

NEWS

Florida Fossil Hunters



Volume 16, Number 11

December 2006

Prez Sez

I hope all of you had a nice Thanksgiving with family and friends.

Come on over to my house at 6 pm on December 13th for the club meeting, Christmas dinner and fossil bucks auction. We'll begin with elections and club business then proceed to the festivities.

Remember to bring a covered dish and your fossil bucks.

Our next meeting on January 17th will be held at the Orlando Science Center as voted on at our November meeting. Further instructions and directions will be in the January newsletter.

Reminder.....club dues are due in January.

See you at my house.

Dave Dunaway

Merry Christmas
and Happy New Year!
or whatever holiday brings you joy!

Coming Events

December - 13th

7:00pm Meeting
at Dave Dunaway's House

Look

at where we will be

January 17, 2007

7:00pm Meeting
at the Orlando Science Center

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Florida Fossil Hunters News

Fragments

Report on the Vulcan Mine Field Trip

We had a record turn out for the trip to Vulcan on Nov. 11th. They brought us to a totally new area so even the veteran hunters had to figure out where to find the fossils. Fun was had by all and lots of echinoids were found along with a few sea urchins.

The echinoid that is found most frequently at Vulcan Mine is: *Rhyncholampas gouldii*

The rarer sea urchins are: *Gagara mossomi* (has smaller bumps where spines attached and arranged in double rows)

Phymotaxis mansfield (has larger bumps arranged in single rows)

It's Party Time

Directions to Dave's house for the Christmas party/meeting/auction: 600 Ferne Drive, Longwood

I-4 to SR 434. Go west on SR 434 to Markham Woods Rd. Turn right onto Markham Woods and go north approx. 1-1/2 miles. At traffic light, turn right onto E.E. Williamson Road. Turn right onto Ferne Drive. Dave's house is on the left almost to the end of the road.

Be sure to bring your covered dish, your fossil bucks and your smiles.

Kids' Fossil Blast

There will be no program this month. The next Fossil Blast will be on February 21st at 6 pm before our regular meeting.

There will be no Fossil Blast in December so our next meeting will be in February 2007.

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.

A Piece on the Peace

Yes, it's still low enough for fossil hunting in the Peace River. Think of it as Mother Nature's Christmas present to all of us.



December 2006 Fossil Bucks Auction

Items to**Bid on**

- 1. Agatized wood from Washington
- 2. Fossil display case
- 3. 60 piece Rotary Drill kit
- 4. Polished Dinosaur bone, Utah
- J 5. Jurassic puzzle (donated by Marcia Wright)
- N 6. Polished Onyx egg
- 7. Modern shark jaw
- 8. Gomphothere tusk section
- 9. Oreodont upper molars in jaw
- 10. Polished pine cone
- J 11. T-Rex toy
- N 12. Mount Ida quartz crystals
- 13. Pre-machine whiskey flask (donated by Roy Singer)
- 14. "Fossil" postage stamps in frame (donated by Wiley Dykes)
- 15. Indian trade beads in display case
- J 16. Fish stickers (donated by Marcia Wright)
- N 17. Rose quartz
- 18. Opalized wood, Colorado
- 19. Sifter
- 20. Withlacoochee agatized coral
- J 21. Green, yellow & blue calcite crystals
- N 22. Polished agate in display case
- 23. Display case
- 24. Four books about Florida animals (donated by Marcia Wright)
- 25. Mammoth & saber-cat toys from the Page Museum at La Brea Tar Pits
(donated by Zach Zacharias)

J - Junior members only (kids under 14)

N - New members only (joined the club within the last year)

Palaeontologists have discovered a bizarre whale fossil in Australia with a set of fearsome teeth.

The specimen has surprised scientists because it belongs to the group known as baleen whales.

Modern day baleen whales are all placid plankton-eaters, but the new fossil shows the group were not always the ocean's gentle giants.

