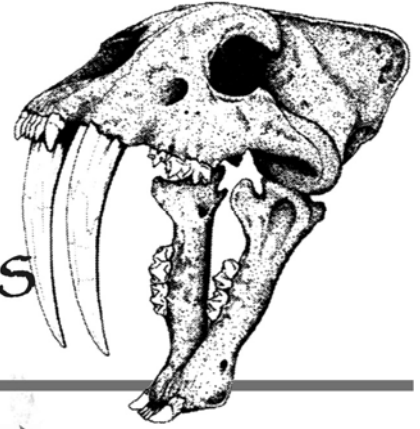


NEWS

Florida Fossil Hunters

Volume 19, Number 1

January 2009



Prez Sez:

Happy New Year, Fossil Hunters!

First, to Shelley Zimmerman, your remarkable leadership brought us boldly through the last two years of fascinating speakers, great fieldtrips, successful Fossil Fairs, and so much more. Thanks for everything!

Paleontologists spend most of their time looking into the past, but today I'm looking forward to the next two years as a time filled with opportunity and promise of what we as a club can continue to bring to our community.

This time is already seeing challenges. As you may know, several reasons including changes in school field trip rules for Orange County have led to the closure of the Orlando Science Center on Wednesdays, and every evening at 5:00 pm. But here again, we find opportunity. Our next meeting, to be held **Saturday, January 17, 2009**, falls on a day where there will be thousands of people in the Science Center, many of whom are potential members for the Florida Fossil Hunters.

We will be discussing several pertinent issues, including future meeting details, upcoming fossil events in Central Florida, and your ideas. There are also going to be some special engagements for our club members coming up at the end of this month, including an evening with a prominent paleontologist!

For our January meeting, please wear your nametags and a Florida Fossil Hunters Shirt (if you have one!) We don't want to cause any confusion with the Science Center's event, and this will let the public see how strong we are as a group!

Jimmy Waldron
President of Florida Fossil Hunters

Coming Events

JANUARY'S MEETING
will be on
SATURDAY,
JANUARY 17th at 2:00 PM
at the Orlando Science Center

Future meeting times and days to be determined at January Meeting See Page 3 for more info

Next Kid's Fossil Blast
February 2009—date & time tba

For more info...
www.floridafossilhunter.com

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JANUARY'S MEETING
WILL BE ON
SATURDAY, JANUARY 17th at 2 PM
See page 3 for more details

Fragments

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SATURDAY, JANUARY 17th at 2 PM

See page 3 for more info

Piece on the Peace

The river is still low enough to hunt for fossils....4 ft. at the Zolfo gauge station on January 3rd. You can walk in at parks in Wauchula, Zolfo, or Arcadia or canoe to a spot with gravel and hunt to your heart's content.



Thank you, Dave for hosting a wonderful Christmas party/meeting/auction again this year. The fort is incredible and the fireworks were awesome. We appreciate all your hard work to make this such an enjoyable experience.

Croc Display

The new Gavialosuchus americanus croc skull replica that the club bought in October has been installed in a display case in the Dinosaur Exhibit area at the Science Center. More information and crocodilian materials will be added soon. These materials join the others that the club and some members have on loan to the Orlando Science Center as a way to educate the public about Florida's fossils and its past.

Hatching the Past

This new exhibit featuring dinosaur eggs, nests and embryos was developed by Florence and Charlie McGovern of the Stone Company and is scheduled to run from January 31st through May 10th. Florida Fossil club members are invited to a special presentation by Florence McGovern on Friday, January 30th at 3 pm. Admission will be free for club members. Please wear club name tags and/or shirts to identify yourselves to the Science Center's staff.

Kids' Fossil Blast

Is there a special fossil that you'd like to learn about? Is there a type of animal or age of the past that fascinates you? If so, let us know at info@floridafossilhunters.com and maybe we can plan a program on that subject.

Our next kids' program will be at the February 2009 meeting—see page 3 for more info.

Mark Your Calendar
2009 FOSSIL FAIR
OCTOBER 10 & 11, 2009

Mineral and Fossil Shows and more...

The Tomoka Gem and Mineral Society will hold their show at the Volusia County Fairgrounds in DeLand on January 17 & 18th, 2009.

Alachua Stone Age Fair

The Sunshine State Archaeological Society will host its 2nd Alachua Stone Age Fair on Saturday, January 24th from 9 am to 4:30 pm at the Alachua Women's Club, 14565 South Main St., Alachua, FL. This is an educational show featuring private and public artifact and fossil collections. No commercial buying or selling of prehistoric artifacts or fossils will be allowed. There will be speakers and modern flintknappers.

