

NEWS

Florida Fossil Hunters



Florida Prehistorical Museum, Inc.
dba/ Florida Fossil Hunters
Volume 35, Number 2

MAR/APR 2025

From Ye Olde President.....

Hello and welcome all FFH Members. It's March and the springtime weather is almost here for fossil hunting. FFH is working to set up field trips to Vulcan Mine and Peace River. Currently working on scheduling a fossil hunting trip to a mine called CEMEX lime rock pits. I will send out emails about updates on the field trips schedule.

I would like to have at all meetings a "fossil swap" to encourage more interactions among the FFH members.

We please ask all FFH members to support your club by buying fossil t-shirts. Every meeting I will have different shirts available for adults and kids. Cost of shirts for kids are \$20 and adults are \$25.

Paleontology for Kids programs will be active at all meetings from 2pm to 3pm. I would like to thank Laura and Francesca for their hard work and dedication with making Paleontology for Kids a success.

Salvatore Sansone will be March's guest speaker. Topic will be about Florida fossil invertebrates.

Saturday, April 12th FFH Field Trip will be held at Chris Delory's Fossil Workshop and warehouse. More info on page 2.

The guest speaker for **May will be Dr Cimboli** and the topic will be Ice Age Mammals. He will also be selling his books for a 25% discount to FFH members..

Thank you
Salvatore Sansone,
FFH President

RENEW YOUR MEMBERSHIP

To continue to receive our newsletter and emails.
See page 2 for 3 easy options and all your membership supports!

UPCOMING MEETINGS

Saturday, March 15th

2pm Paleontology for Kids

3pm Meeting

FFH meeting at OSC

Saturday, April 19

2pm Paleontology for Kids

3pm Meeting

FFH meeting at OSC

2025 Schedule

Now Available pg 8

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www.floridafossilhunters.com

MEETINGS & MORE

Our Upcoming Meetings

At EVERY meeting!

- Support your club with the purchase of vintage fossil fair t-shirts! Variety of sizes available at meetings while they last. \$25/Adults and Kids/\$20.
- "Fossil swap": every member brings in fossils to talk about and swap with other members.
- Paleontology for Kids has been a success and will be held before the general meetings at 2:00pm.

Regular Meetings held at the Orlando Science Center. Unless otherwise noted. Admission and parking is FREE to attending members. At the garage & ticket counter inform them you are there for the meeting.

PALEONTOLOGY FOR KIDS

Every OSC Meeting; 2:00-3:00pm

Kids' Fossil Blast is an informal, hands-on experience aimed at kids ages 5 to 14.

APRIL FIELD TRIP

Saturday, April 12th FFH Field Trip: Chris Delory's Fossil Workshop and warehouse. FFH members meet at Chris's workshop at 4015 Pine Industrial Ave, Rockledge, FL 32955 at 10am. Chris has an amazing fossil collection with items for sale. He always gives FFH members great deals.

Fossil Lab is about fossil preparation and preserving.

- Learn the techniques and tools used for fossil preparations.
- Learn how to make a fossil jacket to protect fossils being transported.
- Learn how to use paleo and wood glues to stabilize and fix broken fossils.

REGISTER/RENEW

Membership options

Family memberships cost \$25
Individual membership will cost \$20

3 OPTIONS RENEW NOW ONLINE!

<https://floridafossilhunters.com/membership>

Mail in the form on pg 7 or renew at the meeting.

