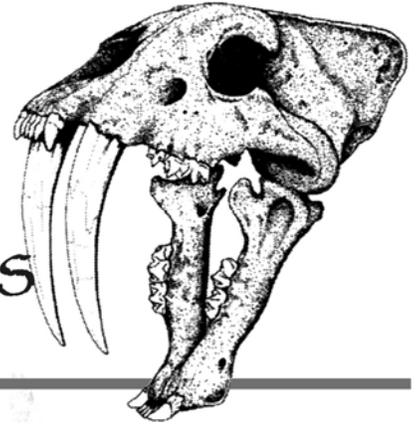


NEWS

Florida Fossil Hunters

Volume 18, Number 1

January 2008



Prez Sez:

I hope everyone had a great holiday season! Dave, you did a great job with the party and everyone brought tasty food, too. Thanks to the kids for our candy necklaces and gifts! Roy was a fun auctioneer as usual and we bought some interesting items with our fossil bucks.

Our speaker for the January meeting is George Hect so bring your mystery items for identification.

Field trips- I will be contacting a few mines to see if we can get in so wish me luck.

Remember our field trips to Vulcan are the third Saturday and Sunday of the month.

Shelley Zimmerman

Coming Events

**Meetings held at the
Orlando Science Center**

January 16, 2008

7:00pm Meeting

February 20, 2008

6:00pm Kid's Blast and

7:00pm Meeting

March 2008

7:00pm Meeting

For more info...

www.floridafossilhunter.com

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Fragments

Piece on the Peace

I checked the depth and the Peace River is still running below 4 ft. at Zolfo Springs. The water is probably cold but since it's so low, you could probably find places to look for fossils that don't include standing waist deep in chilly water. Besides, once you start finding stuff you'll forget all about the cold.

Stone Age Fair

The Sunshine State Archaeological Society is proud to host their first annual Alachua Stone Age Fair on Saturday, January 26, 2008, from 8 am to 5 pm, at the Alachua Women's Club, 255 S Main St, Alachua, FL.

This fair will feature outstanding private and public artifact and fossil collections but will not allow any commercial buying or selling of prehistoric artifacts or fossils. A number of highly regarded speakers will be presenting the latest information on Paleolithic people and animals in North America, concurrently with displays in the exhibition hall. Modern flintknappers will display their skills, booksellers will be present, and refreshments will be available.

The admittance is \$3 for adults; \$1 for children under 12.

Featured speakers include:

- Dr. Michael Gramly, Organizer of the American Society for Amateur Archaeology
 - Dr. Barbara Purdy, Professor Emeritus of the Univ. of Florida
 - Scott Mitchell, Director of the Silver River Museum
 - Dr. Al Goodyear, S.C. Institute of Archaeology
-and others

Directions: North on I-75 to exit 399 at Alachua. Go south (or east) on Rte. 25/441 to NW 141st St. Turn right onto 141st and go south. (This road is also called S. Main St.) The Alachua Women's Club will be on your left on the southeast corner of S. Main St. and NW 140th Ave.

Tampa Bay Fossilfest

The Tampa Bay Fossil Club will hold its 2008 Fossilfest on Saturday, March 8th from 9 am to 6 pm and on Sunday, March 9th from 9 am to 4 pm at the Florida State Fairgrounds.

It will feature fossils, artifacts, minerals, shells, exhibits, and "how-to" seminars. There will also be a kids' fossil mine, raffles, silent auctions and door prizes.

The Florida State Fairgrounds is located at US 301 and I-4, just east of Tampa. There is a charge for parking.

Vulcan Mine Field Trips

We will be having field trips to Vulcan Mine near Brooksville on the third Saturday and Sunday each month, until further notice. Be at the circular driveway near the entrance by 8:45 am to be escorted in by the Vulcan Mine personnel. Generally we dig until noon but sometimes later.

Fossil hunting at this site is usually surface collecting but there can be digging involved if bones or rocks crystals are found.

Bring water, snacks, hat, sturdy shoes, spade or small shovel and a bucket for collecting your finds.

