NEWS Florida Fossil Hunters

Florida Prehistorical Museum, Inc.
dba/ Florida Fossil Hunters
Volume 35, Number 4

JUL/AUG 2025

From Ye Olde President…..

Welcome new members and all you fossil-hunting enthusiasts.

It's July and the heat is on – hot weather and lots of hot stories of fossil hunting to share. Remember heat stroke is a real threat so know your limits and drink plenty of fluids when you are outside.

There will be no meeting in July.

FFH will have a field trip to The Dinosaur Store and museum located in Cocoa Beach.

The *Museum of Dinosaurs and Ancient Cultures* is a 26,000 square-foot privately owned museum containing two floors of exhibits on dinosaurs and ancient human cultures. www.dinosaurstore.com

Highlights: On-site parking · Admission fee · Gift shop

Address: 250 W Cocoa Beach Causeway, Cocoa Beach, FL 32931

Date and time: Saturday July 19th at 10am.

Any questions please call me 321-278-9294.

August meeting, our guest speaker will be Jimmy Waldron with Dinosaurs are Awesome. Topic of discussion is about ***"The Latest Trends in Dinosaur Paleontology".***

August meeting will have **Paleontology for kids at 2 pm.** Reminder to all members to bring in your fossil finds and share your stories.

Thank you
Salvatore Sansone,
FFH President

FOSSIL SWAP
at each Meeting!

Support your club, buy fossil t-shirts. Different shirts will be available for adults and kids at each meeting. Cost of shirts for kids are $20 and adults are $25.

UPCOMING MEETINGS

Saturday, July 19th
Field Trip to
The Dinosaur Store & Museum
See details in the letter to the left.

Saturday, August 16th
2pm Paleontology for Kids
3pm Meeting
FFH meeting at OSC

Saturday, September 20th
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.

JULY FIELD TRIP

Saturday, July 19th FFH Field Trip: ***The Dinosaur Store*** and museum located in Cocoa Beach.

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REGISTER/RENEW

Membership options

Family memberships cost $25

Individual membership will cost $20

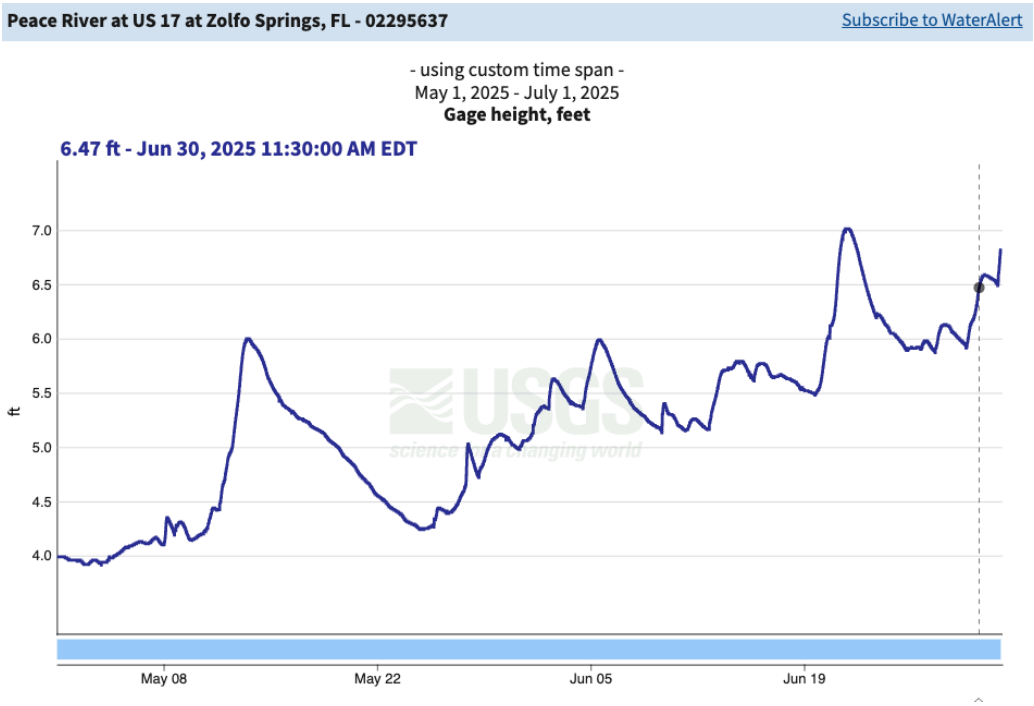
3 OPTIONS RENEW NOW ONLINE!