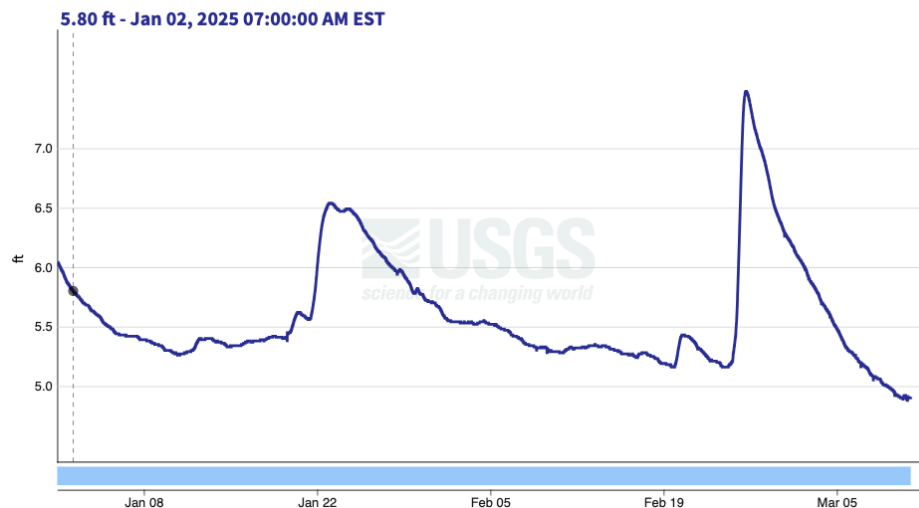
PIECE ON THE PEACE

Want the most current height? Visit floridafossilhunters.com and click on the easy Peace River Gauge button in the sidebar or under the Resources tab for the latest water level data or visit the USGS website directly.
PEACE RIVER AT US 17 AT ZOLFO SPRINGS, FL

Peace River at US 17 at Zolfo Springs, FL - 02295637

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- using custom time span
January 1, 2025 - March 11, 2025
Gage height, feet



Underwater fossil bed discovered by collectors preserves rare slice of Florida's past

Date: February 12, 2025

Source: Florida Museum of Natural History

About half a million years ago, several horses, sloths and armadillos fell into a sinkhole in Florida's Big Bend region and died. The sinkhole filled in with sediment over time, preserving the animals where they lay until fossil collectors Robert Sinibaldi and Joseph Branin discovered them in 2022.

The pair had been diving for years near Sinibaldi's property on the Steinhatchee River. Combing the riverbed for fossils isn't easy; the water is full of tannins, which significantly reduces visibility. "It's like diving in coffee," Sinibaldi said.

They were on their usual fossil hunting trip in June of 2022 and weren't having much luck. They were preparing to move on when Branin looked down and happened to see horse teeth. As they continued looking, they uncovered a hoof core, and then a tapir skull.

Their good feeling swelled to disbelief as the finds continue to rack up -- many in pristine condition. "It wasn't just quantity, it was quality," Sinibaldi said. "We knew we had an important site, but we didn't know how important."

The Steinhatchee River likely followed a different course when the fossils were preserved, but as it meandered over the following millennia, the river edged closer to the sinkhole until, very recently, it eroded into the former pit and rinsed the fossils, leaving them exposed along the bed of the river.

He and Branin shared their findings with the Florida Museum of Natural History, where paleontologists determined they were preserved during an obscure



period of the Pleistocene ice ages called the middle Irvingtonian.

"The fossil record everywhere, not just in Florida, is lacking the interval that the site is from -- the middle Irvingtonian North American land mammal age," said Rachel Narducci, vertebrate paleontology collections manager at the Florida Museum and coauthor of a new detailed study of the site.

Before the discovery, there had only been one other Florida site with fossils from this time period.

An evolutionary transition without a fossil record

While there are few fossils from the middle Irvingtonian, there are plenty from the periods just before and after. Paleontologists know from the record that some species from the early Pleistocene go extinct, while others appear for the first time in the late Pleistocene.

Then there are the species that, for unknown

causes, go through changes in body size and shape during that gap.

One of these includes members of the now-extinct genus *Holmesina*, which resemble modern armadillos, only larger. When the species *Holmesina floridanus* first appeared in Florida two million years ago, individuals averaged 150 pounds. Over time, the creatures became larger and larger until being classified as a new species known as *Holmesina septentrionalis*, which grew up to around 475 pounds.

"It's essentially the same animal, but through time it got so much bigger and the bones changed enough that researchers published it as a different species," Narducci said.

The fossils recovered from the Steinhatchee River site offer a rare look into how this process of speciation took place, with ankle and foot bones that match the size of the larger *H. septentrionalis* species while retaining features of the older, smaller *H. floridanus* species.

