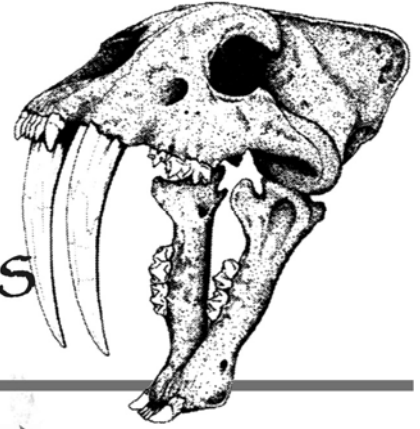


NEWS

Florida Fossil Hunters

Volume 18, Number 9

October 2008



Prez Sez:

Barbara Purdy did a great presentation on the History of Florida Archeology and I will try to get her to return early next year. We will not have a speaker for October so bring your goodies you find at the Fossil Fair and we will recap how it went.

Start thinking of your choices for President next term. My term is coming to a close and I have enjoyed my time and service to the club but the bylaws say you must elect someone new! Bring your suggestions to the meeting.

The Graves Mountain, Georgia geology trip will be Oct 1-4. Some of us are carpooling and will bring our finds to the meeting!

See you all soon!
Shelley Zimmerman

Coming Events

**Meetings held at the
Orlando Science Center**

**October 11-12
Fossil Fair**

October 15
6:00pm Kid's Blast and
7:00pm Meeting

November 19, 7:00pm Mtg

December 17
7:00pm Meeting

For more info...
www.floridafossilhunter.com

2008

Seventeenth Annual, Florida Fossil Hunters Fossil, Mineral, and Gem Show

Central Florida Fairgrounds

Saturday, October 11, 2008 - 9:00 - 5:00pm

Sunday, October 12, 2008 - 10:00am - 4:00pm



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Florida Fossil Hunters News

Fragments

Piece on the Peace

Halleluhah!!!! The Peace has already gone down to 5 ft. at the Zolfo measuring station which means that we get to go fossil hunting while it's still warm. So grab your sifters and shovels and get into the Peace while the hunting is hot.



For those of you who haven't hunted in the Peace River, you're in for a treat. The fossils found there range from the Miocene to the present and include marine and land animals. Take Route 17 south out of Bartow. You can put your canoe in or wade into the river, anywhere from Bowling Green to Arcadia. Then find the areas of gravel and start diggin' and siftin' and you'll find fossils.

Mineral Show

The Tampa Bay Mineral and Science Club will have its 49th Annual Gem, Mineral, Jewelry Show on Saturday, Oct. 25th from 10am to 6pm and on Sunday, Oct. 26th from 10am to 5pm at the Florida State Fairgrounds on US Hwy. 301 in Tampa. There will be classes, a children's sand mine, silent auctions as well as gems, minerals and fossils for sale. The cost is \$5 for adults and \$3 for students K thru 12th grade. Children under 5 are free with parent. For more info go to www.tampabayrockclub.com

Support Your Local Girl Scouts

Our Girl Scouts will have candy for sale at the October meeting so bring some extra cash and indulge your sweet tooth.

Evolution Cruise

Insight Cruises has scheduled a cruise from Feb 27th to Mar 9th, 2009 that features an Evolution seminar in partnership with Scientific American. Learn more about it at www.insightcruises.com. It's listed as Scientific American/ Bright Horizons, Cruise #3, Evolution Emanation.

Kids' Fossil Blast

Since this is the season of things scary and weird, and as if looking at animal skeletons wasn't spooky enough, we will be exploring the fossils that inspired the Monster Myths for the October Fossil Blast. See you at 6pm on Wednesday, October 15th. 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 OSC.

Roadside Geology of Florida

For those of you who weren't at the August meeting..... Florida now has its own book in this great series on geology by state. The table of contents indicate that it is a comprehensive book covering the making of this landmass from the Precambrian to the present. It then gives the geologic formations and even some of the fossils found along many of the roads. It is listed at \$25.99 but you can find it cheaper on Amazon.com. At least one of the vendors at our fossil fair will also have copies for sale.

Daggers and Axes and Swords...

The Daytona Beach Museum of the Arts and Sciences opened a new exhibition of antique weapons and armor on August 15th. The items include artistry of some of the most famous gunsmiths and weapon makers from the medieval period to the 19th century through a wide range of finely designed and decorated muskets, rifles, pistols, lions-head daggers, war axes, knives, sabers and straight-edge swords. You can get more info at their website www.moas.org or at 386-2550285.

Summertime Blues?

Some of fossil hunters' favorite hunting areas may be unaccessable if we get heavy rains again..unless you are into diving. Instead maybe a day at the beach is in order.