https://floridafossilhunters.com/membership

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

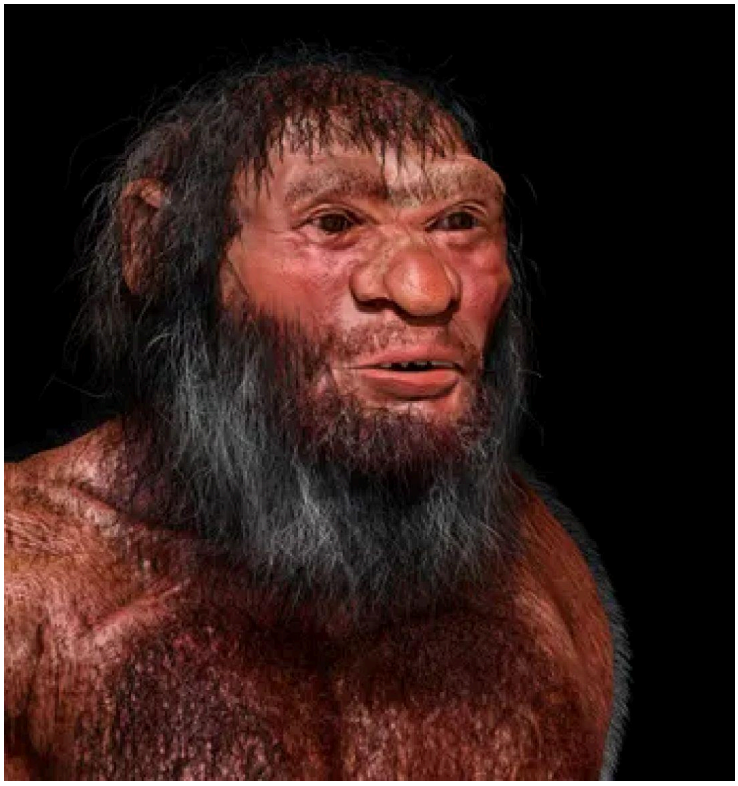
PIECE ON THE PEACE

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



Ancient 'Dragon Man' skull from China isn't what we thought

By Kristina Killgrove published June 18, 2025



A reconstruction of Homo longi from the ancient Harbin skull found in China. (Image credit: John Bavaro Fine Art / Science Photo Library)

Scientists have determined that a giant skull from an ancient human relative named the "Dragon Man" is actually Denisovan.

Using cutting-edge DNA analysis, scientists have uncovered the true identity of an ancient human relative nicknamed the "Dragon Man."

The mystery began with a giant, human-like skull discovered by a Chinese laborer in Harbin City, China, in 1933. In 2018, the man's family recovered the Harbin skull, which the laborer had buried in a well, and donated it to science. The enormous cranium features a long, low braincase and a massive brow ridge, along with a broad nose and big eyes. Based on the skull's unusual shape and size, experts gave it a new species name — Homo longi, or "Dragon Man" — in 2021.

But in the past several years, there has been intense debate about whether Dragon Man, who lived at least 146,000 years ago, is a separate species. Instead, some researchers have claimed that the Dragon Man skull may be from a group of ancient humans called the Denisovans, since no Denisovan skull had ever been found.

Now, in two studies published Wednesday (June 18) in the journals Science and Cell, researchers have proved that Dragon Man is indeed the face of Denisovans.

Scientists first attempted to retrieve an ancient genome from the bones and teeth of the Harbin skull, without success. But they were able to recover some DNA from plaque that had hardened on the teeth and some information on proteins from an inner ear bone.