"This gave us more clues into the fact that the anatomy kind of trailed behind the size increase. So, they got bigger before the shape of their bones changed," Narducci explained. Only later, it seems, would the animals evolve skeletal features to help support the heavier bodyweight.

Three-quarters of the 552 fossils recovered so far from the Steinhatchee River site belong to an early species of the subgroup of living horses that includes the domestic horse and its wild relatives, known as the caballines. "That gives us a good sample size to measure or make comparisons, and it also tells us a little bit about the environment," said Richard Hulbert, lead author of the paper and retired Florida Museum vertebrate paleontology collections manager.

Horses are adapted for living in open habitats. Since they made up such a large share of the new Irvingtonian fossil site, scientists can conclude the area used to be fairly open, much different from the heavily wooded landscape in the region today. If it

had been densely wooded back then, they would expect to find more forest-dwelling animals such as mastodons and deer.

"What was great about the horses from this site is, for the first time, we had individuals that were complete enough to show us upper teeth, lower teeth and the front incisors of the same individual," Hulbert said. These components are often only found separately. The teeth were also unusually well-preserved.

"That was one of the first things I noticed about the site," Hulbert said. Additionally, dental wear and tear from eating were still visible, offering a valuable chance to research the diet of these early caballine horses.

Branin also collected a puzzling tapir skull, with a mix of features that have not been seen together before. Hulbert cautioned against designating it a new species, though. "We need more of the skeleton to firmly figure out what's going on with this tapir," he said. "It might be a new species. Or it always could just be that you picked up the oddball individual of the population."

Hulbert stressed that the Steinhatchee River site, like many of Florida's great vertebrate fossil sites, was not found by professionals. Hobby fossil collectors like Sinibaldi and Branin work with experts like Hulbert and Narducci to expand our collective understanding of Florida's natural history.

Branin called Florida a lucky state for his hobby. "We have a permit system that allows people to collect fossils on state-owned lands, unlike a lot of places where there's more barrier to entry to doing that," he said.

Further collection at the site will be a slow, ongoing process, given the logistical challenges of excavating an ancient sinkhole underwater. Still, the authors are hopeful about the fossils that have yet to be revealed.

<https://www.sciencedaily.com/releases/2025/02/250212134838.htm>

Near-complete skull discovery reveals 'top apex', leopard-sized 'fearsome' carnivore

Egyptian desert finding of this new hyaenodonta also leads to the revelation of another new species from a 120-year-old dig | Taylor & Francis Group | February 17, 2025

A rare discovery of a nearly complete skull in the Egyptian desert has led scientists to the "dream" revelation of a new 30-million-year-old species of the ancient apex predatory carnivore, *Hyaenodonta*.

Bearing sharp teeth and powerful jaw muscles, suggesting a strong bite, the newly-identified '*Bastetodon*' was a leopard-sized "fearsome" mammal.

"Just as we were about to conclude our work, a team member spotted something remarkable -- a set of large teeth sticking out of the ground. His excited shout brought the team together, marking the beginning of an extraordinary discovery: a nearly complete skull of an ancient apex carnivore, a dream for any vertebrate paleontologist."

Its skull was unearthed on Sallam Lab's expedition to the Fayum Depression, an area where digs reveal an important time window into about 15 million years of evolutionary history of mammals in Africa. This

timespan not only captures the transition from the Eocene's global warming to the Oligocene's global cooling, but also reveals how these climate shifts played a crucial role in shaping ecosystems that we still see today.

"The discovery of *Bastetodon* is a significant achievement in understanding the diversity and evolution of hyaenodonts and their global distribution," Shorouq adds.

"The Fayum is one of the most important fossil areas in Africa. Without it, we would know very little about the origins of African ecosystems and the evolution of African mammals like elephants, primates, and hyaenodonts. Paleontologists have been working in the Fayum for over a century, but the Sallam Lab demonstrated there is more to discover in this remarkable region."

