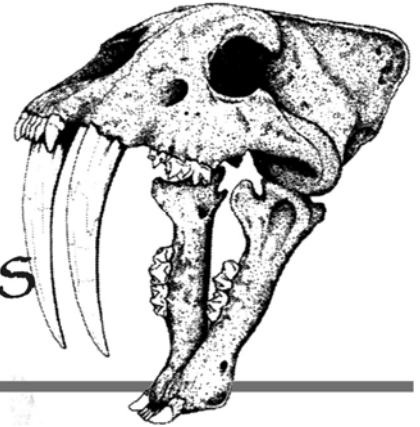


# NEWS

## Florida Fossil Hunters



Volume 17, Number 9

October 2007

### Prez Sez:

Our speaker at the September meeting gave us some good tips to find new fossil sites at Vulcan so I hope to see you there for our field trip on October 27th. There should be another speaker at the November meeting.

Please attend the Fossil Fair and put in some volunteer hours- remember you get paid fossil bucks!! Bring a covered dish since we will have many hungry dealers.

October's meeting will be in the learning lab on the main floor- where admissions is. Follow the signs and winding hallways. Monthly topic- Florida geology. Bring your favorite calcite, chert, coquina, agate etc....

Shelley Zimmerman

*Please note: The November meeting will be on the second Wednesday, Nov. 14th, so it doesn't conflict with Thanksgiving!!!!*

## FLORIDA FOSSIL HUNTERS 2007 FOSSIL FAIR

**Fossils, Rocks, Gems, Minerals, Artifacts**

### Oct 13 & 14

Central Florida Fairgrounds  
Sat 9:00AM to 5:00pm — Sun 10:00AM to 4PM

### Coming Events

**Florida Fossil Hunters  
2007 Fossil Fair  
October 13—14, 2007**

**October 17, 2007**  
6:00pm Kids' Blast  
7:00pm Meeting  
at the Orlando Science Center

**November 14, 2007**  
7:00pm Meeting  
at the Orlando Science Center

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# Florida Fossil Hunters News

# Fragments

## **Florida Paleontological Society, Fall Meeting 2007**

The Society will hold its fall meeting the second weekend in November in Bradenton, Florida.

### Friday, Nov. 9th:

6:00 to 8:00 pm - South Florida Museum and Parker Aquarium, 201 - 10th Street West. Wine and cheese reception with museum tours and exhibits

### Saturday, Nov. 10th:

8:30 am to 1:30 pm - Field trip to nearby shell quarry (to participate you must be an FPS member in good standing and at least 18 yr. old)

3:00 pm Business meeting (location TBA)

6:00 to 9:00 pm - Mattison's Riverside, buffet style dinner, speaker (TBA), and auction

### Sunday, Nov. 11th:

"Child-friendly" field trip, (if possible) TBA

You can get more info on the Society at [www.flmnh.ufl.edu](http://www.flmnh.ufl.edu)

**Field trips-** Stay tuned for a fall Venice dive boat trip for meg teeth and the FPS trip is scheduled for November.

## **Florida Fossil Permits**

There is now a link on our website to take you directly to the permit application on the Florida Museum of Natural History's website. Richard Hulbert, who now is in charge of the permit program, would like to remind everyone to submit a photocopy of your ID with your application.

## **Piece on the Peace**

I thought with all the rain we've had lately that the river level would be way up but it's still under 5ft. at the Zolfo station. It's been a couple years since we were able to dig year-round in the Peace. Be sure you get out there for some fossil hunting before the cold weather moves in.

## **More on the "Hobbit".....**

Recent extensive research on the wrist bones of the mysterious hominin dubbed the Hobbit has revealed some intriguing results. Modern humans and the Neanderthals have different shaped wrist bones from the early hominins such as Australopithecus and Homo habilis and great apes. When compared to chimp and early hominin bones and human bones, they were found to more closely resemble the chimp characteristics. This suggests that Homo floresiensis was more closely related to the earlier hominins instead of being an aberrant modern human. For more information on this research go to [www.sciencedaily.com/releases/2007/09/070920145353.htm](http://www.sciencedaily.com/releases/2007/09/070920145353.htm)

## **Volunteer Diggers Wanted - Last Call**

The Florida Museum of Natural History will continue their fossil excavations at the quarry near Newberry from October 23rd through December 20th, 2007. It is anticipated that this will be the last year working at this fabulous fossil site.

No experience is necessary.....there is on-the-job training and they supply the tools.

For more information and to sign up, visit [www.flmnh.ufl.edu](http://www.flmnh.ufl.edu)

**The Tampa Bay Mineral and Science Club** will hold its 48th Gem and Mineral Show on Saturday, October 27th from 10 am to 6 pm and on Sunday, October 28th from 10 am to 5pm. It will be in the Entertainment Hall at the Florida State Fairgrounds in Tampa.