The **Gulf Coast Mineral, Fossil & Gem Club will host its show** on January 24th and 25th at the Venice Community Center, 300 Nokomis Ave., Venice, Florida. The hours are 10-5 on Saturday and 10-4 on Sunday. For further info, call Ralph or Eileen Marble at 941/922-2135.

Tampa Bay Fossil Fest

Mark your 2009 calendars.....the Tampa Bay show will be the 7th and 8th of March.

The Mid America Paleontology Society (MAPS) will hold its National Fossil Exposition on April 3rd thru 5th at the Western Illinois University in Macomb, Illinois. For more information go to www.midamericapaleo.org

18th Annual Thomas Farm Dig or Hummingbird Challenge V, Florida Museum Of Natural History's Spring 2009 dig will focus on the small fossils to be found. It will be held from Tuesday, March 31st through Sunday, April 5th, 2009. Space is limited. For more information go to www.ufl.edu/ponyexpress or call Dave Steadman at 352-273-1968.

TIME TO RENEW
your Florida Fossil Hunters
2009 Membership.

It's time to pay your 2009 dues which are still only \$17 per household.
Please fill out a renewal form on page 7, so we can make sure all your data is current and to properly document your payment.



Orlando Science Center Presents: February Fossil Fest

About this time, last year, the Orlando Science Center hosted the **Fossil Fest** as an exciting way to get Orlando excited about dinosaurs, fossil hunting, and the science of paleontology. It was a resounding success, with fantastic vendor booths, great shows and entertainment, and a great part of our commitment to making science fun.

We are now preparing for the Third Annual Festival of Fossils as part of our Scienterrific Saturdays events! Scienterrific Saturdays transform the whole Science Center into an all-out themed fun-day experience for the whole family. **Mark your calendars: Fossil Fest returns Saturday, February 28th, from 11:00 am to 4:00 pm.**

To improve this year's Fossil Fest, we're looking for interested people who would like to showcase fossils, minerals, artifacts, artwork, or other really cool dinosaur-related exhibitions. With the adoption of new Science Education standards in Florida, we'd like to include evolutionary information as a topic for this year's event.

Each exhibiting group is allotted a 6-foot cafeteria-style folding table on Level 4 of the Science Center. These will be located in the expanded DinoDigs exhibit and an adjacent hall, as well as in the rotunda. Table assignments are given in a first-come, first serve basis. In addition, you are invited to bring any tabletop decorations, tablecloths, signboards, brochures, or other promotional materials you wish. If you'd be interested in joining us for the celebration, or if you other fossil enthusiasts who love to do this sort of stuff, please respond to me in an e-mail with your name and phone number. and please tell me if you require electricity for your table.

Thanks for your interest,
and I hope to hear from you soon!
Sincerely, JIMMY WALDRON

CHANGE IN MEETING TIME AND/OR LOCATION



As all organizations, businesses and everyone in between know, the economy is causing a lot of changes in the way we do things.

Orlando Science Center has been affected by these events as well. **Starting this January until June 4th, the Science Center will be closed Wednesdays and will close at 5 pm on all other days.**

This puts us in a dilemma. We can choose to meet somewhere else on our customary day and time OR we can continue to meet at the Orlando Science Center but on a different day and time. Some members will be checking out other locations (which may come at a cost) I know that sometimes adapting to change is difficult but we, of all people, should have a grasp of the need to be adaptable in order to survive as a viable group. It's evolution in action.

This will be our 18th year and believe me when I say that we've met challenges in the past and can continue to move forward and better our club.

Please....if you would like a voice in this matter, make sure you attend the January meeting on Saturday, the 17th at 2pm at the Science Center.

Thank you.
Russell Brown, V.P.

New Species of Prehistoric

Giants

found in the Sahara

ScienceDaily (Dec. 17, 2008)

Dinosaur hunters on a month-long expedition to the Sahara desert have returned home in time for Christmas with more than they ever dreamed of finding. They have unearthed not one but two possible new species of extinct animals. Their success marks one of the most exciting discoveries to come out of Africa for 50 years.

The team have discovered what appears to be a new type of pterosaur and a previously unknown sauropod, a species of giant plant-eating dinosaur. Both would have lived almost one hundred million years ago.