Mitochondrial DNA (mtDNA), which is passed from mother to child, recovered from the skull showed that Dragon Man was related to an early Denisovan group that lived in Siberia from around 217,000 to 106,000 years ago, which means that Denisovans inhabited a large geographical range in Asia, the researchers wrote in the Cell study.

Additionally, the researchers investigated the skull's "proteome," the set of proteins and amino acids found in the skeleton. By comparing the proteome to those of contemporary humans, Neanderthals, Denisovans and nonhuman primates, the researchers found a clear connection between the Harbin cranium and early Denisovans, they wrote in the Science study.

While the mystery of the enormous skull has been largely resolved, experts still need to discuss its assignment to the H. longi species.

Until now, the Denisovan group of early humans has been known mostly from their DNA and a tiny handful of fossils. This is in stark contrast to Neanderthals, whose skulls have been found throughout Europe and Western Asia for more than 150 years.

With the identification of the Harbin skull as Denisovan and the identification of a jawbone found off the coast of Taiwan as Denisovan in a study published in the journal Science in April, this means paleoanthropologists have definitive examples that other unknown skulls can be compared to.

Studies of the size and shape of Middle Pleistocene fossil skulls will remain crucial for testing relationships, Stringer said, particularly because DNA does not preserve well in most fossils, and these studies are important for identifying what Denisovans actually looked like. But "there is certainly much more to come from extractions of ancient DNA and proteomes from human fossils," Stringer said.

Read the full article at:
https://www.livescience.com/archaeology/human-evolution/ancient-dragon-man-skull-from-china-isnt-what-we-thought

Scientists Found a Human-Neanderthal Hybrid Who Lived Long After His People Went Extinct

The ‘Lapedo Boy’ was found in 1998, but we only now figured out when he lived.

By Tim Newcomb | Published: Mar 11, 2025 8:30 AM EDT | Valente Romero Sanchez//Getty Images

Neanderthal genes seem to have hung around long after Neanderthals themselves did, as new scientific dating of the famed Lapedo Child remains shows that remains of a child with both human and Neanderthal features was from tens of thousands of years after when the latter went extinct.

The Lapedo Child, discovered by happenstance by archaeologists inspecting rock formations in Portugal in 1998, at the time wowed the scientific community with the obvious mixture of both Neanderthal and human characteristics, and further DNA testing confirmed he had genes from both groups. Now, in a new study published by Science Advances, a team of researchers wrote that an updated radiocarbon dating technique allowed them to date the remains to between 27,780 and 28,550 years ago, roughly 40,000 years after Neanderthals went extinct.

The ochre-stained skeleton of the roughly 4- or 5-year-old child—experts believe the body was wrapped in a painted animal skin for burial in the Lagar Velho rock shelter—when found “exhibited a mosaic of Neanderthal and anatomically modern human features argued to reflect admixture between the two human populations,” the authors wrote. Initial observations showed distinct markers, such as a human-like prominent chin, but short, stocky legs akin to a Neanderthal.

But at the point of discovery dating was tricky, thanks to the era’s technology (or lack thereof) and the fact that plants had started growing into the bones. All these years later, the team used hydroxyproline “direct compound-specific radiocarbon” to date five bones and underlying contexts—those contexts included rabbit bones found on top of the child, deer bones near the

Remains, and charcoal under the body—to reassess the dating. The process determined that the remains are roughly 28,000 years old.

With every element returning the similar date range, researchers believe they found more information about the burial process, which could have included the animals as an offering and the charcoal as being from a ritual fire.

Once the first Neanderthal genome was sequenced roughly a decade after the find, it began the process of understanding the interbreeding between humans and Neanderthals and how ancient Neanderthal DNA has then survived for centuries.

More specific carbon-dating techniques for Paleolithic bones could help researchers develop an updated timeline of how Neanderthals, who experts believe went extinct roughly 40,000 years ago, intertwined with modern humans and just how that still plays out in the DNA of today.