Read more at:

<https://www.sciencedaily.com/releases/2025/02/250217133605.htm>

Global warming and mass extinctions: What we can learn from plants from the last ice age

New analysis methods, applied to ancient plant DNA, reveal how hard-hit plants were and are by global warming | Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research | February 12, 2025

Global warming is producing a rapid loss of plant species -- according to estimates, roughly 600 plant species have died out since 1750 -- twice the number of animal species lost. But which species are hit hardest? And how does altered biodiversity actually affect interactions between plants? Experts from the Alfred Wegener Institute have tackled these questions and, in two recent studies, presented the answers they found buried in the past: using fragments of plant genetic material (DNA) deposited in lake sediments, they were able to gain new insights into how the composition of flora changed

15,000 to 11,000 years ago during the warming at the end of the last ice age, which is considered to be the last major mass extinction event before today. This comparison can offer an inkling of what might await us in the future. The researchers have just published their findings in the journal *Nature Communications*.

"Everyone knows that the woolly mammoth went extinct, but virtually no-one mentions the plants that were lost at the end of the last ice age," says Prof Ulrike Herzschuh from the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research

(AWI). "Until recently, we lacked suitable methods for investigating the extinction of plant species in detail." In terms of fossil plant remains, mainly pollen was used, which doesn't allow individual species to be identified and therefore offers no evidence of which species have died out." Using cutting-edge methods, we analysed old DNA from sediment cores taken from lakes in Alaska and Siberia, which allowed us to reconstruct the changes in vegetation in these regions." The cores contain fragmented DNA from deposited plant biomass from the past 30,000 years, which the experts enriched, sequenced, and compared with databases for identification purposes at special-purpose labs for old DNA.

Relevance for today's Arctic

The results offer fundamental insights into how environmental changes and warming affect biodiversity. Experts were able to determine extinction rates for plants, which can now be used as reference data to better assess the ongoing changes in Arctic ecosystems. "Our studies show how important it is to understand biodiversity and ecological interactions, also in the long term, in order to better predict the impacts of climate change," Ulrike Herzschuh summarises. "Using the information locked in old DNA from sediments, we can gain the fundamental knowledge needed to do so."

Read more about how Temperature can change how plants interact and Which plant species are particularly at risk? In the article at: <https://www.sciencedaily.com/releases/2025/02/250212151507.htm>

Sharks and rays benefit from global warming, but not from CO2 in the Oceans

Even positive effects do not compensate for the complex dangers of climate change

University of Vienna | January 30, 2025

Sharks and rays have populated the world's oceans for around 450 million years, but more than a third of the species living today are severely threatened by overfishing and the loss of their habitat. An international research team has now investigated whether and how global warming influences the diversity of sharks based on climate fluctuations between 200 and 66 million years ago. According to the study, higher temperatures and more shallow water areas have a positive effect, while higher CO2 levels have a clearly negative effect.

However, more than a third of these species of sharks and rays are now seriously threatened due to their habits and increasing over-exploitation and habitat destruction. Fossilised shark and ray teeth were used to determine the species diversity for each age and compared with the climate data of the

respective age. "We wanted to understand which environmental factors influence the diversity of sharks and rays in order to be able to develop possible future scenarios."

No bright future

However, assuming that sharks and rays are facing a bright future would be too short-sighted, explains Stagg: "The environment is currently changing particularly quickly -- unfortunately probably too quickly for the animals and their ecosystems."

"...without the top predators, the ecosystems would collapse," emphasises Kriwet: "By protecting sharks and rays, we are investing directly in the health of our oceans and therefore also in the people and industries that benefit from these ecosystems," says the professor of palaeobiology.

Read more about, higher CO2 level as a decisive environmental factor and opportunities of climate change, at: <https://www.sciencedaily.com/releases/2025/01/250130140501.htm>

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 options are listed to the right.

Meetings are usually held on the third Saturday of the month but may vary with club activities. Check the website for the date and location of the next meeting or call one of the officers.

