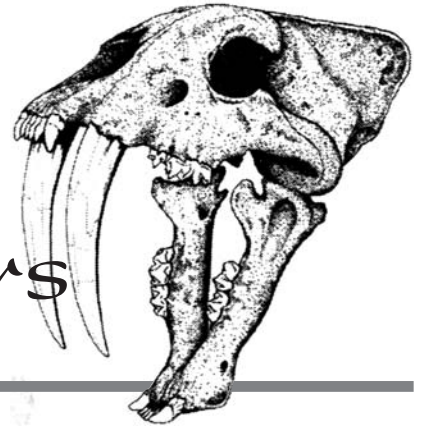


NEWS

Florida Fossil Hunters



Volume 15, Number 2

February 2005

Prez Sez.....

At our January meeting, Dr. Bruce McFadden shared his ideas on how the professional and amateur paleontologists can work together. He showed us slides of Thomas Farms as one example and the Museum's fossiling trips out west on private property as another. Some of our club members have participated in these digs and have enjoyed their experiences. He also encouraged all of us amateurs to communicate to the Museum our ideas on how they can better involve the community. Thank you, Dr. McFadden.

Our meeting on February 16th will be a "Mineral Display" night. So dig out those treasures you've been collecting and bring them in to share. We all love to see what other people have found.

Most of our members have renewed their memberships but if you haven't, please do so at the February meeting or mail them in.

See you at the meeting.

Dave Dunaway



Coming Events

February 12th
Vulcan Mine

February 16th
6:00pm Kid's Fossil Blast
7:00pm Meeting

February 26-27th
Ruck's Pit Drum

March 1st
7:00pm Board Meeting

March 5th
Vulcan Mine

March 16th
7:00pm Meeting

April 4th
7:00pm Board Meeting

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Fragments

Wild about Florida It's time once again for Central Florida's Zoo to have their annual event. There will be activities targeted for Boy Scouts and Girl Scouts. Meet wildlife, native animals and participate in hands on activities. View all the exhibits, enjoy the food and have fun. Florida Fossil Hunters have participated for several years and we have always had a good time. We could use some new people to help with our display. If you're interested please call Ben Shaddrick at 407-293-9733. The event is on Saturday April 9 from 9am to 3 pm. Set-up by 8:30 am.

The **Central Florida Mineral and Gem Society** will have their annual Gem, Jewelry, Mineral & Fossil Show on Saturday, April 2nd and Sunday, April 3rd from 9 am to 5 pm. It will be held at the Central Florida Fairgrounds, 4603 W. Colonial Dr., Orlando. Cost is \$3.00 per person.

The **Deland M-T Bottle Collectors Club** will have its 35th annual Antique Bottle, Insulator & Collectables Show & Sale on Sat., March 9th from 9 am to 3 pm. It will be at the Volusia County Fairgrounds at S.R. 44 & I-4 , Exit 118 (old #56), Deland, Florida. Admission and parking are free and there are free appraisals available, too. For more info, contact M. Pallasch at 386/668-4538 or Bill Marks at 386/789-5255.

Tampa Bay Fossil Club will have their 18th annual Fossilfest on Saturday, March 12th and Sunday, March 13th, at the Florida State Fairgrounds at I-4 and Hwy. 301 in Tampa.

Volunteers Needed!

Museum of Discovery and Science in Ft. Lauderdale.

My name is Hi Bleecker, staff physicist at the Museum of Discovery and Science in Ft. Lauderdale. In May we are going to open a new IMAX film on dinosaurs. I heard that you were also interested in educating the public about fossils and paleontology, so I thought that your organization might be willing to put on an exhibit or display at the museum. The exhibit doesn't have to be anything very elaborate, bones, fossils, short talks etc. We ordinarily get several thousand people thru here a week so it would be good publicity.

The film will open May 28. The time and days for our guest exhibitors are very flexible, but weekends are when we draw the biggest crowds would be best. If you are interested I would appreciate hearing from you within the next week if possible, so that we can include your organization in our mailing to our members and friends (> 4000).

