July, August, September 2025

CENTRAL OKLAHOMA GROTTO
OF THE NATIONAL SPELEOLOGICAL SOCIETY, INC

C.O.G.nizance

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MINUTES

CENTRAL OKLAHOMA GROTTO MEETING,
MAY 9, 2025

ATTENDING: Sue Bozeman, Becky Hunsinger—virtual meeting facilitator, Duane Del Vecchio, John Talbot, Lil Town, Tammy and John Van Dyke, Jon Woltz, Noah Zinn, Steve Beleu
PRESIDING: Jon Woltz
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Penned by Steve Beleu

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MAY 2025 TREASURER'S REPORT

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6/9/2025

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March 3, 2021

Source: Aarhus University

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Whispering bats

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The miniature tags were designed and developed by Associate Professor Mark Johnson at Aarhus Institute of Advanced Sciences.

Small recorders -- big challenge

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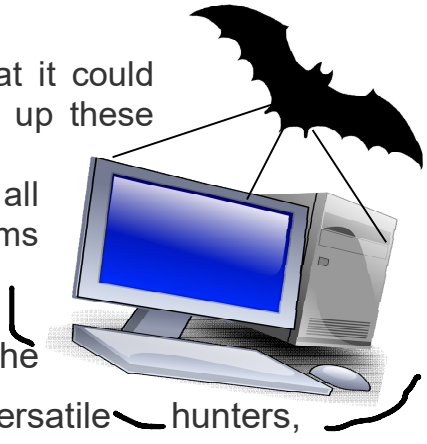

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By Patrick Pester published August 22, 2025

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A reconstruction of Petralona skull attached to a cave wall with a stalagmite growing out of its head.

The Petralona skull is a mysterious and important piece in the human evolution puzzle. This image is a reconstruction depicting the skull attached to a cave wall.

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The skull was reportedly discovered attached to the wall of Petralona Cave in northern Greece in 1960. Researchers have since argued about its position on the human family tree and had trouble figuring out its age — until now.

In the new study, published online Aug. 14 in the Journal of Human Evolution, researchers dated calcite (a mineral form of calcium carbonate often found in caves) protruding out of the skull to find that it was at least 277,000 years old. They don't know precisely how long the skull was in the cave before it began acquiring calcite, but the new estimate helps narrow down previous attempts to date the skull, which have ranged from 170,000 to 700,000 years old.

The Petralona fossil is distinct from H. sapiens and Neanderthals, study co-author Chris Stringer, a paleoanthropologist at the Natural History Museum in London, told Live Science, "and the new age estimate supports the persistence and coexistence of this population alongside the evolving Neanderthal lineage in the later Middle Pleistocene of Europe".

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As the caves we came from, at night
Little different from night, in day many rooms
Dark as caves; we feel at ease there.

People who build houses that let in more light
Have left the caves; the more light they let in
The further they move away from them.
Perhaps this advances human evolution.

But no matter how far behind we leave them
The pull of the caves remains, not controlling
Our behavior but shaping it from dim memories
We share that can surface in dreams and visions

Nowhere else, fragments of our lost past life
And everyone is better for that—but we cavers
Return to our origins and rejoice in every crawl
We make beneath cold water that drips on us

From a ceiling one inch above us or from far above.
This is our cavers' love.

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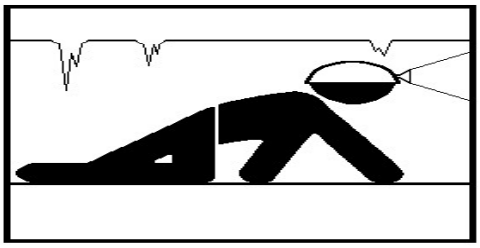

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News of potential gas station development sparked a wave of local opposition last year, with residents expressing their disapproval. Their efforts helped secure protections for the 45-mile-long Wakulla/Chip's system — the longest underwater cave system in the U.S.

The Chip's Hole Cave System also provides drinking water to all Wakulla County residents, contributing millions of gallons of freshwater daily downstream to Wakulla Spring.