Officers:

| | | |
|----------------|-------------------|----------------|
| President | Salvatore Sansone | (321) 278-9294 |
| Vice President | Steve Sharpe | (352) 552-2296 |
| Secretary | Melissa Dunaway | (407) 461-8507 |
| Treasurer | David Dunaway | (407) 786-8844 |

Chairs:

| | | |
|-----------------|---------------------------------------|----------------|
| Field Trips | OPEN | |
| Fossil Fair | Valerie First | (407) 699-9274 |
| Fossil Auctions | Dave Dunaway | (407) 786-8844 |
| Fossil Bucks | Dave Dunaway | (407) 786-8844 |
| Fossil Lotto | Ed Metrin | (407) 321-7462 |
| Membership | Ken Sellers | |
| Newsletter | Elise Cronin-Hurley, info@elisech.com | |
| Photography | John Heinsen | (407) 291-7672 |
| Facebook | Salvatore Sansone Ken Sellers | |
| Webmaster | Elise Cronin-Hurley, info@elisech.com | |

Board of Directors:

| | |
|-----------------|----------------|
| Joyce Bittle | (407) 341-6366 |
| Melissa Dunaway | (407) 461-8507 |
| Marge Fantozi | (407) 256-5566 |
| Valerie First | (407) 699-9274 |
| Ed Metrin | (407) 321-7462 |
| Ken Sellers | (407) 457-4117 |

*Florida Prehistorical Museum, Inc.
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Membership Application

MAIL in this form or Register ONLINE at www.floridafossilhunters.com/membership

| | | | |
|---------------------------------------------------------------------------------------------------------------------|-----|--------------------------|---------|
| Name: | | | |
| Associate Members | | | |
| Address: | | | |
| Phone: | | | |
| Email: | | | |
| <input type="checkbox"/> | New | <input type="checkbox"/> | Renewal |
| Please list any interests, experience, talents or just plain enthusiasm, which you would like to offer to the club: | | | |

Family membership: \$25

Individual membership: \$20

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 with Family Membership. Per our insurance policy, family membership covers married couples and children. All other individuals must have separate individual membership to be covered by our club insurance.

Membership year runs from January to December.

Newsletter Policy

Articles must be submitted two weeks before publication date. to be considered for an issue. Emailed to: info@floridafossilhunters.com. Articles can be sent either as text in the email, in a google doc, or in Microsoft Word files (.docx). Please note in subject of email 'FFH News: [article or info]



MARCH 15 & 16, 2025

FOSSIL FEST



March 15 & 16, 2025

Sat: 9AM-5PM

Sun: 10AM-4PM

Florida State Fairgrounds

4800 US HWY 301 Tampa, FL 33610

FOSSILS & ARTIFACTS

FOSSIL EXHIBITS - GEMS

MINERALS - SHELLS - WORKSHOPS

KIDS GAMES - FOSSIL MINE - RAFFLES

DOOR PRIZES - SILENT AUCTIONS

FLORIDA'S LARGEST PREHISTORIC SHOW!



TICKETS

AVAILABLE AT DOOR
\$9 ADULTS
12 AND UNDER FREE!

PALEO WORKSHOPS

Learn about Florida's prehistoric past in a FossilFest workshop! Experienced collectors will teach you how to find, identify, and preserve fossil treasures of your very own! All workshops are **FREE** to FossilFest attendees!

Saturday & Sunday

DISCOVERING FLORIDA'S FOSSIL TREASURES WITH TBFC'S DR. BOB SINIBALDI PHD. LEARN WHERE AND HOW TO FIND FOSSILS OF YOUR OWN, RIGHT HERE IN FLORIDA!

FLORIDA'S FOSSIL VERTEBRATES & THE FOSSIL HUNTING PERMIT WITH RACHEL NARDUCCI OF THE FLORIDA MUSEUM OF NATURAL HISTORY. IT'S CHEAP AND EASY! LEARN HOW TO GET YOUR FOSSIL PERMIT AND PARTICIPATE IN THE SCIENCE OF PALEONTOLOGY.

FOSSIL IDENTIFICATION: BRING YOUR FOSSILS TO BE IDENTIFIED BY EXPERTS IN THE FIELD.