Details of the 25-million-year-old find appear in the journal Proceedings of the Royal Society B.

It looks like the teeth were not used for filter feeding

Mark Uhen, Cranbrook Institute of Science

The small, large-eyed baleen whale used a fully developed set of teeth to hunt its prey.

Scientists had thought that two groups of ancient whales evolved drastically different eating habits more than 34 million years ago.

They believed ancient whales that fed by filter feeding evolved to become today's enormous but passive baleen whales; and those that hunted became the ocean's giant predators, the toothed whales.

Toothed whales include the sperm whale, narwhal, orca and other dolphin species; whereas baleen whales are typified by the humpback and blue whale.

The new specimen shows that ancient baleen whales probably hunted prey like their toothed relatives.



The whale used large eyes to hunt prey (Image: R Start, Museum of Victoria)

probably used its large, sharp teeth to capture and chew prey, which it located using its large eyes.

"It's always been known that ancient baleen whales had teeth, but this fossil is very important because it looks like the teeth were not used for filter feeding," commented Mark Uhen, head of research at the Cranbrook Institute of Science in Michigan, US.

The fossil represents a previously unknown species, named *Janjucetus hunderi* after its teenage finder Staumn Hunter, who noticed it in an exposed boulder while surfing in 1997.

Janjucetus hunderi lived between 9 and 25 million years ago after the last common ancestor of the toothed and baleen whales.

The species also had unusual hearing which appears to have been specialised to detect very high-pitched sounds. This is similar to modern toothed whales, which now "echolocate" by producing high-pitched soundwaves and listening to the echoes to find prey.

Whether *Janjucetus* could find prey in this way is not clear; it may just have used its very large eyes. Certainly, modern baleens do not have high-frequency hearing. Instead, their ears detect the very low-frequency bass sounds which we associate with whalesong.

Big beast

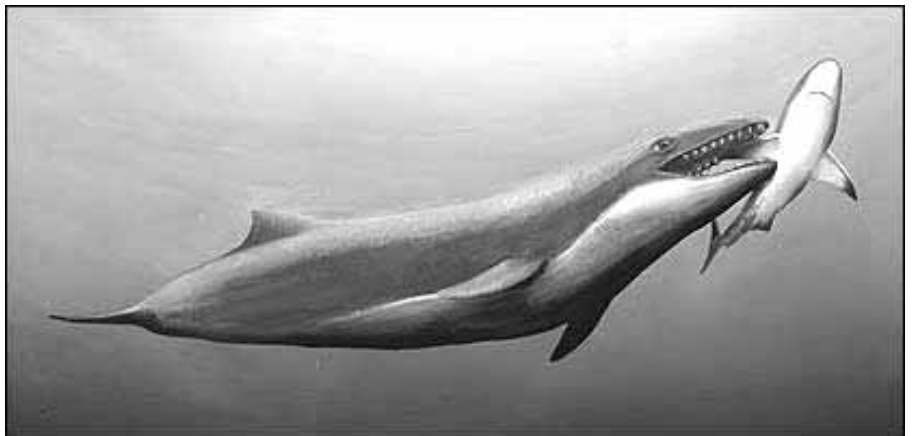
Modern-day baleen whales are named after their characteristic baleen, a comb-like structure between their jaws which allows them to filter tiny plankton from the sea to eat. Baleen is made of a substance called keratin, just like human fingernails and hair.

"Specialised skull features tell us that this fossil is undoubtedly a baleen whale," said lead researcher Erich Fitzgerald of the University of Monash in Victoria, Australia.

"Surprisingly, it appears that the original features of baleen whales did not include the filter-feeding apparatus."