Hiram Bleecker, 954.712.1162, bleeckerh@mods.net

Step Up

*The club still needs volunteers
for Secretary
Board Members and
Fossil Fair Chairperson*

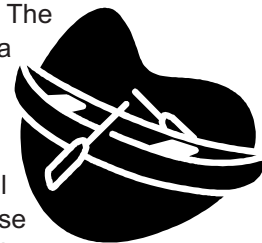


Next Board meetings will be on Tuesday, March 1st and Monday, April 4th. Anyone is welcome to join us. The meetings are held in the teachers' lounge at Lee Middle School at 7 pm. For more information call Dave Dunaway, President 407/786-8844 .

2005 is HERE! It's time to renew your club membership. Fill out the form so we can make sure all your information is current and make a check out for \$17.00 to Florida Fossil Hunters. You can mail it or bring it to the meeting.

On a piece of the Peace

Peace River is between 7.5 and 8 feet at the gauge station at Zolfo Springs as of this printing. The ideal for digging is 5 ft. but we can find a few places to dig at 7 ft. although the current is usually very strong when it's that high. We are all chomping at the bit to get back in the river but we'll have to wait just a little longer. For those of you who'd like to check on the depth on your own, the web site is as follows.



http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02295637&PARAMeter_cd=00065.00060

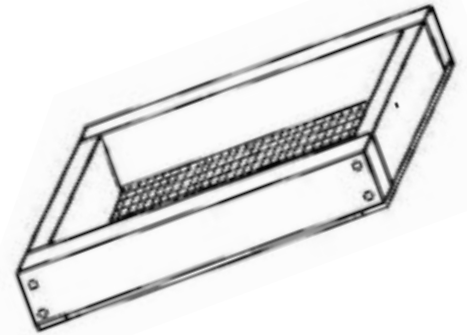
Good hunting.

Bonnie

Kids' Fossil Blast

Hey, kids! Want to find out why whales have toe bones in their back fins? We're going to explore fossil whales at our next meeting on Wednesday, February 16th, at 6 pm in the cafeteria at Lee Middle School right before our regular meeting. *See you there.*

Field Trips



Vulcan Mine

Shelley Zimmerman is putting together displays of fossils that can be found at Vulcan Mine for Saul to put in the office there. She has plenty of the common echinoids but needs some of the more unusual specimens (such as sea urchins, shark teeth, sand dollars, etc.). Donations would be very welcome. The folks at Vulcan have been so kind to us amateurs and this is a great way to say "Thanks".

There are **two more trips scheduled to the Vulcan Mine** - Sat. Feb. 12th and Sat. March 5th. You can call Shelley at 407/891-1260 to sign up for the Feb. 12th trip. You can sign up at the Feb. meeting for the March 5th trip or call Bonnie at 352/429-1058.

Peace River, Gardner

When: The February 6th field trip was cancelled due to high water levels. It will be re-scheduled for later in the month. Shelley will have the information at the meeting on February 16th or check the website after the meeting date.

Where: The ramp at Gardner

Directions Take Hwy. 17 south. Cross the Peace River at Zolfo Springs and keep going south. Go past the golf course till you see the sign/symbol for an airport (Gardner). Turn right on the graded dirt road across from the airplane sign. The ramp is at the end of the road.

What you'll need: Clothes and shoes that you can get wet in plus dry clothes to change into. The water is cold so dress as warmly as possible. (wet suit or panty hose and jeans, i.e.) Bring fanny packs, shovels, screens with flotation devices, rope to tie screen to you, containers for small and large fossils, drinks and food, etc.

The water is shallow at the ramp so you can hunt there even if you don't have a canoe. Those with canoes can opt to hunt further upstream. The current has been strong so it's best to have a motor.

What can be found: Lots of shark teeth! Also mammal and reptile teeth and bones, fossilized wood, and lots of neat fossils from Miocene to the present.

Ruck's Pit, Ft. Drum

When: Saturday, Feb. 26th and possibly Sunday, Feb. 27th

Cost: \$15 or \$20 dollars per person (Shelley will have info later)

Directions: Take the turnpike (or Hwy.441 south) to Yeehaw Junction. Take 441 south to Ft. Drum. There is a convenience store on the left and soon after that, turn left onto road marked with Crystal Mine sign. Check with Shelley for name of the road.