"We are honored to stand alongside Wakulla residents in the protection of this beloved cave system," said Conservation Florida CEO Traci Deen. "This is a true work of heart by each and every person involved. Because of this commitment to conservation, and coordination with entities like Southwest Georgia Oil Company, special places like Chip's Hole will be preserved for future generations."

Once permanently protected, Chip's Hole is to become a public preserve, available for monitored public use and recreation.

Salon Announces 2025 Illuminations Awards Winners
Sunday, June 29, 2025, 6:15 PM

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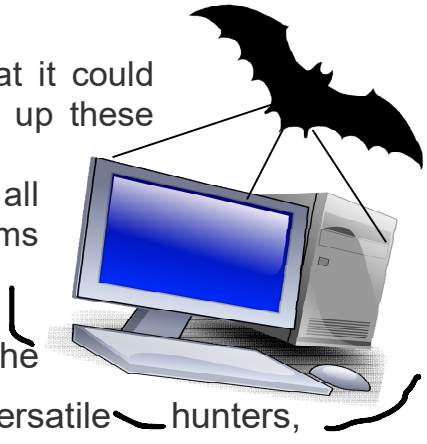

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The further they move away from them.
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The pull of the caves remains, not controlling
Our behavior but shaping it from dim memories
We share that can surface in dreams and visions

Nowhere else, fragments of our lost past life
And everyone is better for that—but we cavers
Return to our origins and rejoice in every crawl
We make beneath cold water that drips on us

From a ceiling one inch above us or from far above.
This is our cavers' love.

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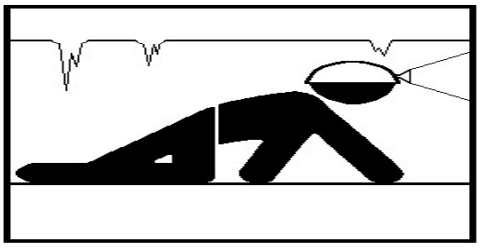

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C.O.G.nizance

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ANNOUNCEMENTS

*No trips are planned at this time.

***Next meeting is September 12, 2025 at 8:00 pm central time on Google Meet. Becky will send out invitations.**

The National White-nose Syndrome Decontamination Protocol (March 2024) outlines procedures to effectively clean and disinfect clothing, footwear, and equipment that may have been exposed to *Pd*, and can help reduce the risk of human-assisted spread of the fungus. The recommendations are based on the best available evidence to date.

Key changes to the current update compared to October 2020 include the following:
-Ethanol, Formula 409 and Hibiclens are removed from the approved disinfection product table.
-Isopropanol concentration is narrowed to 50-70%.the previous protocol, >50% isopropanol was approved.
-The WNS management areas map is updated to reflect the current status of Pd and WNS occurrence in the US. Hawai'i, Alaska, and Puerto Rico are added to the map of management areas.
- Guidelines for movement of gear and when to decontaminate gear are stated in a bulleted list rather than a diagram.
-Additional information is provided regarding decontamination of mist-nets, harp traps and acoustic equipment.

from https://www.whitenosesyndrome.org/mmedia-education/national-wns-decontamination-protocol-u-s

MINUTES

CENTRAL OKLAHOMA GROTTO MEETING,
MAY 9, 2025

ATTENDING: Sue Bozeman, Becky Hunsinger—virtual meeting facilitator, Duane Del Vecchio, John Talbot, Lil Town, Tammy and John Van Dyke, Jon Woltz, Noah Zinn, Steve Beleu
PRESIDING: Jon Woltz
START: 8:19

NEW BUSINESS:
The suggestions that Becky and I made to meet in person in either the area of White Rock, New Mexico and/or Freedom, Oklahoma were not meet with much response. Therefore, we will table this motion until our September meeting and reopen it to discussion then. Duane added that we decide to meet in Freedom he would try to procure a viewing for us of the Selman Bat Cave bat flight.

