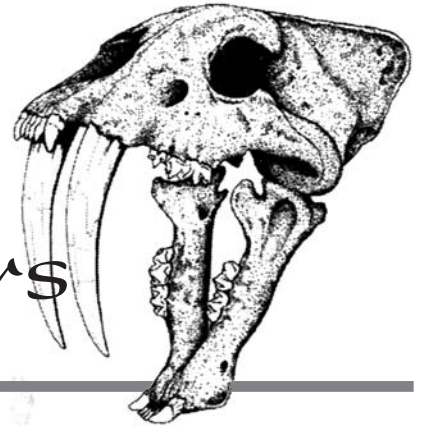


NEWS

Florida Fossil Hunters



Volume 15, Number 4

April 2005

Prez Sez.....

Zach Zacharias gave a great power point slide presentation at our March meeting on the giant ground sloth found in the Daytona Bone Bed. I hope our club members will go to the Fossil Fest at the Daytona Beach Museum of Arts and Sciences on Sat., April 23rd from 12 noon to 5 pm. You can see more of the sloth fossils there. Also Mark Renz and Eric Sanders will be guest speakers at the event.

I hope the Peace River will come down enough for our club camp-out on April 29th through May 1st. In May our club will be going to the Brevard Zoo where Chris DeLorey will give us a "behind the scenes" tour. Date and details will be announced at the meeting or on our website.

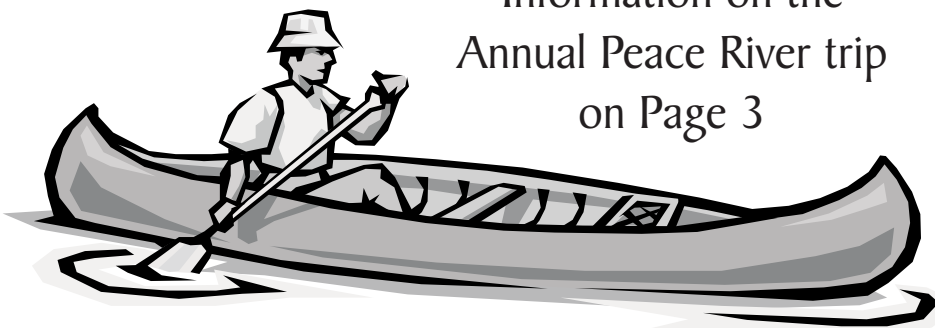
Valerie First and Sharon Reagan have agreed to be our Fossil Fair Chairmen for 2005. Thank you, ladies.

Be sure to bring your plant fossils and petrified wood to show to your fellow club members at our April meeting. Of course, please bring anything else you've found lately so we can look at those, too.

See you at the meeting.

Dave Dunaway.

Information on the
Annual Peace River trip
on Page 3



Coming Events

April 20th

6:00pm Kids' Fossil Blast

7:00pm Meeting/Display Night,
Plant Fossils & Petrified Wood

April 29th-May 1st

Annual Peace River Camp-out &
Fossil Hunt

May 3rd

Board Meeting

May 18th

7:00pm Meeting

*For more events check out the
Mark Your Calendar section
on the back cover.*

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Fragments

The 17th annual Gainesville Indian Artifact & Fossil Show will be on Sat., May 7th from 8 am to 4 pm.

Cost is \$2 for adults. Children 12 and under are free. It will be at the Holiday Inn - West, 7417 Newberry Rd., Gainesville, Florida. Take I-75 north to exit 387, turn left and the Holiday Inn will be on the left after you go under the interstate. For more info, call Hugh McKenzie at 407/647-3074.

The **Florida Museum of Natural History** is having a program "**Finding Florida Fossils**" on Sat., April 16th, from 1 to 4 pm. This family oriented program will educate visitors on where Florida fossils are found, why fossil permits are required and how to get one, and how to identify fossils. Visitors can see fossils from the Florida Museum's collections, meet museum researchers and representatives from Florida fossil clubs and the Florida Paleontological Society, and "stump the paleontologist" with their own fossil find. Visitors also can enjoy lectures on microfossils, fossil preparation and skeletal mounts, or participate in a variety of activities designed for kids of all ages.

Directions: I-75 north. Take exit 384 and go east on State Road 121 (SW 34th Street). At the third traffic signal, turn right and go east on Hull Rd. for 1/4 mi. The entrance to the University Cultural Plaza is on the south (right) side of Hull Rd.