On the East Coast, the best hunting is in the Amelia Island/Fernandina Beach area. Check out the locals at the "Ship's Lantern" downtown for information. Most people just park and walk the public beach or go to the Fort and beach-comb. Shark teeth and fish material can commonly be found. In fact, you have a better chance of finding fossil white shark teeth there than on the West Coast

Everyone on he West Coast knows to head to Venice Beach, proclaimed as the "Shark Tooth Capital of the World" and also home to the annual Shark Tooth and Seafood Festival held in the Spring. All along the beaches there, you'll see folks looking for shark teeth: divers are out hitting the areas beyond the sand bars, some people just surface collect and others use sifters on a stick, called "Florida Snow Shovels" which can be bought at the local shops.

Even if the findings are slim, a day at the beach is better than a day at work.

Russell Brown

VULCAN FIELD TRIP DATES

Currently these dates are available:

November 8th, 2008 December 13th, 2008

You must be a member to attend!

Check the website for more info.

My, What Big Teeth You Had!

Extinct Species Had Huge Teeth On Roof Of Mouth

ScienceDaily (Sep. 12, 2008) — When the world's land was congealed in one supercontinent 240 million years ago, Antarctica wasn't the forbiddingly icy place it is now. But paleontologists have found a previously unknown amphibious predator species that probably still made it less than hospitable.

The species, named *Kryostega collinsoni*, is a temnospondyl, a prehistoric amphibian distantly related to modern salamanders and frogs. *K. collinsoni* resembled a modern crocodile, and probably was about 15 feet in length with a long and wide skull even flatter than a crocodile's.

In addition to large upper and lower teeth at the edge of the mouth, temnospondyls often had tiny teeth on the roof of the palate. However, fossil evidence shows the teeth on the roof of the mouth of the newly found species were probably as large as those at the edge of the mouth.

"Its teeth, compared to other amphibians, were just enormous. It leads us to believe this animal was a predator taking down large prey," said Christian Sidor, a University of Washington associate professor of biology and curator of vertebrate paleontology at the Burke Museum of Natural History and Culture at the UW.

Sidor is lead author of a paper describing the new species published in the September issue of the *Journal of Vertebrate Paleontology*. Co-authors are Ross Damiani of Staatliches Museum für Naturkunde Stuttgart in Germany and William Hammer of Augustana College in Rock Island, Ill.

The scientists worked from a fossilized piece of the snout of *K. collinsoni*, analyzing structures present in more complete skulls for other temnospondyl species that had similar size characteristics.

"The anatomy of the snout tells us what major group of amphibian this fossil belonged to," Sidor said.

Teeth at the edge of the mouth, as well as on the palate roof, were clearly visible, and the presence of structures similar to those that allow fish and amphibians to sense changes in water pressure led the researchers to conclude that the species was aquatic.

The fossilized piece of snout also contains a nostril, which aided the scientists in judging proportions of the head when



comparing it to other fossils. They estimated the skull was about 2.75 feet long and perhaps 2 feet across at its widest point.

"*Kryostega* was the largest animal in Antarctica during the Triassic," Sidor said.

The term "*Kryostega*" translates to 'frozen' and 'roof,' which refer to the top of the skull. The scientists named the species for James Collinson, a professor emeritus of Earth sciences at Ohio State University who made important contributions to the study of Antarctic geology.

Hammer collected the fossil in 1986 from an Antarctic geological layer called the Fremouw Formation. He has studied a number of other Antarctic fossils, including dinosaurs, collected at about the same time, and so the temnospondyl fossil was not closely examined until the last couple of years.

At the time *K. collinsoni* was living, all the world's land was massed into a giant continent called Pangea. The area of Antarctica where the fossil was found was near what is now the Karoo Basin of South Africa, one of the richest fossil depositories on Earth.

Sidor noted that in the early Triassic period, from about 245 million to 251 million years ago, just before the period that produced the *K. collinsoni* fossil, it appears that Antarctica and South Africa were populated by largely the same species. While Antarctica was still colder than much of the world, it was substantially warmer than it is today, though it still spent significant periods in complete darkness.

By the middle of the Triassic period perhaps only half the species were the same, he said, and in the early Jurassic period, around 190 million years ago, unique early dinosaur species were appearing in Antarctica.

"It could be that these animals were adjusting to their local environment by then, and we are seeing the results of speciation occurring at high latitude," Sidor said. "Here we have really good evidence that Antarctic climate wasn't always the way it is today. During the Triassic, it was warmer than it is today – it was warmer globally, not just in Antarctica."

This work was funded in part by the National Science Foundation and the Alexander von Humboldt Foundation.

MASS *Extinctions*

and The Evolution Of Dinosaurs



ScienceDaily (Sep. 30, 2008) – Dinosaurs survived two mass extinctions and 50 million years before taking over the world and dominating ecosystems, according to new research published this week.