Directions: West on Highway 50 to Brooksville. Turn right onto State Road 19 and go north approximately 10 miles. Vulcan Mine will be on the left.

For further info or to sign up call Shelley Zimmerman at 407-891-1260.

More info on Florida Museum Science projects....

Florida Natural History Museum scientists engage in research around the world every day, but only a small number of these discoveries are displayed in the public exhibits space. They have instituted a "Science Stories" site which is an ongoing collection of news articles about Florida Museum natural science research. One recent article details the findings at Haile Quarry.

Go to the link at www.flmnh.ufl.edu to view the articles.



Kids' Fossil Blast

Our next meeting of the Kids Fossil Blast will be on Wednesday, February 20th, at 6:00 pm before our regular meeting.

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 6:00 pm at the Orlando Science Center.

The new year brings a new opportunity

Voting to take place at the January meeting

The new year brings an opportunity for a milestone leap for the Florida Fossil Hunters.

Florida Fossil Hunters, also known as "Florida Pre-historical Museum, Inc.", was founded in January, 1991. Dean L. Sligh, president and founder, along with a Board of Directors sat down and set up goals, needs, and rules to be used to guide the club meetings, fossil fairs, displays, education and a museum. The main goal was to inform and educate the public on the prehistory of Florida.

Members set aside donations that went into a separate account whose purpose was to build and maintain a museum for the club as the means to reach the public. The amount is now a few thousand dollars. The reality of the club being able to finance a museum on its own seems a long way off.

The Orlando Science Center has asked the Florida Fossil Hunters to help them change and update their displays on fossils on the fourth floor. Right now the displays, mostly dinosaurs, contain materials collected from out of state. Jimmy Waldron, who is now in charge of the fourth floor displays, and I have been discussing the possibilities of having fossils from Florida in some of the display cases and having more information on the geology of Florida.

This would be a giant move towards the club's goal of having a permanent educational display and further opens the door of a working relationship with the OSC. This would demonstrate to the Science Center that we want to be more than just a club that meets once a month at their facilities. It would show our appreciation and let them know we are committed to future involvement.

Thousands of children, teachers, members and the general public come to the Orlando Science Center each year. The display would always be there to show the who, what and where about Florida fossils and our club.

The club already has several skull replicas that are used in school displays and public outreach events, some of which could be used in the OSC display. Bonnie and I have materials that we use in lectures and school displays, some of which we will use. We have been doing displays for 10 years at different schools, libraries and lectures. However there are several items that we do not have extras of. These include: large mammoth and mastodon teeth from Florida, a large sloth claw core replica, and a large Terror Bird skull replica, to name just a few of the larger items.

As I presented to you at the December meeting, Bonnie and I will set up the first display. We ask for input, suggestions, etc. from the club membership. If anyone wishes to help on the displays or donate items, get with us for further details.

I propose that the club use some of the money from the museum fund to purchase needed items in the proposed displays at the Orlando Science Center. The amount is estimated to be between \$1,200.00 and \$2,000.00.

Everyone I've spoken to on this has agreed that this would be a great step for the club to take. This will be discussed and voted upon at the January meeting. Please attend.

Sincerely,

Russell Brown

Whales Descended from Tiny Deer-like Ancestors

ScienceDaily (Dec. 21, 2007) — Hans Thewissen, Ph.D., Professor of the Department of Anatomy, Northeastern Ohio Universities Colleges of Medicine and Pharmacy (NEOUCOM), has announced the discovery of the missing link between whales and their four-footed ancestors.

Scientists since Darwin have known that whales are mammals whose ancestors walked on land, and in the past 15 years, researchers led by Dr. Thewissen have identified a series of intermediate fossils documenting whale's dramatic evolutionary transition from land to sea. But one step was missing: The identity of the land ancestors of whales.

Now Dr. Thewissen and colleagues discovered of the skeleton of *Indohyus*, an approximately 48-million-year-old even-toed ungulate from the Kashmir region of India, as the closest known fossil relative of whales. Dr. Thewissen's team studied a layer of mudstone with hundreds of bones of *Indohyus*, a fox-sized mammal that looked something like a miniature deer.

