CENTRAL
OKLAHOMA
GROTTO
OF THE NATIONAL
SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

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ANNOUNCEMENTS

*No trips planned at the present time.

***Next meeting may be May 9, 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%. In 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

Bat White-Nose Syndrome (WNS)/Pd Surveillance Submission Guidelines
Winter 2023/2024 (November – May)

The following sample submission guidelines are for use when evaluating unusual bat morbidity or mortality during Winter 2023/2024 identified through either passive surveillance efforts (i.e.: public reporting, rabies lab submissions) or active surveillance efforts (i.e.: hibernacula surveys, spring trapping). They are meant to assist with prioritizing appropriate field samples for laboratory submission based on presence/absence of WNS clinical signs, geographic location, and prior knowledge of WNS/Pd status at a site. This document replaces all previous winter submission guidelines from the USGS-National Wildlife Health Center (NWHC).

BAT CONSERVATION TRUST
www.bats.org.uk/about-bats/threats-to-bats/white-nose-syndrome/overviewWhite-nose syndrome

(WNS) is the name used to describe a group of symptoms associated with the deaths of millions of bats in the USA (40 states) and Canada (eight provinces), according to figures from the US Fish and Wildlife Service. In some hibernation sites numbers have declined by 80-100% since 2006, when the condition was first identified.

The video Battle For Bats: Surviving White Nose Syndrome shows what is being done in the United States to mitigate the effects of WNS on bat populations.

MINUTES

CENTRAL OKLAHOMA GROTTO MEETING
APRIL 11, 2025

ATTENDING: Sue Bozeman, Becky Hunsinger—virtual meeting facilitator, Lil Town, Dale and Carole Town made a cameo appearance, Noah Zinn, Steve Beleu

PRESIDING: S. Beleu

START: 8:15

OLD BUSINESS

Sue reported that the NSS hasn't contacted her about the report she submitted, therefore she and we should assume that it was accepted by the NSS.

NEW BUSINESS

1. Becky invited us to come to New Mexico this summer through winter to hold our monthly meeting in White Rock, either in physical presence or virtual attendance for those who can' tmake the pilgrimage to The Enchanted State, and/or to cave in New Mexico and eat any tamales.

2. Noah delivered the woeful news to us that upon graduation he will probably move to and stay in Austin with his grandparents while he searches for a job in that metropolis.

TREASURER'S REPORT – Treasurer Emeritus John Talbot and beloved wife were on vacation, therefore you will find both last month's report and this month's in this newsletter.

END: 9:00

ADDENDUM TO MINUTES FROM BECKY: here is an addendum to these minutes created by Becky about the possibility of her hosting a live/virtual COG meeting sometime in the next 6 months from her home and/or environs in White Rock, New Mexico. We will discuss this at our May meeting –

https://www.hunsingers.net/Local_Info.pdf

You will be asked to enter this password to open it: COGspeleo

TRIP REPORTS

NO TRIP REPORTS THIS MONTH

TREASURER'S REPORT

MARCH 2025 TREASURERS'S REPORT

	INCOME	EXPENSES
Dividends	$ .16	
TOTAL	**$ .16**	
CASH	$ 6.05	
CHECKING	$ 306.52	
SAVINGS	$ 1234.94	
TOTAL	**$ 1541.51**	

4/14/2025 **PREPARED BY TREASURER JOHN TALBOT NSS #30254**

APRIL 2025 TREASURERS'S REPORT

	INCOME	EXPENSES
Dividends	$ .01	
TOTAL	**$ .01**	
CASH	$ 6.05	
CHECKING	$ 300.53	
SAVINGS	$ 1234.94	
TOTAL	**$ 1541.52**	

5/07/2025 **PREPARED BY TREASURER JOHN TALBOT NSS #30254**

POTPOURI

Wild Baby "Bat" Attaches To Man. Weeks Later, He Is Stunned When He Realizes It's Not Just A Bat
Part 2

All stories pointed back to a single, unsettling source. 'This can't be a coincidence,' Tony murmured as he reviewed his notes.

He underlined common details, hoping to find a logical explanation. The evidence suggested a link too strong to ignore, amplifying his determination.