Reporting in *Biology Letters*, Steve Brusatte, Professor Michael Benton, and colleagues at the University of Bristol show that dinosaurs did not proliferate immediately after they originated, but that their rise was a slow and complicated event, and driven by two mass extinctions.

“The sheer size of dinosaurs like *Tyrannosaurus* makes us think there was something special about these animals that preordained them for success right from the beginning,” Brusatte said. “However, our research shows that the rise of dinosaurs was a prolonged and complicated process. It isn’t clear from the data that they would go on to dominate the world until at least 30 million years after they originated.”

Importantly, the new research also shows that dinosaurs evolved into all their classic lifestyles – big predators, long-necked herbivores, etc. – long before they became abundant or diversified into the many different species we know today.

Brusatte added: “It just wasn’t a case of dinosaurs exploding onto the scene because of a special adaptation. Rather, they had to wait their turn and evolved in fits and starts before finally dominating their world.”

Dinosaurs originated about 230 million years ago and survived the Late Triassic mass extinction (228 million years ago), when some 35 per cent of all living families died out. It was their predecessors dying out during this extinction that allowed herbivorous dinosaurs to expand into the niches they left behind.

The rapid expansion of carnivorous and armoured dinosaur groups did not happen until after the much bigger mass extinction some 200 million year ago, at the Triassic-Jurassic boundary. At least half of the species now known to have been living on Earth at that time became extinct, which profoundly affected life on land and in the oceans.

Historically the rise of the dinosaurs has been treated as a classic case in which a group evolves key features that allow it to rapidly expand, fill many niches, and out-compete other groups. But Professor Benton said the story isn’t so simplistic: “We argue that the expansion of the dinosaurs took up to 50 million years and was not a simple process that can be explained with broad generalizations.”

Adapted from materials provided by [University of Bristol](http://www.bristol.ac.uk).

Illustration of a Tarbosaurus, a cousin of Tyrannosaurus Rex, chasing two Parasaurolophuses. (Credit: iStockphoto/Allan Tooley)

Mother Of A Goose!

Giant Ocean-going Geese with Bony-teeth Once Roamed Across SE England



ScienceDaily (Sep. 27, 2008) — A 50 million year old skull reveals that huge birds with a 5 metre wingspan once skimmed across the waters that covered what is now London, Essex and Kent. These giant ocean-going relatives of ducks and geese also had a rather bizarre attribute for a bird: their beaks were lined with bony-teeth.

It may be a few weeks until the British pantomime season kicks-off, but this new fossil from the Isle of Sheppey is giving 'Mother Goose' an entirely new meaning. Described today (September 26) in the journal *Palaeontology*, the skull belongs to *Dasornis*, a bony-toothed bird, or pelagornithid, and was discovered in the London Clay, which lies under much of London, Essex and northern Kent in SE England.

The occurrence of bony-toothed birds in these deposits has been known for a long time, but the new fossil is one the best skulls ever found, and preserves previously unknown details of the anatomy of these strange creatures.

With a five metre wingspan, these huge birds were similar to albatross in their way of life. Albatross have the largest wingspan of any living bird, but that of *Dasornis* was over a meter and half greater. Despite these similarities, the latest research suggests that the closest living relatives of *Dasornis* and its fossil kin are ducks and geese.

"Imagine a bird like an ocean-going goose, almost the size of a small plane! By today's standards these were pretty bizarre animals, but perhaps the strangest thing about them is that they had sharp, tooth-like projections along the cutting edges of the beak" explains Gerald Mayr, expert palaeornithologist at the German Senckenberg Research Institute and author of the report.

Like all living birds *Dasornis* had a beak made of keratin, the same substance as our hair and fingernails, but it also had these bony 'pseudo-teeth' "No living birds have true teeth - which are made of enamel and dentine - because their distant ancestors did away with them more than 100 million years ago, probably to save weight and make flying easier. But the bony-toothed birds, like *Dasornis*, are unique among birds in that they reinvented tooth-like structures by evolving these bony spikes."

So why did *Dasornis* have these pseudo-teeth? "Its linked to diet" says Mayr, "these birds probably skimmed across the surface of the sea, snapping up fish and squid on the wing. With only an ordinary beak these would have been difficult to keep hold of, and the pseudo-teeth evolved to prevent meals slipping away."

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
- 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

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

2008 Fossil Fair

Seventeenth Annual, Florida Fossil Hunters
Fossil, Mineral, and Gem Show

October 11-12th

Central Florida Fairgrounds

Saturday, October 11, 2008 - 9:00 - 5:00pm

Sunday, October 12, 2008 - 10:00am - 4:00pm

Wednesday, October 15th

6:00pm Kid's Blast and

7:00pm Meeting

Wednesday, November 19th

7:00pm Mtg

Wednesday, December 17

7:00pm Meeting

Vulcan Field Trip dates:

November 8th, 2008

December 13th, 2008

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