There will be fossils, minerals, and gems for sale as well as a Children's Sand Mine, Chinese Raffle and displays. Cost is \$5 for adults, \$3 for students and kids under 5 are free. Parking at the Fairgrounds is \$5.00.

For more info call Jan Hendershot at 813-671-9556 or email [jan.hendershot@verizon.net](mailto:jan.hendershot@verizon.net) or visit their website at [www.tampabayrockclub.com](http://www.tampabayrockclub.com)

**The Gem & Mineral Society of the Palm Beaches** will hold their 41st annual Gem, Mineral, Jewelry, Bead and Fossil Show on November 17th and 18th, 2007, at the South Florida Fairgrounds, Southern Blvd., West Palm Beach, FL.

Hours: Saturday 9 am to 6 pm

Sunday 10 am to 5 pm

There will be geode cracking, gem identification, door prizes and a fossil dig and gem mining for the kids. Cost is \$7 for adults.

Children under 12 are free. Parking is free.

For more info go to [www.gemandmineral.cc](http://www.gemandmineral.cc)

## **Kids' Fossil Blast**

This month we won't be studying fossils.....we're going to check out the minerals found in Florida and how they affect the fossilization process.....and everyone likes pretty, shiny rocks!

Join us October 17, 2007 for the next Kids Fossil Blast. The Kids' Fossil Blast is a fun, hands-on way to find out about fossils for kids mainly ages 4 to 14 yrs. Each meeting we focus on a different type of fossil using real fossils, replicas and printed materials. Sometimes the kids even get to take real fossils home. We meet every other month at 6 pm check the website for the location.

# FLORIDA FOSSIL HUNTERS 2007 FOSSIL FAIR

## Fossils, Rocks, Gems, Minerals, Artifacts

Learn to dig Florida and see what can be discovered!

Educational displays, vendors,  
silent auctions, raffles, Kids Dig Pit \$1.00

## Oct 13 & 14

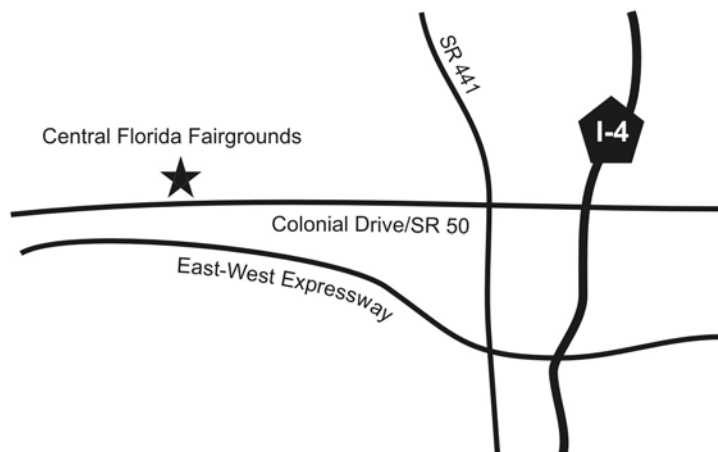
Central Florida Fairgrounds  
4603 West Colonial Drive, Orlando, Florida 32808

Sat 9:00AM to 5:00pm - - Sun 10:00AM to 4PM  
\$3/ Adult & \$1/child

Directions:

From Tampa: I-4 to Colonial Drive (Hwy 50) exit.  
Go west on 50 just past Mercy Drive. Central Florida  
Fairgrounds is on the north side (on the right).

From Daytona: I-4 to Colonial Dr (Hwy 50) in Orlando.  
Go west on 50 just past Mercy Drive. Central Florida  
Fairgrounds is on the north side (on the right).



## Member Fair Info

**Fossil T-Shirts:** In response to popular demand, we will have some kids' size t-shirts at the fossil fair. They are blue with the sabertooth cat design from 2001. Will have adult small and medium sizes as well as kids' medium and large sizes. We still have some t-shirts from the previous years in adult large and extra large size available. *They will be on sale at the membership table at the fossil fair.*

There will be **more fossil and mineral dealers this year...**in fact, we've had to move the fair to one of the larger buildings at the Fairgrounds.

**To volunteer** email Valerie First (vjfirst@aol.com) or call her at 407-699-9274. We'll need people at the admission table, kids' dig pit, silent auction, membership table and to lead groups around giving information about fossils, prehistoric animals, etc. We'll also need *help to set things up on Friday, Oct. 12th* and to pack things up on Sunday after the Fair closes.

Be sure you **pass out fair flyers** (they can be picked downloaded from the website), tell all your friends, and post signs/flyers where you can.