Gathering significant information

Tony decided to meet these individuals to compare notes, gathering a wealth of confusing but significant information. Weekend meetings turned into intense discussions, each person contributing pieces to the puzzle. 'We need to figure this out together,' Tony urged, spreading out his notes on the table. Each account added more depth to the mystery, assembling a haunting collage of oddities. Bonds formed among them, united by their shared experiences and growing unease.

An unsettling realization

This collective investigation brought him closer to an unsettling realization: there may be something more to these creatures than meets the eye. Tony felt a blend of excitement and fear. The more they discovered, the more questions arose. 'What if there's more to it than just strange animal behavior? ' he pondered aloud. Their meetings became more urgent, driven by an unspoken consensus that they were on the verge of uncovering something extraordinary.

Consulting a folklore expert

Tony's discoveries led him to an old folklore expert, Dr. Collins, who recounted ancient tales of creatures resembling bats with mythical powers. Sitting in a cozy study filled with ancient texts, Tony listened intently. 'These tales go back centuries,' Dr. Collins explained, showing dusty volumes of folklore. Tony found the stories eerily similar to his own experiences. 'Could these old tales actually be pointing to something real?' he wondered, feeling a chill.

Matching Tony's experiences

The expert shared stories that eerily matched Tony's experiences, suggesting a supernatural connection. 'These creatures were said to influence humans and animals alike,' Dr. Collins noted, peering over his glasses. Tony leaned in, captivated but skeptical. Tales of ancient beings who mimicked and altered behavior struck a chord deep within him. 'It's almost too uncanny,' he thought, goosebumps rising. The parallel between folklore and his modern-day mystery shook him to the core.

Parallels he can't ignore

Though skeptical, Tony couldn't ignore the parallels between the stories and his own life. The creatures described in ancient texts seemed to mirror the behavior of the one on his shoulder. 'Could there be a grain of truth in these old tales?' he pondered, flipping through the pages. He felt a strange sense of validation but also a growing urgency to uncover the full story. The lines between myth and reality blurred.

Layer of historical mystery

This added a layer of historical mystery, intensifying his quest for the truth. The more Tony delved into old records and stories, the more convinced he became that his situation wasn't unique. 'There's a hidden history here,' he murmured, piecing together fragments of ancient lore with his personal experiences. Each new discovery fueled his determination. The shadows of the past seemed to reach into his present, weaving a complex tapestry of curiosity and dread.

Determined to unravel the enigma

Tony became even more determined to unravel the enigma, and he started documenting everything in detail, creating a timeline to track patterns and events.

'I need to be thorough,' he said, pinning notes and photographs on a board. Lines connected various events, forming a map of interactions and anomalies. His living room transformed into a makeshift detective's office. Every detail, every odd behavior, was noted meticulously. He felt he was on the brink of a breakthrough.

(Continued on page 4)

On the verge of breakthrough

Tony felt he was inches away from a significant breakthrough. The notes, video footage, and accounts formed a clear pattern. 'Everything seems to be leading to something big,' he told himself. His living room was now a hub of research, with pinned notes connecting different events. Ideas swirled in his mind, each one closer to uncovering the creature's true nature. He felt a surge of determination.

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Missing pages found

Upon meeting the scientist's family, Tony was provided with missing pages from the journal. These pages depicted bizarre yet revealing accounts of interactions with the creature. The detailed descriptions painted a vivid picture of a bond that transcended the usual human-animal relationship. 'This is astounding,' Tony said, eyes wide as he read. Each entry was like a key, unlocking a deeper understanding of his situation.

History repeating itself. Haunted by the scientist's accounts mirroring his own, Tony felt a creeping fear that he was repeating history. 'Is this my future? ' he wondered, eyes scanning the old journal. The eerie similarities between the scientist's documented struggles and his own experiences were too strong to ignore.'I need to be cautious,' Tony muttered, feeling an unsettling blend of apprehension and urgency. The weight of the past pressed heavily on him.