OLD BUSINESS

None

TREASURER'S REPORT

John read his report unto us.
END: 8:49

Penned by Steve Beleu

TREASURER'S REPORT

MAY 2025 TREASURER'S REPORT

	INCOME	EXPENSES
Dividends	$ .01	
TOTAL	**$ .01**	
CASH	$ 6.05	
CHECKING	**$ 300.54**	
SAVINGS	**$ 1234.94**	**PREPARED BY TREASURER**
		JOHN TALBOT NSS #30254
TOTAL	**$ 1541.53**	

6/9/2025

TRIP REPORTS

No trip reports this month

POTPOURRI

Miniature, bat-borne tags reveal how wild bats use very weak echoes to hunt successfully.

March 3, 2021

Source: Aarhus University

https://www.sciencedaily.com/releases/2021/03/210303142524.htm

An international research team has taken a seat on the back of wild bats to experience their world through echoes recorded on-board the bats by 3-gram computers. In a new paper published in Science Advances, the research team from Aarhus University and the Max Planck Institute of Ornithology attached echo- and motion-recording tags to wild greater mouse-eared bats in Bulgaria.

"We experienced the world through the ears of the bats by recording their echoes directly on-board while they were hunting for insects at night," said Dr. Laura Stidsholt, postdoc at Aarhus University and leading author of the study.

Whispering bats

The tags recorded the echolocation calls and the movement of each bat in three dimensions, but most importantly, the echoes returning from their environment during one full night of foraging. This allowed the research team to tap into the sensory scenes of a hunting animal.

"We wanted to use the tags to find out how bats control what they "see" when they hunt

(Continued on page 3)

tiny insects on the wing on superfast timescales. We used the sound recordings to find and track echoes from prey and vegetation, and to our surprise, we found that the bats are guided by extremely weak prey echoes that would be like a whisper to us," said Dr. Laura Stidsholt.

The bats themselves control the strength of their returning echoes by calling louder or weaker. So why would they choose these weak echoes, if they could increase the levels by calling louder?

Acoustic tunnel vision

To answer this, the researchers quantified the volume of air in which bats could potentially detect an echo for each echolocation call. The bats controlled the size of these sensory volumes by adjusting the strength of their calls.

"We found that hunting bats narrow their sensory volumes by more than a thousand times to only focus on the prey and thereby reduce the clutter from other echoes. It's like an acoustic version of a tunnel vision that briefly makes their world much simpler," said Dr. Holger Goerlitz of Max Planck Institute of Ornithology, a co-author of the study. He continued:

"The weak prey echoes might therefore be a consequence of the small sensory volumes shaped to hunt close to background clutter."

To protect these weak echoes from interference, the research team also showed that the bats used their flight patterns to separate the prey echoes from the background e.g. by flying parallel to trees.

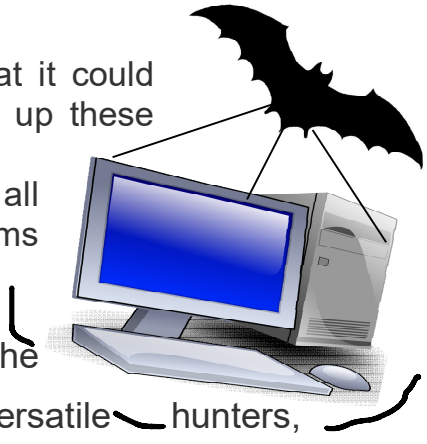
Precise flight adjustments

"When the bats are hunting, they stay at least a prey detection distance away from the vegetation. We think they do this to avoid masking of the weak prey echoes by the loud echoes from vegetation. By continually adjusting both their flight patterns and their sensory volumes during the hunt, the bats simplify the information they need to process," said senior author Professor Peter Teglberg Madsen of Aarhus University.Peter Teglberg Madsen suggests that the bats dedicate their attention and brain to the most essential information -- getting their next meal -- and that this might be one of the reasons that bats are such efficient hunters.

The miniature tags were designed and developed by Associate Professor Mark Johnson at Aarhus Institute of Advanced Sciences.