Instead, the newly discovered ancient whale

The whale was sensitive to high frequencies (Image: Erich MG Fitzgerald)



Fossil Is Missing Link

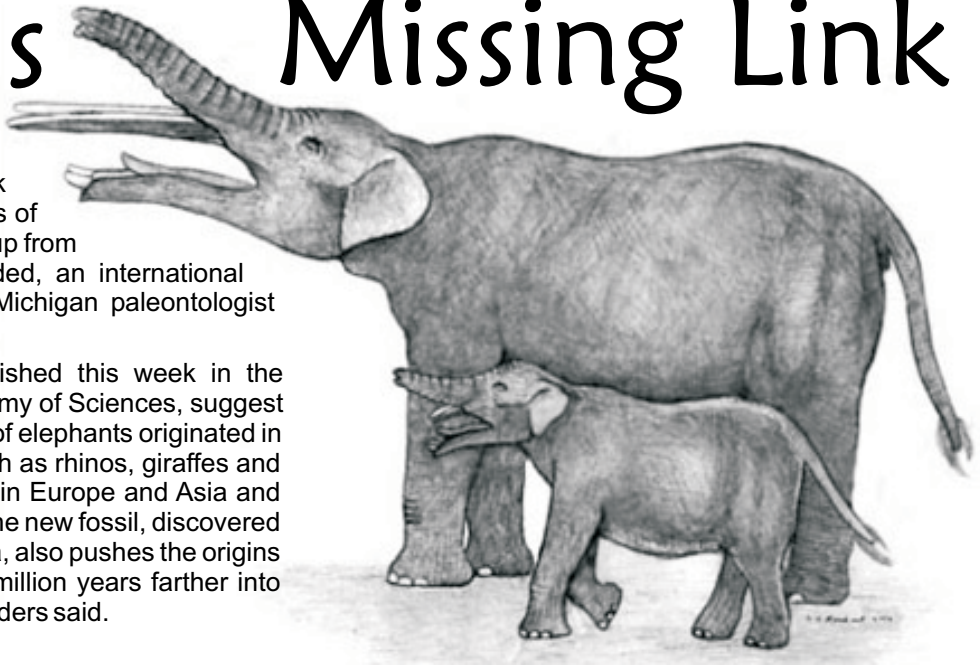
A pig-sized, tusked creature that roamed the earth some 27 million years ago represents a missing link between the oldest known relatives of elephants and the more recent group from which modern elephants descended, an international team that includes University of Michigan paleontologist William J. Sanders has found.

The group's findings, to be published this week in the Proceedings of the National Academy of Sciences, suggest that mastodons and the ancestors of elephants originated in Africa, in contrast to mammals such as rhinos, giraffes and antelopes, which had their origins in Europe and Asia and migrated into Africa. The dating of the new fossil, discovered in the East African country of Eritrea, also pushes the origins of elephants and mastodons five million years farther into the past than previous records, Sanders said.

From 35 to 25 million years ago, representatives of the group known as proboscideans (which includes elephants, mastodons and their close relatives) lived only in Africa and Arabia, and most of them were palaeomastodonts. These animals were shorter and smaller than today's elephants, with short trunks and tusks and simple teeth that were all in place at the same time, as human adult teeth are.

After 25 million years ago, larger proboscideans such as mastodons and gomphotheres—the ancestors of modern elephants—dominated the scene. Elephant-sized, with long tusks and trunks, these advanced proboscideans had more complex teeth that emerged more slowly, so that each quadrant of the mouth had only one or two functional teeth in place at a time.

"The new fossil from Eritrea is important because it shows aspects of dental anatomy in common with the advanced group, including molars with more cusps and complex crowns and the delayed maturation and emergence of molars," said Sanders, an assistant research scientist in the U-M Museum of Paleontology. But the creature that the new fossil represents also had characteristics in common with palaeomastodonts,



In Elephant Lineage

namely smaller body size and a jaw structure that suggests shorter tusks and trunk.

"In age and anatomy it is exactly the sort of intermediate evolutionists would expect to bridge the gap between archaic and advanced proboscideans," Sanders said.