You will need: Shovels, rock hammers, screens if you want to look for shark teeth or other fossils. buckets and containers and stuff to wrap fragile fossils or shells. Bring drinks, food (Eddie Rucks is supposed to have one of his barbecues that weekend and I've heard it's very good), sturdy shoes that can get muddy, hat, etc.

The hunting is on the surface and shallow digging for the shells. Some of the digging can be very hard if you're trying to get a big crystal shell out of the rock and some people bring large picks. Children can come but you have to keep a close eye on them. This is a working shell pit and the walls can be very steep and the water is deep in places. Kids do love to find the crystals though.

What can be found: Clam and gastropod shells with calcite crystals, fossilized shells, some shark teeth and other fossils.

You can sign up for these trips at the meeting in January or February. If you have questions, call Shelley Zimmerman at 407/891-1260.

Future Field Trips:

Gatorland in April, the annual campout and fossil hunt on the Peace River in May, the Brevard Zoo tentatively March 25th..... look for info next month and online.

Shelley Zimmerman and Valerie First are planning a trip to the Mount Ida quartz mines in Arkansas from March 31st to April 3rd. Anyone interested in joining them should contact Shelley Zimmerman at 407/891-1260.

Fierce Mammal Ate Dinosaurs for Lunch



These early mammals were predators, feeding on young psittacosaurus

BCC News Online

An astonishing new fossil unearthed in China has overturned the accepted view about the relationship between dinosaurs and early mammals.

The specimen belongs to a primitive mammal about 130 million years old and its stomach contents show that it ate young dinosaurs called psittacosaurus.

A US-Chinese team of researchers has described the find in *Nature* magazine.

In the same issue, the group reports discovering the largest known primitive mammal from the same locality.

Mesozoic mammals were thought to have lived in the shadow of the dinosaurs. But the picture is quite different now

Meng Jin, American Museum of Natural History

The team found the Early Cretaceous specimens in the famous fossil beds of Liaoning Province in north-eastern China.

The mammal with the dinosaur in its stomach belongs to a carnivorous mammal called *Repenomamus robustus*, which was about the size of an opossum.

"At first, we thought it was a placental mammal carrying an embryo. But then we looked more closely and saw it was a dinosaur," said co-author Dr Meng Jin, curator of palaeontology at the American Museum of Natural History.

"The position was also interesting; it was located in the lower left side of the fossil - exactly the position where the

stomach is located in extant mammals."

Dog-sized predator

The new species of mammal, also found by the researchers in Liaoning, was probably about 50% larger - weighing about 13kg (30lbs). It has been named *Repenomamus gigantus*.

But fragmentary evidence from Liaoning suggests even bigger mammals may have prowled the region during the Cretaceous.

"This find has helped to break a stereotype about early mammals," said Dr Zhe-Xi Luo, a palaeontologist at the Carnegie Museum of Natural History in Pittsburgh, US, who also studies early mammals.

The preservation conditions were exceptional

Most mammal fossils from the time of the dinosaurs are about the size of mice and rats. As such, they were at a distinct size disadvantage compared with predatory dinosaurs.

The combined discovery of a dinosaur in the stomach of *R. robustus* and the dog-sized *R. gigantus* suggests mammals were not the timid insect-eaters they have been portrayed as in the past.

"Mammals at this time were thought to have lived in the shadow of the dinosaurs. But the picture is quite different now," Dr Jin told the BBC News website.

continued on page 7

Dinosaur footprints found in Maryland are a "first"

An amateur paleontologist finds the 6-foot "Mesozoic equivalent of rabbits"

By Frank D. Roylance, The (Baltimore) Sun

Submitted by: Wiley Dykes

COLLEGE PARK, Md. - He was 6 feet long - small by dinosaur standards. And as a plant-eater vulnerable to larger predators, he was probably nimble and fast. Maybe a high jumper.

An amateur paleontologist from College Park has found the creature's unmistakable footprints, pressed into rocks he pulled from stream-beds in White Marsh and Prince George's County.

It's the first evidence that members of the *Hypsilophodon* family roamed Maryland's swamps and mud-flats more than 112 million years ago. It's also the first time scientists have found the dinosaur's foot-prints anywhere.

