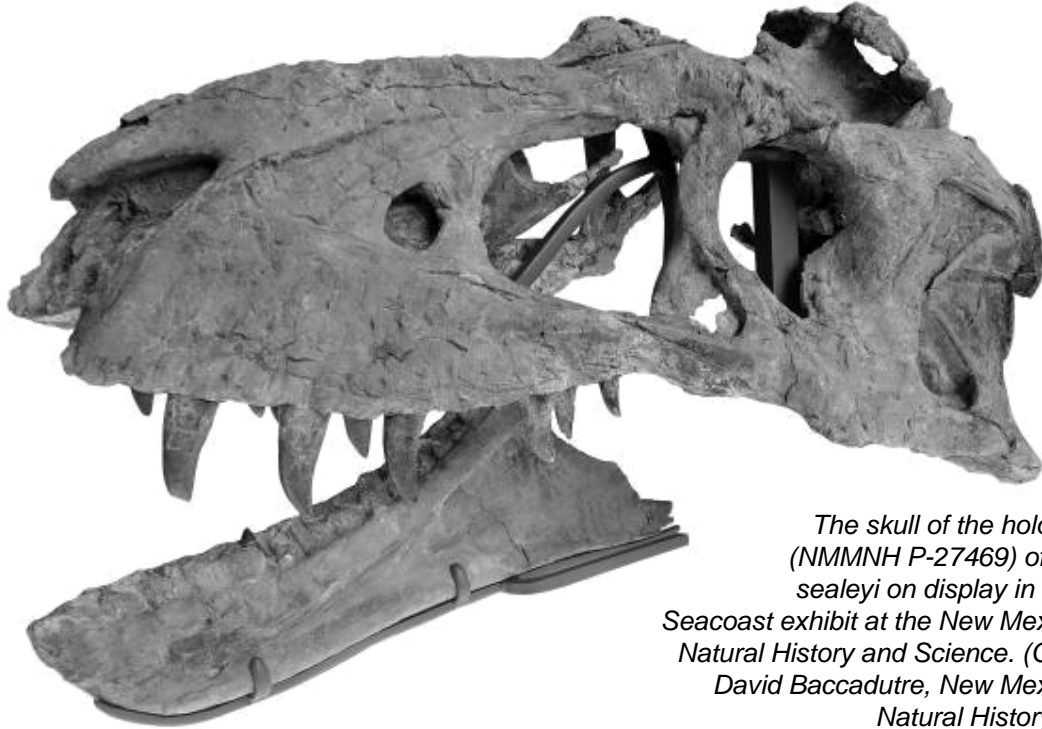
Based solely on the fossil records, it was thought that primates originated in a geographically small area and dispersed to other regions and continents...even to have rafted huge distances across oceans.

In this new approach using DNA differences and similarities and plate tectonics, Heads shows that the distribution ranges of primates and their nearest relatives, the tree shrews and flying lemurs, conform to a pattern that would be expected from their having evolved from a widespread ancestor. This ancestor could have evolved

into the extinct Plesiadapiformes in North America and Eurasia, the primates in Central/South America, Africa, India and Southeast Asia, and the tree shrews and flying lemurs in Southeast Asia. In other words, the early primate ancestor lived throughout Pangea before its breakup and then the different species evolved, becoming more and more different as the continents drifted further apart.

Biogeographic evidence for the Jurassic origin for primates, and the pre-Cretaceous origin of major primate groups considerably extends their divergence before the known fossil record. But we've all seen examples of new fossil finds establishing earlier dates for origins of different species.

# New Species of Tyrannosaur Discovered in Southwestern US



The skull of the holotype specimen (NMMNH P-27469) of *Bistahieversor sealeyi* on display in the Cretaceous Seacoast exhibit at the New Mexico Museum of Natural History and Science. (Credit: Photo by David Baccadutre, New Mexico Museum of Natural History and Science.)

*ScienceDaily* (Feb. 1, 2010) — New Mexico is known for Anasazi and Pueblo Indian ruins, Georgia O'Keefe's art and the Los Alamos National Laboratory. Paleontologists Thomas Williamson of the New Mexico Museum of Natural History and Thomas Carr of Carthage College is now bringing a new superstar to the state.

*Bistahieversor sealeyi* (pronounced: bistah-he-ee-versor see-lee-eye) is a new species of tyrannosaur discovered in the Bisti/De-na-zin Wilderness of New Mexico. Tyrannosaurs include the famous meat-eating dinosaurs like *T. rex*, with their characteristic body and skull shape and their mouthful of ferocious teeth that make them easy for paleontologists and kids to recognize.

The skull and skeleton of *Bistahieversor* were collected in the first paleontological excavation from a federal wilderness area, and the specimen was airlifted from the badlands by a helicopter operated by the Air Wing of the New Mexico Army National Guard. "*Bistahieversor sealeyi* is the first valid new genus and species of tyrannosaur to be named from western North America in over 30 years," says Williamson.

Tyrannosaurs are best known from 65-75 million year old sediments from the Rocky Mountain region of North America. *Bistahieversor* provides important insights into the evolutionary history of the group.

"*Bistahieversor* is important because it demonstrates that the deep snout and powerful jaws of advanced tyrannosaurs like *T. rex* were special adaptations that evolved around 110 million years ago, after the eastern and western halves of North America were separated by a shallow sea," says Carr.

*Bistahieversor* was different from other tyrannosauroids in having an extra opening above its eye, a complex joint at its "forehead," and a keel along its lower jaw; it also had more teeth than its distant relative *T. rex*.

*Bistahieversor* skulls and skeletons collected from the Bisti/De-na-zin Wilderness and from the lands of the Navajo Nation are currently on display at the New Mexico Museum of Natural History.

The finding is detailed in the January issue of the *Journal of Vertebrate Paleontology*.

# 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	Shelley Zimmerman	(407) 891-1260
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
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**Board of**

Paul Bordenkircher

**Directors:**

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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

**February 13:** Vulcan Field Trip

**February 20, OSC Fossil Fest**  
Orlando Science Center, 11 am to 4 pm

Kids' Fossil Blast, February 20  
hourly presentations from 12 to 3 pm

**March 13:** Vulcan Field Trip

**March 20**  
3:00pm Club Meeting

**March 20 & 21**  
Tampa Bay Fossil Fest

**April 9, 10 & 11**  
Venice Shark Tooth Festival

**April 17**  
2:00 Kids Fossil Blast  
3:00pm Club Meeting

**STAY ON THE MAILING  
LIST RENEW YOUR  
MEMBERSHIP TODAY**

## Be Green

We are *emailing* the newsletter each month. If you want to participate, just email Bonnie at [bjrb48@netzero.com](mailto: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.



See page 2 for more information on events.

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)

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Florida Fossil Hunters News