The palaeontologists discovered a large fragment of beak from a giant flying reptile and a more than one metre long bone from a sauropod, which indicates an animal of almost 20 metres (65 feet) in length. The discovery of both is extremely rare.

The expedition was composed of scientists from the University of Portsmouth, University College Dublin (UCD) and the Université Hassan II in Casablanca and was led by UCD palaeontologist, Nizar Ibrahim.

Ibrahim, who is an expert on North African dinosaurs, said: "Finding two specimens in one expedition is remarkable, especially as both might well represent completely new species."

Dr David Martill, a reader in Palaeobiology at the University of Portsmouth, said: "Plant eaters are uncommon in this deposit, extremely rare in this region and to find one this large is very exciting. It's a major discovery."

For Martill it was also significant because it marked a successful conclusion to a quest begun almost 25 years ago. In 1984, driven back by sandstorms, his original mission to find a sauropod came to a halt just 20 miles away from the area of desert he had pinpointed as ripe for excavation. He returned empty handed but was left itching to retrace his steps.

A quarter of a century later he unearthed the dinosaur that eluded him so long ago, together with fellow enthusiast, Ibrahim to whom he is passing the baton.

Ibrahim will undertake the detailed analysis of the sauropod bone, which both scientists expect is a new species and genus of the sauropod family.

"From our initial examination on site, we're almost certain that we have a new species on our hands," said Ibrahim, who will spend the next six months examining all of the fossils and writing about them for his PhD thesis.

He will also examine the pterosaur remains which are particularly uncommon because their bones, optimised for flight, were light and flimsy and seldom well preserved.



*Dr David Martill and Nizar Ibrahim
prepare to move the bone.
(Credit: Image courtesy of
University of Portsmouth)*

He said: “Most pterosaur discoveries are just fragments of teeth and bone so it was thrilling to find a large part of a beak and this was enough to tell us we probably have a new species.”

The team spent a month in the desert and travelled over five thousand miles by Landrover in an epic over-land trip which has taken them through the Atlas mountains and has seen them battling sandstorms and floods in an Indiana Jones-style quest.

Having discovered the giant sauropod bone they had to return to the nearest town to get more water and plaster with which to protect it, a trip which involved crossing flooded rivers in their Landrover at night with water coming in through the doors.

During their fieldwork they were cut off from civilization for 4 days when heavy rain in the Atlas mountains flooded the river Ziz. To retrieve the bone they had to manhandle the fossil in its plaster jacket down the side of a mountain, clearing thousands of stones to make a safe path to carry it on a wooden stretcher.

“There was a point when we wondered if we would make it out of the desert with the bone, but we had worked so hard to find it so there was no way I was leaving it behind. It took us 5 days to get the bone out of the ground and down the mountain – and that was not the end of our problems,” said Ibrahim.

Dr Martill added: “When we had managed to get the bone in the Landrover the extra weight meant we kept sinking in the sand dunes and on several occasions everybody except the driver had to walk while we negotiated difficult terrain. Our journey home was equally eventful. While crossing the Atlas mountains we got caught in a snowstorm and total whiteout. But it’s all been worth it.”

The team were also excited to discover some rare dinosaur footprints, including some that record several animals walking along the same trail.

As well as discovering hundreds of dinosaur teeth, they also unearthed bits of giant crocodiles and some new species of fish.

Ibrahim said: “It’s amazing to think that millions of years ago the Sahara was in fact a lush green tropical paradise, home to giant dinosaurs and crocodiles and nothing like the dusty desert we see today. Even to a palaeontologist dealing in millions of years it gives one an overwhelming sense of deep time.”

The team also included Moroccan scientists Prof Samir Zouhri and Dr Lahssen Baïdder as well as Portsmouth researchers Dr Darren Naish, Dr Robert Loveridge and Richard Hing.

Prof Samir Zouhri, head of the Department of Geology at the Université Hassan II in Casablanca said: “Nizar Ibrahim is a very determined researcher and I knew that he would have success on this trip, but these fossils exceeded our expectations. It is wonderful that we have made these significant discoveries and that they will return to Morocco for display after study in Dublin.”

The sauropod and the pterosaur were found in south-east Morocco, near the Algerian border.

*Adapted from materials provided by
University of Portsmouth.*

Four, Three, Two, one... Pterosaurs have Lift Off

ScienceDaily (Jan. 7, 2009) — Pterosaurs have long suffered an identity crisis. Pop culture heedlessly — and wrongly — lumps these extinct flying lizards in with dinosaurs. Even paleontologists assumed that because the creatures flew, they were birdlike in many ways, such as using only two legs to take flight.