For Ray Stanford, a transplanted Texan whose years of slogging along stream-beds near the Interstate 95 corridor have produced what is likely the largest collection of Maryland dinosaur foot-prints, it was a bitter-sweet triumph.

"It was thrilling, in a sense, because it became a world first," he said. But the track-bearing rock layer in White Marsh has since been "completely and totally destroyed" by development and a stream-control works.

Stanford's discovery appears in the latest issue of *Ichnos*, an international journal for discoveries of tracks and "traces" of ancient plants and animals, rather than their fossil remains. Stanford co-authors were geologist Robert E. Weems of the U.S. Geological Survey and Martin Lockly of the University of Colorado at Denver.

The animal that made the foot-prints may have been, or looked like, *Zephyrosaurus schaffi*, a particular species of *Hypsilophodon* that lived in Montana during the same early Cretaceous period. *Zephyrosaurus* means "lizard of the west wind."

Because they can't tell for sure, Stanford and his colleagues named the animal *Hypsilochnus marylandicus*, which means "traces of *Hypsilophodon* from Maryland."

Members of the *Hypsilophodon* family walked on their hind legs most of the time but dropped to all fours to rest, eat or drink. Stanford's prints each reveal the animal in that position with a smaller front foot set just in front of its larger hind foot.

"I always think of them as the Mesozoic equivalent of rabbits," Weems said.

Why We Count by Tens

Courtesy of *Natural History*, February 2005

Digging for fossils on Nova Scotia's Bay of Fundy can be unnerving. Twice a day the highest tides in the world sweep up the beach, threatening to pin unwary visitors at the foot of the bluff. But the rewards of digging there are worth the risk. One site, dated to between 345 million and 359 million years ago, has just yielded the oldest extensive collection of tracks ever found of four-legged terrestrial animals.

Spencer G. Lucas, a paleontologist at the New Mexico Museum of Natural History and Science in Albuquerque, and his colleagues report that six kinds of tracks, all left by different species and now carved into the rock, have

been discovered by a local collector, Chris Mansky. The footprints range from three-quarters of an inch to four inches long, all of them made by feet with five digits. There's little evidence of dragging tails or bellies, suggesting that most of the animals were walking, not sliding or slithering.

Before the find, no one could be sure about the number of toes on the first terrestrial tetrapods. Five is a common number for fossil feet, but some with fewer digits had been found, and some with more. But the newfound tracks make it clear that pentadactyls were prominent among the earliest conquerors of land.

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, Le Middle School Cafeteria (Maury Road, two blocks West of Edgewater Drive, Orlando).

Officers:

President	Dave Dunaway	(407) 786-8844
Vice President	Paul Bordenkircher	(407) 493-5549
Secretary		
Treasurer	Sara Morey	(407) 834-0281

Chairs:

Education	Melissa Cole	(407) 834-5615
Field Trips	Shelley Zimmerman	(407) 891-1260
Fossil Fair		

Fossil Auctions	Dave Dunaway	(407) 786-8844
Fossil Bucks	Dave Dunaway	(407) 786-8844
Fossil ID Table	Andreas Kerner: intlfossils@msn.com	
Fossil Lotto	Ed Metrin	(407) 321-7462
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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

Florida Fossil Hunters Membership Application

Names: _____

Associate Members: _____

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

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

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).

Fierce Mammal Ate Dinos for Lunch (cont'd)

General picture

Dr Jin and Dr Luo both agree that the general picture that primitive mammals were small, nocturnal prey animals still holds true.

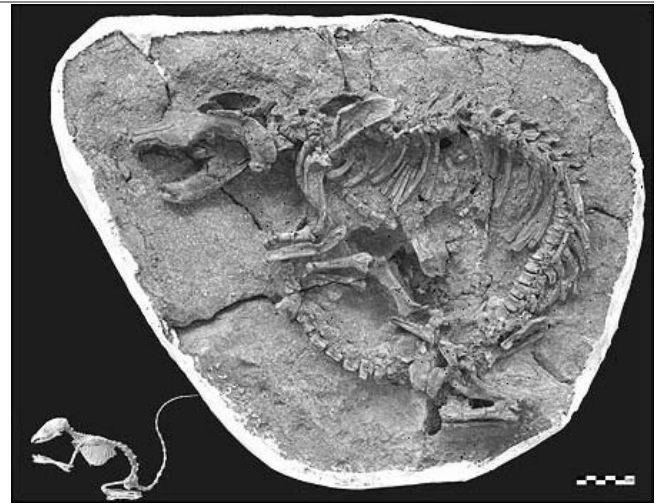
But, said Dr Luo: "We have always suspected the feeding niches of early mammals were more diverse, but we never had the proof."