To read the entire article, visit:

https://www.popularmechanics.com/science/archaeology/a64129388/human-neanderthal

New method provides the key to accessing proteins in ancient human remains

29 May 2025 | University of Oxford

A new method developed by researchers at the Nuffield Department of Medicine, University of Oxford, could soon unlock the vast repository of biological information held in the proteins of ancient soft tissues. The findings, which could open up a new era for palaeobiological discovery, have been published this week in PLOS ONE.

“Until now, studies on ancient proteins have been confined largely to mineralized tissues such as bones and teeth. But the internal organs – which are a far richer source of biological information – have remained a “black box” because no established protocol existed for their analysis. Our method changes that.” - *Lead researcher Alexandra Morton-Hayward (University of Oxford)*

From brains and muscles, to stomach and skin – preserved soft tissues can offer unique insights into the past, and the lives of individuals. But up to now, this treasure trove of information has been largely inaccessible to science. In the new study, the team led by postgraduate researcher Alexandra Morton-Hayward (Department of Earth Sciences and Centre for Medicines Discovery, University of Oxford) developed the first robust method for extracting and identifying proteins from ancient soft tissues, then demonstrated its capability on archaeological human brain samples.

A key hurdle was finding an effective way to disrupt the cell membranes to liberate the proteins. After testing ten different strategies on samples from 200 year-old human brains excavated from a Victorian workhouse cemetery, the team discovered that urea (a major component of urine) successfully broke open the cells, liberating the proteins within.

Following extraction, the proteins are then separated with liquid chromatography, and identified using mass spectrometry. The team found that by coupling the liquid chromatography-mass spectrometry step with a method called high-field asymmetric-waveform ion mobility spectrometry, they could increase the number of proteins identified by up to 40%. This makes the technique a powerful approach to recover proteins from samples that are hard to analyze, including degraded or very complex mixtures.

Morton-Hayward said: 'It all comes down to separation: by adding additional steps, you are more likely to confidently identify molecules of interest. It is a bit like dumping out a bucket of Lego: if you can start to discriminate between pieces by colour, then shape, then size, etc. the better chance you have of making something meaningful with it all.'

Using the combined method, the team identified over 1,200 ancient proteins from just 2.5 mg of sample – by far the largest and most diverse palaeoproteome ever reported from any archaeological material. The researchers point out that proteins are an ideal vehicle to navigate the recent and deep past, as they survive far longer in the archaeological record than DNA, and can tell us about the lived experience of an individual, beyond their genetic blueprint.

'This new technique opens a window on human history we haven't looked through before.' says Morton-Hayward.

Since less than 10% of human proteins are expressed in bone compared to around 75% in internal organs, this technique promises to vastly expand our understanding of ancient diet, disease, environment, and evolutionary relationships. The method has already attracted interest for its applicability to a wide range of archaeological materials and environments – from mummified remains to bog bodies, and from antibodies to peptide hormones.

Dr Christiana Scheib, said: 'Ancient soft tissues are so rarely preserved, yet could hold such powerful information regarding evolutionary history. It is key to first develop the best way to obtain relevant information from these materials, which is what this study does. This type of fundamental experimental work is crucial for the field to move forward. The study is well-designed and I look forward to seeing what will be gleaned from the future protein data that this work has enabled.'

The study 'Deep palaeoproteomic profiling of archaeological human brains' has been published in PLOS One.

Authors of the study. Dr Sarah Flannery, Alexandra Morton-Hayward, Professor Roman Fischer, and Dr Iolanda Vendrell | Mass Spectrometry Lab at the Centre for Medicines Discovery, Nuffield Department of Medicine, University of Oxford.

Read the full article at:
https://www.ox.ac.uk/news/2025-05-29-new-method-provides-key-accessing-proteins-ancient-human-remains

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.
dba/ Florida Fossil Hunters

Membership Application

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

Name:			
Associate Members			
Address:			
Phone:			
Email:			
☐	New	☐	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]

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, August 16
Saturday, September 20
Saturday, October 18
Saturday, November 15

July 19th Field Trip
More info on Page 1

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
Visit www.floridafossilhunter.com
for the flyer and dealer info.

SEE INSIDE
for more information on events

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

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