Dr. Thewissen and colleagues report key similarities between whales and *Indohyus* in the skull and ear that show their close family relationship.

Thewissen and colleagues also explored how *Indohyus* lived, and came up with some surprising results. They determined that the bones of the skeleton of *Indohyus* had a thick outside layer, much thicker than in other mammals of this size. This characteristic is often seen in mammals that are slow aquatic waders, such as the hippopotamus today. *Indohyus*' aquatic habits are further confirmed by the chemical composition of their teeth, which revealed oxygen isotope ratios similar to those of aquatic animals. All this implies that *Indohyus* spent much of its time in water.

Dr. Walt Horton, Vice-President for Research at NEOUCOM commented: "This remarkable research demonstrates that the study of the structure and composition of fossil bones can tell us about how the skeleton of whales and, by extension, other mammals like humans, interacts with the environment and changes over time."

Before, it was often assumed that whales descended from carnivorous terrestrial ancestors, and some researchers speculated that whales became aquatic to feed on ocean-dwelling fish. According to Dr. Thewissen, "Clearly, this is not the case, *Indohyus* is a plant-eater, and already is aquatic. Apparently the dietary shift to hunting animals (as



The 48 million year old ungulate Indohyus from India. Indohyus is a close relative of whales, and the structure of its bones and chemistry of its teeth indicate that it spent much time in water. In this reconstruction, it is seen diving in a stream, much like the modern African Mousedeer does when in danger. Reconstruction by Carl Buell. (Credit: Image courtesy of Northeastern Ohio Universities Colleges of Medicine

modern whales do) came later than the habitat shift to the water."

Although it may seem strange to think of a tiny, deer-like animal living in water, one modern mousedeer offers something of an analogue to the ancient *Indohyus*, even though it is not closely related to whales: The African Mousedeer (also called Chevrotain) is known to jump in water when in danger, and move around at the bottom (for a movie showing this go to YouTube and watch 'Eagle vs. Water Chevrotain').

Whale evolution is one of the best documented examples of mammal evolution, and Dr. Thewissen's discovery adds a significant new piece to the puzzle.

"Not much was known about the earliest whales, until the early nineties," Dr. Thewissen said. "But then, a number of discoveries came in quick succession."

The article documenting Dr. Thewissen's new discovery, titled *Whales originated from Aquatic Artiodactyls in the Eocene of India*, was published in the November issue of *Nature*. It's authors (in order of appearance on the paper) include: J. G. M. "Hans" Thewissen, Ph.D., Professor of the Department of Anatomy, Northeastern Ohio Universities Colleges of Medicine and Pharmacy (NEOUCOM); Lisa Noelle Cooper, Doctoral Student, Graduate Program in Biomedical Sciences, Kent State University and NEOUCOM;

Continued from page 4

Mark T. Clementz, Ph.D., Department of Geology and Geophysics, University of Wyoming, Laramie WY; Sunil Bajpai, Ph.D., from the Department of Earth Sciences, Indian Institute of Technology, Roorkee, Uttarkhand in India; and B. N. Tiwari, Ph.D., from the Wadia Institute of Himalayan Geology, Dehra Dun, Uttarkhand, India.

The research by Dr. Thewissen and his team was funded by the National Science Foundation (NSF).

Adapted from materials provided by Northeastern Ohio Universities Colleges of Medicine and Pharmacy.

Researcher seeks Yukon fossils with ancient meteor clues

Fossils suggest cosmic explosions may have killed mammoths in area

Thursday, January 3, 2008, CBS News

Mammoth fossils around the Yukon are offering evidence that ancient meteor explosions may have wiped out entire species there thousands of years ago, a California-based researcher says.

A team led by Richard Firestone, a nuclear scientist at the Lawrence Berkeley National Laboratory in Berkeley, Calif., made the discovery while testing thousands of samples of fossilized Alaskan mammoth ivory from a suspected meteor impact that occurred about 13,000 years ago.