The **Florida Paleontological Society** will have their spring meeting in conjunction with the program at the Florida Museum of Natural History in Gainesville. For more info call 352/392-1721 ext. 254 or email: fps@flmnh.ufl.edu

Dinodiggers! is a local company that gives kids the opportunity to excavate 39 life-size T-Rex fossil replica's.

Once the "fossils" are cleaned and categorized, the children help to build the 15 ft. T-Rex skeleton.

There are other activities for the children in the "activity tents", when they're not involved with digging up bones in the "dig-site".

Other activities include: coloring dinosaur pictures, molding fossil clay, making T-Rex tooth necklaces, winning comic books by taking a "Dino. Quiz", and reaching into the "Fossil Box" so they can take home a real (1,000,000 yr. old) Florida fossil.

"Dinodiggers!" is located in Port Orange, FL.

<http://dbshark94.tripod.com>

Wekiva Resort at Mastodon Springs offers a tube run, natural springs, swimming, snorkeling and FOSSIL HUNTING! They have a beach area, marina, boat ramp, rental canoes, etc. For more info call 407/830-9828.

Photos? *The following inquiry was received via our website.* I've seen a lot of different fossil species of Strombus and Pectin in the Caloosahatchee Formation of SW Florida. I'd say there are 5 or 6 species of both types. Do you have any photos identifying the different species? Is there a good source book for identifying fossil species? email: NYDinosaur@aol.com

2005 Fossil Fair... Sharon Barfoot and Valerie First are co-chairing the 2005 fossil fair. The date for this year's fair is October 15th and 16th. The fair will feature the Edentates (sloths and armadillos and glyptodonts). *So mark all your calendars, save those fossils for the kids pit, and tell all your friends.*

The **Daytona Beach Museum of Arts and Sciences** will have a **Fossil Fest** on Saturday, April 23rd from 12 noon to 5:00 pm. The program is free with admission to the Museum. Admission is \$8 for adults and \$4 for students. Children 5 & under are free. The Museum is located at 1040 Museum Rd., Daytona Beach, FL.

Program:

12-12:45 pm Paleontology Activities for Kids

Fossil Identification

1- 2 pm Guest Speaker- Eric Sanders: Fossil Sharks and Current Shark Fisheries

2- 3 pm Tour of the Giant Ground Sloth Gallery

Book Signing with Mark Renz

Fossil Identification

3- 4 pm Guest Speaker- Mark Renz: Florida Mammoths and Mastodons

4- 5 pm Tour of the Giant Ground Sloth Gallery

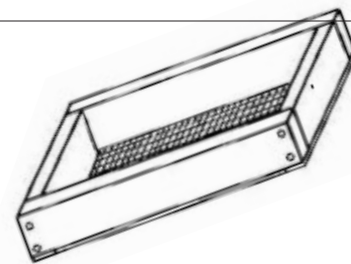
Directions: I-4 east to Nova Rd. exit. Take Nova Rd. to Museum Blvd.

For more info call Zach at 386/255-0285, ext. 33

Kids' Fossil Blast

This month we will be looking at fossil plants and petrified wood. If you have some of your own already, bring it to the meeting. The meeting will be at 6 pm in the cafeteria of Lee Middle School before our regular club meeting. Looking forward to seeing you there.

Field Trips



Annual Overnight Peace River Canoe & Camping Trip

Dates: Friday, April 29; Saturday, April 30th and Sunday, May 1st

Trip Leaders: Friday- Dave Dunaway (ph. 407/786-8844 between 7 pm and 9 pm)

Saturday- Wiley Dykes (ph. 407/298-5764 between 7 pm and 9 pm or email iamafossil@aol.com)

Location: Peace River at Bowling Green south of Payne Creek Historic Park. We will camp on the island in the river and dig one bend south of the island.

Directions: Take Hwy. 17 south through Winter Haven, Eagle Lake, Bartow, & Ft. Meade. In Bowling Green look for the sign for Payne Creek park at traffic light and turn left at the light and go past park. Before bridge pull off on dirt track and meet under the bridge to put in.

Canoe owners: Be at bridge in time to unload canoe & gear and be ready at 7:30 to drive the vehicles to Peace River Canoes. Vehicles can be parked at there and they will shuttle us back to Bowling Green and pick us up at 3:30 pm on Sunday.

Canoe Renters: Call Peace River Canoes at 863/773-6370. Tell them you are with the Florida Fossil Hunters. Cost is \$55.00 for 2 days/1 night for 2 people. They will give you info on directions to their place and time to be there.

Day Trippers(with own canoes): Meet under the bridge at

8 am either Friday or Saturday. Leave your vehicle parked by the bridge. Paddling one way without a motor takes about one hour. If you come on Sunday, paddle downstream until you find us.