Now comes what is believed to be first-time evidence that launching some 500 pounds of reptilian heft into flight required pterosaurs to use four limbs: two were ultra-strong wings which, when folded and balanced on a knuckle, served as front “legs” that helped the creature to walk — and leap.

Publishing in *Zitteliana*, Michael B. Habib, M.S., of the Center for Functional Anatomy and Evolution at the Johns Hopkins University School of Medicine, reports his comparison of bone strength in the limbs of pterosaurs to that of birds and concludes that pterosaurs had much stronger “arms” than legs. The reverse is true of birds.

“We’ve all seen birds take off, so that’s what’s most familiar,” says Habib. “But with pterosaurs, extinct 65 million years and with a fossil history that goes back 250 million years, what’s familiar isn’t relevant.”

A supersized glitch is inherent in the traditional bipedal launch model, Habib notes: “If a creature takes off like a bird, it should only be able to get as big as the biggest bird.”

Birds use legs to launch, wings to flap. They don’t get launch power from wings or flight power from legs. In fact, when a bird is aloft, its legs become payload, or cargo. The muscle on the two back limbs that provides the power to launch must be carried and therefore limits size. Released of that handicap by employing all four legs to launch, giant pterosaurs could fly despite the fact that they were roughly the same size and shape as modern-day giraffes.

“The difference between pterosaurs and birds with regard to critical mechanical properties is very, very large,” Habib says, especially when you’re talking about the big pterosaurs; as the size gets bigger, the difference gets bigger too.”

For example, the wings of these fantastic hairy reptiles, most notably those of *Quetzalcoatlus northropi*, which spanned to an impressive 35 feet when the creatures were aloft, propelled the creatures into the air during take-offs that Habib describes as leap-frogging long-jumps:



“Pterosaurs had long, huge front limbs, so no partner was required. Then, with wings snapping out, off they’d fly.”

Using computer scans to obtain cross-sectional images and geometric data for 155 bird specimens representing 20 species, Habib calculated the strengths of bones in bird limbs and compared these to three species of pterosaurs, the bones strengths of which he calculated using measurements from previously published sources. Structural strength, taking into account length and diameter, among other things, is a measure of how much force a bone can take before it fractures.

Habib also spent time crunching the numbers using the old, bipedal launch model and simply couldn’t find a mathematical solution that would enable the largest of the pterosaurs — using hind legs alone — to launch at all.

“But using all four legs, it takes less than a second to get off of flat ground, no wind, no cliffs,” he said. “This was a good thing to be able to do if you lived in the late Cretaceous period and there were hungry tyrannosaurs wandering around.”

It stands to reason that a large-bodied animal needing to produce lots of power at take-off would use four legs instead of two, Habib says: “We put V8 engines in our biggest, heaviest cars, not V-4s, like the one in my Camry.”

Assumption and convention - rather than reason or data - held sway for centuries, ever since the classical bipedal model of pterosaur take-off was first championed, he notes.

The research was funded by the Jurassic Foundation. Habib, of Johns Hopkins, is the sole author of the paper.

Adapted from materials provided by Johns Hopkins Medical Institutions.

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	Jimmy Waldron	(386) 212-5814
Vice President	Russell Brown	(352) 429-1058
Secretary		
Treasurer	Sara Morey	(407) 353-8675

Chairs:

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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
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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'S MEETING will be on
SATURDAY, JANUARY 17th at 2:00 PM
See Page 3 for more info

January 17 & 18, 2009
The Tomoka Gem and Mineral Society Show

January 24, 2009
Alachua Stone Age Fair

January 24th and 25th
Gulf Coast Mineral, Fossil & Gem Club show

February 2009
Kid's Fossil Blast and Meeting time and date tbd
See Page 3 for more info

February 28, 2009
Orlando Science Center, Fossil Fest
See page 3 for more info

March 7 - 8, 2009
Tampa Bay Fossil Fest

March 31 - April 5, 2009
*18th Annual Thomas Farm Dig or
Hummingbird Challenge V*

April 3 thru 5, 2009
*The Mid America Paleontology Society (MAPS)
National Fossil Exposition*

More information on these events on page 2

**All 2009 Meetings Dates and Times
to be determined at January meeting
—see page 3 for more info**

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Florida Fossil Hunters News