Firestone's team found tiny "burn rings" with embedded iron particles in this Alaskan mammoth tusk. (Courtesy Richard Firestone)

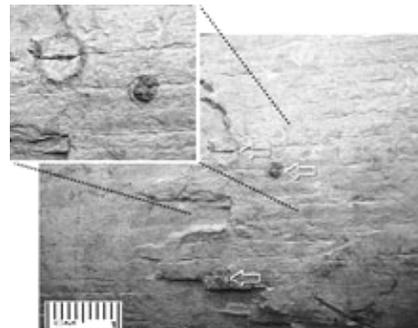
"You would see round circles with little holes in them," Firestone told CBS News in an interview Thursday, referring to hundreds of circular burn marks he saw on some mastadon tusks.

X-ray analysis showed tiny rock fragments deep inside those holes, and metallurgical tests confirmed the fragments did come from meteors.

Firestone said he believes meteorites exploded over parts of Beringia — the Ice Age-era region that includes parts of modern-day Alaska, Yukon and Siberia — creating showers of fragments, or "micrometeorites," that struck and killed many of the prehistoric creatures that roamed the area.

Furthermore, Firestone's team uncovered a surprise: The sample tusks dated back to about 35,000 years ago, meaning they were older than the blast from 13,000 years ago that they were initially studying.

"It turns out that there was an impact event, probably a meteor, that exploded over Alaska and probably over Siberia ... around that time and embedded these particles into the tusks," he said.



Firestone's team found tiny "burn rings" with embedded iron particles in this Alaskan mammoth tusk. (Courtesy Richard Firestone)

"They probably came in under very high velocities, hundreds of kilometers a second almost. It must have exploded and just embedded these things in the tusks in large quantities, as many as 100 or more in one tusk."

The small holes with meteorite fragments were found in about one out of every 1,000 pieces of mastadon ivory pieces Firestone's team has tested. They also found similar fragments in one Siberian bison skull that appeared to have survived the blast, he said.

"In the bison skull, since that was bone, we could see renewed growth around these particles after they had been impacted. So presumably the bison — that particular individual, at least — survived the impact."

Now, Firestone is asking Yukoners for any mammoth fossil samples they may have. He is asking anyone who has found fossilized bone or ivory with circular discolorations to try and collect soil samples in the area where they found the fossil, then contact him at the California laboratory.

"We think they came from your area around the Yukon somewhere," he said. "So presumably [Yukoners] are going to be finding these things if they look for them."

Firestone's findings were presented last month at a meeting of the American Geophysical Union in San Francisco.

Big Vulcan Mine Find

In October at our clubs field trip to Vulcan Mine, little Jeremy Smith (not to be confused with the over 6 ft., 30 yr. old Jeremy Smith) discovered a piece of fossil rib. After additional searching of the area, more bones were found and soon a major excavation was under way. The digging crew tried to get it out as gently as possible but a lot of bones broke and even crumbled. They did manage to take home several large pieces of ribs as well as a couple vertebrae plus many, many fragments.



Jeremy Smith pointing to one rib of the fossil he found at Vulcan Mine this past fall. After being told that fossil hunters get the honor of naming the fossils they find, he informed us that this specimen was Doogie "The Manatee" Smith.



The excitement of finding the manatee fossils was contagious and soon a group of Smiths and Maios and even a Brown were down on their knees in search of more of the animal.

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) 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 ID Table	Andreas Kerner, intlfossils@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	Melissa Cole	(407) 834-5615
	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 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 in the e-mail or in Microsoft Word files (*.doc).

Florida Fossil Hunters Mark Your Calendar

January 16, 2008

Florida Fossil Hunters Meeting 7:00pm

January 19th and 20th

Vulcan Mine Field Trips

Saturday, January 26, 2008

Sunshine State Archaeological Society, First Annual Alachua Stone Age Fair

February 16th and 17th

Vulcan Mine Field Trips

February 20, 2008

Next Kid's Fossil Blast Meeting 6:00pm

Florida Fossil Hunters Meeting 7:00pm

Tampa Bay Fossil Club, 2008 Fossilfest at the Florida State Fairgrounds.

Saturday, March 8th from 9 am to 6 pm and Sunday, March 9th from 9 am to 4 pm

Visit us online at www.floridafossilhunters.com

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

Florida Fossil Hunters

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Florida Fossil Hunters News