Small recorders -- big challenge

"It was a real challenge to make a computer so small that it could work on a flying bat and still be sensitive enough to pick up these weak sounds," said Mark Johnson.



Echolocating bats account for 20 percent of all mammal special and play important roles in ecosystems across the planet.

"We think that this strategy has expanded the niches available to look for insects and is one of the reasons that bats have become such versatile hunters, but we don't know if they are versatile environment," said Professor Peter Teglberg Madsen.

Mysterious 300,000-year-old Greek cave skull was neither human nor Neanderthal, study finds

By Patrick Pester published August 22, 2025

Mysterious 300,000-year-old Greek cave skull was neither human nor Neanderthal, study finds | Live Science

Researchers have dated the mysterious skull from Petralona Cave in Greece to 300,000 years ago and concluded that the fossil belonged to an ancient human group that lived alongside Neanderthals.

A reconstruction of Petralona skull attached to a cave wall with a stalagmite growing out of its head.

The Petralona skull is a mysterious and important piece in the human evolution puzzle. This image is a reconstruction depicting the skull attached to a cave wall.

A mysterious skull with a stalagmite growing out of its head is about 300,000 years old and neither human nor Neanderthal, a new study finds.

The skull was reportedly discovered attached to the wall of Petralona Cave in northern Greece in 1960. Researchers have since argued about its position on the human family tree and had trouble figuring out its age — until now.

In the new study, published online Aug. 14 in the Journal of Human Evolution, researchers dated calcite (a mineral form of calcium carbonate often found in caves) protruding out of the skull to find that it was at least 277,000 years old. They don't know precisely how long the skull was in the cave before it began acquiring calcite, but the new estimate helps narrow down previous attempts to date the skull, which have ranged from 170,000 to 700,000 years old.

The Petralona fossil is distinct from H. sapiens and Neanderthals, study co-author Chris Stringer, a paleoanthropologist at the Natural History Museum in London, told Live Science, "and the new age estimate supports the persistence and coexistence of this population alongside the evolving Neanderthal lineage in the later Middle Pleistocene of Europe".

The Petralona skull, sometimes called the "Petralona Man," was almost certainly male based on the fossil's size and robustness, according to Stringer. He also said that the skull's teeth had moderate wear, so it likely belonged to a young adult.

While records of the skull's discovery are poor, Stringer noted that there's evidence to support the idea that it was stuck to the wall by calcite encrustations — the same kind that were protruding out of the skull.

To estimate the age of the calcite, researchers used a method called uranium-series dating. Calcite contains a small amount of uranium, which decays into another radioactive element called thorium over a fixed period. This fixed rate of decay means that researchers can calculate ages based on the calcite’s ratio of uranium to thorium. The skull calcite dates back to around 286,000 years ago, with a high degree of confidence that it's at least 277,000 years old.

The dating research also suggested that calcite grew quite rapidly in the cave. Stringer noted that it likely didn't take long for the skull to acquire its first layer of calcite, which would mean the skull is around 300,000 years old. However, the skull could be older than 300,000 years old if the calcite took longer to form.

The estimate of 300,000 years old fits with Stringer and colleagues' analysis of a similar fossil from Zambia in Africa known as the Kabwe skull. Their 2019 study dated the Kabwe skull, which is often assigned to H. heidelbergensis, at 299,000 years old.

"That fossil is closely comparable to the Petralona one, and I would classify them both as Homo heidelbergensis," Stringer said.

THE PULL OF THE CAVES

The homes of humans are mostly dark
As the caves we came from, at night
Little different from night, in day many rooms
Dark as caves; we feel at ease there.

People who build houses that let in more light
Have left the caves; the more light they let in
The further they move away from them.
Perhaps this advances human evolution.

But no matter how far behind we leave them
The pull of the caves remains, not controlling
Our behavior but shaping it from dim memories
We share that can surface in dreams and visions

Nowhere else, fragments of our lost past life
And everyone is better for that—but we cavers
Return to our origins and rejoice in every crawl
We make beneath cold water that drips on us

From a ceiling one inch above us or from far above.
This is our cavers' love.