We'll **need donated fossils** for the Kids' Dig Pit; fossils, minerals and related items for the Silent Auction; and some highly desirable fossils, minerals or replicas for the raffle.

*Don't miss out on the FUN!*

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

407-699-9274

# Florida Fossil Hunters News

# Prehistoric Reptiles From Russia Possessed The First Modern Ears

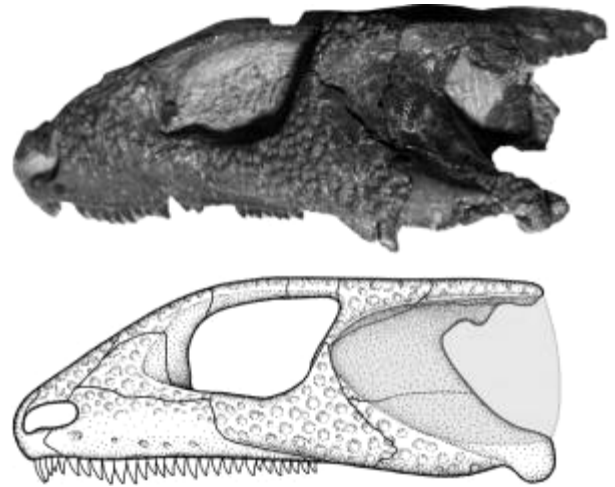
Science Daily — The discovery of the first anatomically modern ear in a group of 260 million-year-old fossil reptiles significantly pushes back the date of the origin of an advanced sense of hearing, and suggests the first known adaptations to living in the dark.

The 260 million-year-old fossil of the small reptile *Bashkyroleter mesensis*, from central Russia, owner of the first known 'modern' ear. Reconstruction (in pink, below) of the extremely large eardrum structure. Entire skull approximately 6.5 cm in length. (Credit: Linda Tsuji and Johannes Müller)

In a new study published in PLoS One, Johannes Müller and Linda Tsuji, paleobiologists at the Natural History Museum of the Humboldt University in Berlin, Germany report that these fossil animals, found in deposits of Permian age near the Mezen River in central Russia, possessed all the anatomical features typical of a vertebrate with a surprisingly modern ear.

When vertebrates had conquered land and the ancestors of modern day mammals, reptiles, and birds first began to diversify, hearing was not of high importance. The first fully terrestrial land vertebrates were, in fact, largely deaf, and lacked any of the anatomical features that would indicate the possession of what is termed impedance-matching hearing - the mechanism by which modern land vertebrates are able to transmit airborne sounds into the inner ear by means of small bony connections.

The ability of modern animals to hear a wide range of frequencies, highly important for prey capture, escape, and communication, was long assumed to have only evolved shortly before the origin of dino-



saur, not much longer than 200 million years ago, and therefore comparatively late in vertebrate history.

But these fossils demonstrate that this advanced ear was in existence much earlier than previously suggested. In these small reptiles the outside of the cheek was covered with a large eardrum, and a bone comparable to our own hearing ossicles connected this structure with the inner ear and the brain. Müller and Tsuji also examined the functional performance of this unique and unexpected auditory arrangement, and discovered that these little reptiles were able to hear at least as well as a modern lizard.

But why would these animals have possessed such an ear? "Of course this question cannot be answered with certainty", explains Müller, "but when we compared these fossils with modern land vertebrates, we recognized that animals with an excellent sense of hearing such as cats, owls, or geckos, are all active at night or under low-light conditions.

***(Prehistoric Reptiles From Russia Possessed The First Modern Ears cont'd)***

And maybe this is what these Permian reptiles did too." Because the fossils from the Mezen River also possess comparatively large eyes, another typical feature of vertebrates living in the dark, these reptiles indeed might have been among the first land vertebrates to pursue a specifically nocturnal lifestyle. An adaptation of this kind would have been a significant step at this early stage of terrestrial evolution, as endothermic (cold-blooded) animals require the heat of the sun to maintain their body temperature.

The discovery of an ear comparable to modern-day standards in such ancient land vertebrates provides an entirely new piece of information about the earliest

terrestrial ecosystems, which no longer seem to be as primitive as once assumed. Already by this time, there must have been intense pressure to exploit new ecological niches and to evolve new structures to gain an advantage over other species in an increasingly crowded world. At last, it was those pressures and evolutionary inventions that paved the way for our modern day environments.

Citation: Müller J, Tsuji LA (2007) Impedance-Matching Hearing in Paleozoic Reptiles: Evidence of Advanced Sensory Perception at an Early Stage of Amniote Evolution. PLoS ONE 2(9): e889. doi:10.1371/journal.pone.0000889

Note: This story has been adapted from material provided by Public Library of Science.