Interestingly, many small dinosaur fossils have been found in the same beds as the new mammals. The researchers cannot yet say whether mammals dominated their reptilian counterparts at this location.

Big mammals like *Repenomamus* could have been prey for larger dinosaurs that have not yet been seen here. But broadly speaking, carnivores usually reside at the top of food chains.

The wonderfully preserved specimens were pulled from the Yixian Formation, a class of fossil beds in the Liaoning Formation.

This formation has produced an abundance of amazing fossils, including feathered dinosaurs, early birds, fish and mammals.



Dr Jin thinks the astounding preservation of these fossils may be down to how the animals died.

"The bottom section of the Yixian Formation is sandstone with a lot of volcanic ash in it. Many of the fossils are preserved in a resting position. Some of them look as if they are sleeping.

"It could be that poisonous gas produced by volcanism killed many animals while they were asleep."

A Seismic Shift in Understanding How the Earth Got its Gas

Source: University Of Manchester

Date Posted: 2005-01-25

January 6, 2005 -- Scientists studying volcanic activity in New Mexico, USA, have overturned a longstanding view of the origin of gases deep within our planet, according to a paper published in Nature this week.

The researchers, led by Dr Chris Ballentine from the University of Manchester, concluded that meteorite bombardment, after the moon was first formed, was the only way gases could have arrived so deep within the Earth - craters on the moon attest to the ferocity of this process.

The research, funded by the Natural Environment Research Council, has profound implications for our understanding of Earth's early history.

Dr Ballentine said: "Before the moon formed the Earth had a massive atmosphere. Scientists have argued for decades that lava lakes underneath this atmosphere contained dissolved gases, in exactly the same way that carbon dioxide gas is pressurised into fizzy drinks.

"They believed currents in the magma oceans would take this dissolved gas deep into the Earth where the molten rock would eventually freeze, trapping the gases.

"But we know that a planet the size of Mars smashed into the Earth to form the moon. This devastating impact would have destroyed the early atmosphere and released any trapped gas, even from deep within the Earth," he

explained.

"So we asked the question, 'why do volcanoes still spew out gases from so deep, to this day?'"

The team sampled volcanic gases in New Mexico. Uniquely, volcanic gases here contain very little air contamination and this allowed the team to measure rare gas isotopes, like neon, for the first time. These isotopes can be used to 'fingerprint' the origin of the volcanic gas.

The team found that these fingerprints were identical to gases found trapped in meteorites and not from an early atmosphere. The only way that these gases could have been added to the deep Earth is by continued meteorite bombardment after the moon was formed.

According to Dr Ballentine, tectonic activity on a huge scale must have dragged the gases trapped in the meteorites from the surface downwards.

Dr Ballentine's work paves the way to acceptance of the theory that the whole mantle, the bit between the Earth's crust and its core, convects like a pot of water on the stove - albeit very slowly - removing heat from deep within the Earth.

The team concluded that the whole mantle convective movement drives continental plate motion, controls the rate at which continents grow, and determines the amount of water, carbon and nitrogen that goes into and comes out of the Earth.

Mark Your Calendar

February 12th: Vulcan Mine

February 16th: 6:00pm Kid's Fossil Blast, 7:00pm Meeting

February 26-27th: Ruck's Pit Drum

March 1st: 7:00pm Board Meeting

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April 3rd: Central Florida Mineral and Gem Society

April 4th: 7:00pm Board Meeting

April 9th: Wild about Florida

Visit our website www.floridafossilhunters.com

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

Florida Fossil Hunters

Post Office Box 540404

Orlando, Florida 32854-040



Florida Fossil Hunters News