In addition to Sanders, the research team included Jeheskel Shoshani of the University of Asmara in Eritrea and the Elephant Research Foundation in Bloomfield Hills, Mich.; Robert Walter of Franklin and Marshall College in Lancaster, Penn.; Michael Abraha and Tesfalidet Ghirmai of the Eritrean Ministry of Mines and Energy; Seife Berhe of Global Resources in Asmara, Eritrea; Pascal Tassy of the Museum National d'Histoire Naturelle in Paris; Gary Marchant of the Elephant Research Foundation; Yosief Libsekal of the National Museum of Eritrea; and Dietmar Zinner of Deutsches Primatenzentrum in Göttingen, Germany.

Sanders received financial support for participation in the project from a Scott Turner Award from the U-M Department of Geological Sciences.



The teeth of the newly described Eritreum melakeghebrekristosi are a tip-off to its position as a missing link in the elephant family tree. (Image courtesy of University of Michigan)

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 Dave Dunaway (407) 786-8844
 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
 Membership Sharon Lynes: momba10@aol.com
 Newsletter Bonnie Cronin (352) 429-1058
 Elise Cronin-Hurley (407) 929-6297
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 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

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).

Florida Fossil Hunters has a new meeting place!

Thanks to the efforts of Valerie First and John Budowick, an agreement has been made with the Orlando Science Center for our club to hold its meetings at their facility starting in January, 2007. In exchange club members are asked to volunteer their time at the Science Center. Contact Valerie First at vjfirst@aol.com or 407/699-9274 to have your name submitted as a volunteer.

The club members voted to accept this agreement at the November, 2006 meeting.

THE MEMO OF UNDERSTANDING BETWEEN

The Orlando Science Center and the Florida Fossil Hunters

This Memorandum of Understanding is hereby entered into by and between the Orlando Science Center (hereafter referred to as "OSC") and the Florida Fossil Hunters (hereafter referred to as the "FFH").

In consideration of the terms and conditions contained herein, the parties agree as follows;

1. The Florida Fossil Hunters are permitted to hold club meetings at OSC, in a lab/ classroom designated by OSC once per month for a period of one year, beginning December 2006 and ending November 2007. Parking will be provided in the OSC parking garage free of charge for FFH members. The meetings are held the third Wednesday of the month; between 6:00 and 9:00 p.m. OSC will make the lab/classroom available between 5:30 p.m. and 9:30 p.m. OSC will provide the classroom, and an appropriate number of tables and chairs. FFH will provide any other materials and equipment including, but not limited to, projectors, TV, other audio/visual equipment, tablecloths, miscellaneous office supplies
2. In exchange for the classroom use, FFH will provide OSC with fossils for the NatureWorks exhibit Trading Center to be given to admitted guests of OSC at the discretion of NatureWorks and OSC Education staff. Fossils will be awarded to participants who have earned Trading Center points. Fossils will become the property of OSC. FFH will provide a five-gallon bucket of fossils to begin the trading, and will restock the supply periodically as needed. Fossils will include, but not be limited to, sharks teeth, echinoids, dugong and turtle bone fragments, and other common fossils not considered to be rare, valuable, or irreplaceable. OSC will not place a value on the fossils nor acquire these fossils for the purposes of starting a collection but will use them as 'tradable items' of little scientific or monetary value for its NatureWorks Trading Center
3. FFH will provide volunteer educational support staff on a part-time basis for the DinoDigs exhibit – the schedule to be arranged with OSC Education staff.
4. FFH will provide a display and presentation staff for the Fossil February program on Saturday, February 24, 2006 from 11:00 a.m. until 4 p.m. For this event, OSC will provide the necessary tables, chairs, A/V equipment, and access to electricity.
5. This agreement is valid from the date signed _____ (Date). This agreement will extend through November 30, 2007 and can be extended/renewed by mutual consent of both parties.

Mark Your Calendar

December - 13th
7:00pm Meeting
at Dave Dunaway's House

Look
at where we will be



January 17, 2007
7:00pm Meeting
at the Orlando Science Center

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