# Vulcan Mine Field Trip

When: Saturday, October 27th. Meet at the entrance near US 98 at 8:30 am to fill out and sign the releases before we go into the mine. We'll probably dig until around noon. No one is permitted to drive in or out of the mine without an employee of Vulcan escorting the group.

Directions: From Orlando take Hwy. 50 west into Brooksville. Turn right onto US 98 and go north approximately 10 miles. Vulcan Mine will be on your left. For those of you using a GPS, the address is 16301 Ponce De Leon Blvd.

What we find: echinoids, sea urchins, chert (the rock that the Indians used to make their stone tools), shell molds, and the occasional shark teeth or pieces of bone.

This surface collecting and shallow digging.

You will need: buckets, small containers and cushioning for fragile fossils, trowels or small shovels or rock hammers. Wear sturdy shoes, hats, and gloves. Bring water, drinks, food and sunscreen. You might also want to bring a change of shoes and clothing in case you get muddy.

Children are permitted and most of them love the experience of the mine as well as the fun of fossil hunting. They must however be under adult supervision at all times. This is a working mine and there are large trucks moving at great speeds as well as the dangers of steep sided embankments, sharp rocks and sinkholes.

There will be a sign up sheet at the September and October meetings. There is no cost for this field trip but you must be a member of the fossil club. For additional information or to sign up, email Bonnie Cronin at [bjrb48@netzero.com](mailto:bjrb48@netzero.com) or call 352/429-1058 or 321/279-2592.

# Oldest Identifiable Footprints Found

Two reptile-like animals living 290 million years ago are the oldest creatures to have their footprints positively identified after a fortuitous discovery allowed scientists to match fossils to preserved trackways.

Fossils of *Diadectes absitus* and *Orobates pabsti* were recently found in the Tambach Formation in central Germany. Nearby and in the same sediment layer, scientists found well-preserved footprints made by creatures that plodded through the region's soft sediments long ago. The footprints turned out to be a match for the fossil animals.

The work, detailed in the latest issue of the *Journal of Vertebrate Paleontology*, marks the first footprints of the Paleozoic Era, a time before the dinosaurs that lasted from 540 to 240 million years ago, to be associated with the animals that made them. It could also force scientists to rethink how the ancient creatures moved.

Because of the exceptional preservation of the Tambach skeletons, scientists were able to match them to the nearby footprints. The two species were among the first four-legged plant eaters on land and have no close living relatives.

"Fossils don't usually include really good feet," said study team member David Berman of the Carnegie Museum of Natural History in Pittsburgh. "It's rare that we get feet with all the toe and wrist and ankle bones [intact]."

*O. pabsti* is a completely new species that has never been described before. "It's a new genus and species," Berman told LiveScience.

The new findings could allow scientists to partially recreate the migration patterns of these long-extinct creatures. "It is not necessary to find the skeleton of a creature at a certain locality to state that this animal has lived there," said Sebastian Voigt, a trackway expert from the Freiberg University of Mining and Technology in Germany.

The work could also lead to a rethinking of how some of the first land creatures stood and walked. Mammals tend to have legs and limbs that drop vertically from the pelvis to the ground, while those of reptiles tend to extend away from the body horizontally before turning back downward. The new reptiles had a "mammalian" arrangement for their limbs.

"We know from the trackways that these animals had their feet planted almost under their body," Berman said, "whereas in textbooks, they give them a sprawling gait as if the limbs are extended out from the body considerably. This just isn't true. You look at the trackway and you see that the footprints are very close to the midline of the body."

# 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	Shelley Zimmerman	(407) 891-1260
Vice President	Paul Bordenkircher	(407) 687-3843
Secretary		
Treasurer	Sara Morey	(407) 834-0281

**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 ID Table	Andreas Kerner, intfossils@msn.com	
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	Sharon Lynes: momba10@aol.com	
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:**

Dave Dunaway	(407) 786-8844
Jeremy Smith	(407) 293-9391
Roy Singer	(407) 645-0200
Ed Metrin	(407) 321-7462
Tom Tomlinson	(407) 290-8474

## 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 messages in the e-mail or in Microsoft Word files (\*.doc).

# Mark Your Calendar

*Florida Fossil Hunters, 2007 Fossil Fair*  
*October 13—14, 2007*

**October 17, 2007**

*6:00pm Kids' Blast*

*7:00pm Meeting at the Orlando Science Center*

**October 27th:** Vulcan Mine Field Trip

**October 27th:** Tampa Bay Mineral and Science Club Gem and Mineral Show

**November 9-11:** Florida Paleontological Society, Fall Meeting

**November 17-18th:** The Gem & Mineral Society of the Palm Beaches

**November 14, 2007:** 7:00pm Meeting at the Orlando Science Center

Florida Fossil Hunters

Post Office Box 540404

Orlando, Florida 32854-040



Florida Fossil Hunters News