What to bring: Canoe and gear OR rent a canoe.

Sifter, shovel, fanny pack or bag for collecting, bucket for larger items or scrap for the kids' pit. Optional: probe, stand

Enough food and drinks for the time you'll be there. Water(1 gallon per day per person for drinking and cooking) Cooler with ice to last two days. A 1 gallon milk jug filled with water and frozen works real well along with a bag of ice. Remember to drain melted water daily to keep food dry.

Change of clothes in waterproof packaging(canoes do overturn at times so bag and secure all items) plus swim suits, hats, water shoes, dry shoes, towels.

Sunscreen and insect repellent, plus personal hygiene supplies including toilet paper! This is primitive camping, folks; there are no portable toilets. First aid kit.

Cups, plates, & eating utensils.

Sleeping Bag, tarps, tent, flashlights

Optional: Camera, fishing pole, bait & license; chair; mask & snorkel, wet suit, marshmallows.

More Field Trips

Gatorland

When: Sat., April 16th at 9 am

Cost: \$23 (there will be about a \$7 discount if at least ten people show up from the club)

Address: 14501 S. Orange Blossom Tr., Orlando

Directions: You can take the 417 south or the Florida Turnpike south to 441 and go south. Gatorland is just north of the Orange/Osceola county line and is on the east side of 441.

This is the time of year that the alligators do their mating roar. It's a unique experience!

For more info, call Dave Dunaway at 407/786-8844.

Future Trips

Brevard County Zoo will be scheduled for sometime in May. If Dave doesn't have the date at the April meeting, be sure to check the website for the date and time.

Ruck's Pit, Fort Drum

When: Sunday, April 24th at 9 am

Cost: \$30 if 10 or less people show up. \$25 if more come

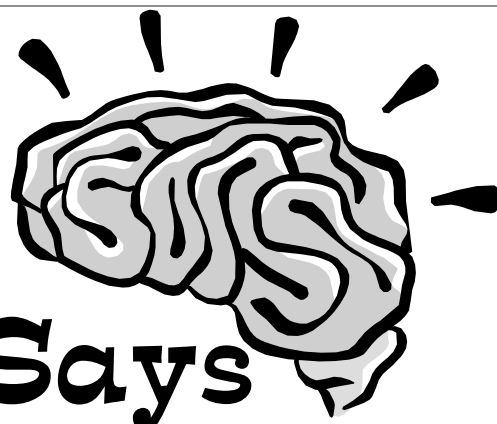
Directions: Take the turnpike (or 441 south) to Yeehaw Junction. Take 441 south to Ft. Drum. There is a convenience store on the right and soon after that will be a road on the left marked with a "Crystal Mine" sign. Go a couple miles and the mine will be on the left.

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, crystals or shells. Bring drinks, food, a hat, sturdy shoes and extra clothes in case you get muddy.

You can hunt for stuff on the surface or dig into the matrix and mud. Children can come but you must keep a close eye on them. This is a working shell pit and the walls are steep and the water can be deep in places.

Sign up at the April 20th meeting or call Shelley if you have any questions.

"Hobbit" Brains Were Small but Smart, Study Says



Hillary Mayell, For National Geographic News, March 3, 2005

Provided by Wiley Dykes

The recently discovered "hobbit" fossils do in fact represent a new human species, according to a new study of a hobbit braincase. What's more, the little humans seem to have been more intelligent than expected, given their extremely small brains—a finding that may completely change how scientists view human evolution.

Last October a team of Australian and Indonesian archaeologists reported the discovery of the 18,000-year-old bones of an adult female hobbit. The only known hobbit skull is from this female, though archaeologists later found partial remains of seven other individuals.

Formally known as *Homo floresiensis*, the fossil skeleton has a unique combination of features not seen in any other humans or human ancestors.

Flores, an isolated island in Indonesia, was colonized by early humans as far back as 800,000 years ago. But from at least 95,000 years ago until around 12,000 years ago, it was occupied by these tiny humans.

H. floresiensis grew to be only about three feet (one meter) tall—prompting archaeologists to christen them "hobbits," after the diminutive *Lord of the Rings* characters.

Despite having very small brains—roughly the size of a chimpanzee's—they appear to have hunted animals twice their size, made stone tools for hunting and butchering, and used fire for cooking.

"It's remarkable. We've always been taught and thought that as humans evolved, the bigger the brain, the better they are," said Charles Hildebolt, a physical anthropologist at Washington University in St. Louis, Missouri.