FLORIDA FOSSIL HUNTING PERMIT: APPLICATIONS & RENEWALS, JUST \$5!

Be a part of the adventure!

JOIN TBFC TODAY!

tampabayfossilclub.com

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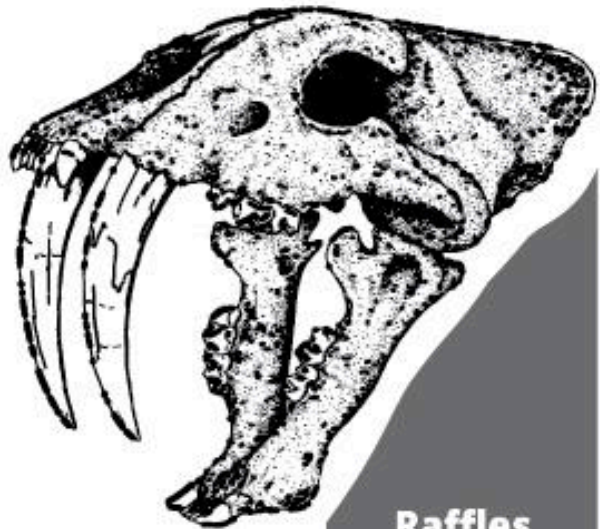
Instagram

2025 FOSSIL FAIR

Florida Fossil Hunters

Thirty-Fourth Annual
**Fossils, Rocks,
Gems & Minerals**

Saturday, October 4, 2025
9:00am - 5:00pm
Sunday, October 5, 2025
10:00 - 4:00pm



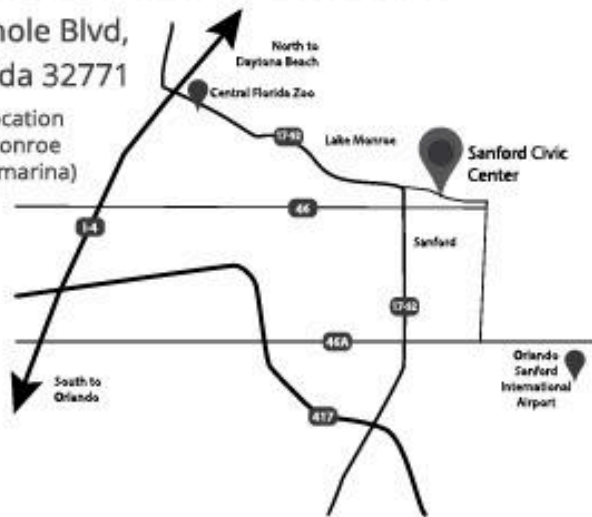
\$6.00 Adults | \$2.00 Children

**LEARN to dig in Florida and
see what can be discovered!**

Sanford Civic Center

401 E. Seminole Blvd,
Sanford Florida 32771

A picturesque location
right off Lake Monroe
(across from the marina)



For more information

contact us at one of the following info@floridafossilhunters.com,
(cell) 407-721-0481 or 407-699-9274, or visit

www.floridafossilhunters.com

Raffles

Vendors

Silent
Auctions

Children's
Activities

Educational
Displays

Airconditioned!
INDOORS!

Florida Fossil Hunters Mark Your Calendar

MARK YOUR CALENDAR

Meetings 3pm at OSC | Paleontology for Kids at 2pm and alternative time and location noted when applicable.

2025 Meeting Meeting Schedule

Saturday, March 15
Saturday, April 19
Saturday, May 17
Saturday, June 21
Saturday, August 16
Saturday, September 20
Saturday, October 18
Saturday, November 15

Thirty-Fourth Annual Fossils, Rocks, Gems & Minerals

Saturday, October 4, 2025

9:00am - 5:00pm

Sunday, October 5, 2025

10:00 - 4:00pm

Sanford Civic Center

www.floridafossilhunter.com

SEE INSIDE

for more information on events



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Email info@floridafossilhunters.com to share articles, questions, & comments

Florida Fossil Hunters

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Florida Fossil Hunters News