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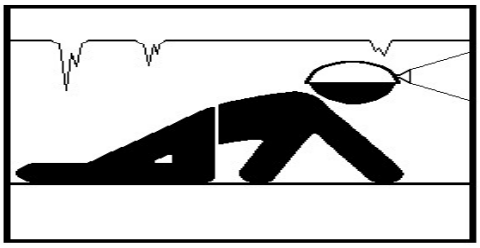

Longest underwater cave system in America to be conserved The Wakulla/Chip's cave system stretches for 45 miles.

By Kirsten Ferguson
August 14
Longest underwater cave system in America to be conserved - Land Trust Alliance

In a major conservation win, the state of Florida approved $3.78 million to protect Chip's Hole, a vast underwater cave system in Wakulla County.

The accredited Conservation Florida will use the funding to purchase 225 acres and complete a land swap with Southwest Georgia Oil Company, shifting the proposed gas station development away from the land over the cave complex.

News of potential gas station development sparked a wave of local opposition last year, with residents expressing their disapproval. Their efforts helped secure protections for the 45-mile-long Wakulla/Chip's system — the longest underwater cave system in the U.S.

The Chip's Hole Cave System also provides drinking water to all Wakulla County residents, contributing millions of gallons of freshwater daily downstream to Wakulla Spring.

"We are honored to stand alongside Wakulla residents in the protection of this beloved cave system," said Conservation Florida CEO Traci Deen. "This is a true work of heart by each and every person involved. Because of this commitment to conservation, and coordination with entities like Southwest Georgia Oil Company, special places like Chip's Hole will be preserved for future generations."

Once permanently protected, Chip's Hole is to become a public preserve, available for monitored public use and recreation.

Salon Announces 2025 Illuminations Awards Winners
Sunday, June 29, 2025, 6:15 PM

Salon Announces 2025 Illuminations Awards Winners Jo Schaper and Michael Ray Taylor, Arts and Letters Co-Chairs, would like to announce the 2025 A&L Illuminations Award winners: Steve Beleu—Poetry Winner: "The Pull of the Caves." Bill Steele—Prose Winner: "The Game of Rockin' Cave Packs." Elizabeth Owens—Graphics Winner: Art and Poetry Combo for "Stalactites." Congratulations! These awards are given at Convention for submissions that appeared in the last year's Illuminations magazine. There is no separate submissions process—all work deemed fit to publish are automatically entered, and judged by non-staff, anonymous caver judges. Illuminations publishes original fiction and non-fiction prose, poetry, graphics and art, music and A/V productions with cave and karst subjects. https://caves.org/salons/arts-and-letters-salon/illuminations/ for more information. Awardees may pick up their awards at the Writer's Workshop, or email Jo @ joschaper@socket.net to make arrangements.

Central Oklahoma Grotto is a non-profit organization and a chapter of the NSS (National Speleological Society), 6001 Pulaski Pike, Huntsville, AL, 35810-1122 USA. Phone (256)852-1300. Dedicated to cave conservation and safety, C.O.G. publishes general information in a monthly newsletter ($6.00/year) and detailed cave surveys and related Speleological items in a yearly publication, *The Oklahoma Underground* ($3-$8/issue) Membership is by sponsor and is $12 per year for adults, $6 for spouses and students, and $3 if under 18. Central Oklahoma Grotto meets once a month on the second Friday of each month. For information, write Lil Town, 25692 Mosier Circle, Conifer, CO 80433: All submissions to the newsletter should be sent to the editor: Lil Town, 25692 Mosier Circle, Conifer, CO 80433: Telephone: (580)471-1238: E-mail: cavemoose@gmail.com. The deadline for submissions for any particular month's issue is the 20th day of the previous month. If you wish material returned, please include an SASE with submission. All materials in this newsletter are available for reproduction, provided proper credit is given with the article when you print it. Trade publications are welcomed. *Cave softly and safely*

Friday
September 12, 2025
There will be a
virtual meeting.
See you online!

COG

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