"If this little creature actually made the tools and was using the tools, built the fire and was using the fire, then that really tips human evolution upside down and changes the way we have to think about brain evolution. It may indicate that the reorganization of the brain was just as important and may be even more important than size."

Hildebolt was a member of the team, led by paleoneurologist Dean Falk of Florida State University, that studied the braincase of the species.

Small but Powerful Brains

Falk and her team created a virtual, three-dimensional cast of the interior of the fossilized *H. floresiensis* skull. Called an endocast, the model shows a variety of features, including the brain's size, shape, vessels, and convolutions.

This hobbit endocast was then compared with virtual endocasts and latex endocasts of modern humans, gorillas, chimpanzees, an adult female Pygmy, and three early human ancestors: *Australopithecus africanus*, a species that lived around 2.5 million years ago; *Paranthropus aethiopicus*, a species that appears in the fossil record about 2.7 million years ago, and *Homo erectus*, a species that lived from about 1,600,000 to 250,000 years ago.

Some scientists have speculated that the hobbit fossil was not of a new species but rather of a modern human with microcephaly, a birth defect in which a person has an abnormally small brain. To address this concern, Falk's team also compared the hobbit braincase to that of a known modern human microcephalic.

"We think it least resembles a microcephalic," Hildebolt said. "It has a lateral profile that is somewhat similar to a *Homo erectus*, but it has other features that are similar to modern humans. The combination is unique."

Falk agrees and contends that the exhaustive analysis puts skeptics' claims that the hobbit is really a microcephalic to rest.

"The scaling of brain to body isn't at all what we'd expect to find in Pygmies, and the shape is all wrong to be a

continued on page 5

"Hobbit" Brains Were Small but Smart, Study Says (con't)

microcephalic," Falk said. "This is something new."

Although much smaller than in modern humans, the hobbit's frontal lobe contains a region known as Brodmann's area 10, which is very convoluted and has large swellings. In the modern human brain, area 10 is associated with higher cognitive processes such as planning ahead and taking initiative.

When scaled for size, the hobbit also has larger temporal lobes than *Homo erectus* does. In modern humans the temporal lobes are associated with hearing and understanding speech.

"This species was undergoing its own long evolution on this island," Falk said. "Our data are consistent with the kinds of sophisticated behaviors being reported."

H. floresiensis "is a really strange combination of some very advanced traits, some that are very primitive, and some that are unique," said Mike Morwood, an archaeologist from the University of New England in Australia. Morwood led the team that first found the hobbit remains.

Morwood said the stone tools found close to the *H. floresiensis* fossils represent "a very sophisticated assemblage of stone artifacts and are directly associated with evidence of hunting and butchering of stegadon, a dwarf elephant."

Hildebolt, though, pointed out that this doesn't automatically mean that the tools and cooking evidence are associated with the new species. Other scientists agree with him.

"I am cautious about drawing too many conclusions about brain quality from endocranial surface features [features inside the skull], and I am still cautious about the extent of the 'advanced' behavior inferred for *Homo floresiensis* from the archaeological evidence," said Chris Stringer, director of the Human Origins Program at the Natural History Museum in London.

"For me, the most significant aspects of this new study are the demonstration that the endocranium is very different from that of a small-bodied, or a microcephalic, *H. sapiens* and that it does, with some differences, most resemble endocasts of *H. erectus*."

The Falk team's report appears in today's issue of the online version of the journal *Science*. Their findings will also be featured on the National Geographic Channel's *Explorer* TV series on March 13 at 8 p.m. ET/PT.

Tiny Contemporary Humans?

Scientists have long thought that, with the extinction of the Neandertals roughly 30,000 years ago, *H. sapiens* was the only human species left on the planet. The discovery that another human species, vastly different from us, existed up until about 13,000 years ago is a stunning find.

Who were they and how did they get to Flores? There are several hypotheses.

The team of archaeologists that found the hobbit fossils—led by Mike Morwood, Bert Roberts, and Thomas Sutikna—suggested that the hobbits' small stature was the result of a phenomenon known as island dwarfing.

Flores island has been inhabited by some species of human since at least 800,000 years ago. The team that found the fossils leans toward the theory that, once there, this earlier species evolved into *H. floresiensis*.

Over thousands of years, the theory goes, their bodies adapted to the constraints of island living in the same way that many other mammals' bodies do. With food in short supply, their skeletons grew smaller—a process called island dwarfing.

And because reptiles on islands frequently grow larger, the hobbits may have been both predators and prey. If so, they would have needed to be smarter just to survive—there would be a significant evolutionary advantage to developing a more highly evolved brain.

"Small and smart is definitely better than small and dumb," Hildebolt laughed.

The authors of the braincase study, which was funded by the National Geographic Society, support an alternative hypothesis that was originally presented by the team that found the fossils.

They suggest that *H. floresiensis* existed as a species before arriving on Flores—that it was already tiny on arrival. It's possible, they say, that there was a small-bodied, small-brained, as yet unknown species of human ancestor (possibly *H. floresiensis*) that may have left Africa at around the same time as *Homo erectus*, about 1.8 million years ago.

"We're not dismissing the island-dwarfing hypothesis. It's just that we think the other seems maybe a little stronger," Hildebolt said.

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:

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Vice President	Paul Bordenkircher	(407) 687-3843
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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).



Arkansas

by Valerie First

Five women, two vans and a myriad of personalities but some of what happens on road trips stays in the minds of the travelers and not in this article. We departed on Saturday, March 26, and headed towards Mississippi, the vans traveling individually. We did not attempt to stay together to our first destination. I do not think I ever drove through as much rain as I did on this trip. We took I-75 to route 10 and then veered north to Flora Mississippi where we spent the night and went to the Petrified Forest the next morning. Luckily, the rain held off while we had our walk through the forest. It is believed that the logs were trees that had drifted into the area and buried, causing petrification. The estimated time of deposition was during the Oligocene Epoch, 36 to 38 million years ago. As settlers moved into the area, in the 1800's, they spotted the logs as they eroded out of the soil. The walk through the forest took about 45 minutes and ended at the souvenir shop and museum where we spent an equal amount of time. Aside from the fossils, what I particularly liked was seeing an exhibit that also featured some pictures of fossil stamps. I collect these topical stamps.

From Flora, we went in different directions. Marge Fantozzi and Marcia Wright went to the Murfreesburg Arkansas diamond mine. I drove with Julia Rudolph and Shelley Zimmerman to Mt. Ida. Apparently there are not many finds at the diamond mine, per day, but one was found the day Marge and Marcia were there but fortunately they did not have to be the one to load any diamonds into their vehicle, thereby having plenty of room for the Mt. Ida crystals.

While they were diamond hunting, our group went to the Fiddler Ridge mine (\$20) which was very close to the Crystal Inn, where we stayed Sunday through Wednesday night. Marge and Marcia joined us on Tuesday and Wednesday. We went to the Gee & Dee Mine (\$20) and the other was the

Coleman Miller Mine (\$10).

The Fiddler mine allowed us to dig the wall, although in all the mines, I found most of the crystals in the tailings.

The crystals are in the abundant red clay and are part of the Ouachita formation, as Gondwana collided with Laurentia in the process of forming Pangea and the southeastern United States. Our ride to each mine involved dirt roads but our vans seemed to have had no trouble. We found many individual crystals and some clusters but the best clusters we purchased. The prices were very reasonable. Each mine, and all throughout the town, crystal shops were abundant.

On Thursday, we road to Malverne, Arkansas. Shelley had gotten directions from a geologist for finding amber. We had to hike to the spot, go through a muck area, get cut up on vines and shrubbery and then try to figure out what we were looking for. When shelly made the find, I dropped the glass I was holding onto in the hopes that maybe it was amber. Well, it kind of looked like amber. Once we knew what we were looking for, we were all able to spot some, but it was not very abundant. Still, we were all happy to find some.

I know it was crazy but from Malverne, I decided to drive straight back to Florida. Marge and Marcia took a more leisurely path, exploring a couple more spots and spent a couple more nights in hotels. They had good weather all the way back. I drove through continuous downpours, tremendous lightening, floods, high winds and occasional fish tailing. It made the time a full week of adventure and, yes, I know I should have pulled over.

Mark Your Calendar

- April 16th: Fl. Museum of Natural History - Finding Florida Fossils
April 16th: Gatorland Field Trip
April 20th: 6:00pm Kids' Fossil Blast
7:00pm Meeting and Display Night "Plant Fossils & Petrified Wood"
April 23rd: Daytona Beach Museum of Arts & Sciences "Fossil Fest"
April 24th: Ruck's Pit Field Trip
April 29th - May 1st: Annual Peace River Camp-out & Fossil Hunt
May 1st: Lee Creek Mine, Aurora, North Carolina
May 3rd: Board Meeting
May 18th: 7:00pm Meeting

Visit our website www.floridafossilhunters.com
Articles and comments should be sent to: elise@liseydreams.com

Florida Fossil Hunters
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Florida Fossil Hunters News