Nearing a discovery

Yet, Tony also sensed he was nearing the discovery that had eluded the original scientist. 'I'm so close,' he breathed, flipping through the aging pages. The clues were all there, interwoven between the lines of the journal and his own experiences. 'I can't stop now,' he thought, feeling a renewed determination. The sense that he might uncover what the scientist couldn't drove him forward, inching ever closer to the truth.

Hidden compartments

More pieces of the puzzle fell into place when Tony discovered hidden compartments in the local library archives. It was by sheer accident that he stumbled upon them, old drawers that hadn't been opened in decades. 'What's this? ' Tony murmured, pulling out dusty folders. Inside were sketches and writings about hybrid creatures, part bat and part another species. The old documents felt like a treasure trove, offering new insights into his ongoing mystery.

Hybrid creatures

These compartments contained sketches and writings about hybrid creatures, part bat and part another species, brought to life under extraordinary circumstances. The drawings were intricate, showing creatures that oddly resembled his own companion. 'This can't be just coincidence,' Tony thought, feeling a chill run down his spine. The writings detailed experiments, hinting at a science that bordered on the unnatural. Each page added a layer of complexity to his understanding.

Realization

Deeply shaken, Tony realized he was dealing with more than a simple misunderstanding of nature. 'This is beyond anything I imagined,' he whispered, staring at the papers spread before him. The idea that his small companion was a product of secret experiments challenged everything he knew. It was unsettling and fascinating in equal measure. 'What have I stumbled upon?' he mused, grappling with the implications of his discovery.

Experiment gone awry

The culmination of his research pointed to an experiment gone awry long ago, slipped into obscurity. 'This explains so much,' Tony pondered, staring at the notes. The creatures were part of a grand experiment, their existence a testament to forgotten scientific ambitions. 'No wonder there's no record,' he muttered. The realization painted a picture of a clandestine project that had spiraled out of control, leaving behind a trail of mysterious beings.

Close to the truth

Tony knew he was close to the truth and braced himself for the final revelation, feeling a mix of dread and excitement. 'I'm almost there,' he thought, pulse quickening. The accumulated evidence felt heavy in his hands—each piece a step closer to understanding. Knowing that the final answers might come at any moment filled him with anticipation. 'Just a bit more,' he urged himself, eager and anxious for the ultimate discovery.

Not just a bat

Finally, through meticulous research and

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an unexpected breakthrough in lab results, Tony uncovered that the creature was not a bat at all, but an engineered hybrid with intelligence far beyond what he imagined. 'This changes everything,' Tony said, eyes wide. The lab reports confirmed his suspicions, revealing a complex genetic structure designed for unknown purposes. 'What are you, really?' he whispered to the creature, feeling a mix of awe and trepidation.

Forgotten purpose

The journal entries and ancient tales converged, revealing the creature to be a human-designed being made for a specific purpose forgotten over time. 'This was never just about nature,' Tony realized, piecing together the final clues. The creature's behaviors, its bond with him, and its influence on his health were all intentional byproducts of its design. 'I've uncovered something incredible,' Tony acknowledged, both exhilarated and daunted by the magnitude of his find.

Project veiled in secrecy

The creature's creation was cloaked in secrecy, rooted in an era of bold scientific experimentation. Small, underground facilities, stripped of oversight, conducted cutting-edge genetic manipulations. Researchers, fueled by ambition, tinkered with nature's blueprints, aiming to produce beings that transcended the ordinary. The aim, purpose, and outcomes of these covert projects were lost in time, leaving behind an enigma. Tony grasped that his companion was not just a chance finding but a relic of these audacious, now-forgotten scientific endeavors.

Hard realization hits Tony

The realization hit Tony like a ton of bricks. His small companion, which he had once thought of as a mere wild creature, was something far more complex. It wasn't just a bat fluttering into his life—it had purpose, intention, and design behind its existence.

Stunned, Tony looked at the creature with new eyes, grappling with the weight of this revelation. This wasn't a chance encounter; it was a deliberate, orchestrated meeting.

Design's intentional byproducts

Its behavior, bond with him, and influence over his health were all intentional byproducts of its design. Each mimicry, every interaction, had a purpose grounded in the creature's engineered intelligence. The dizziness, his health deteriorations, weren't mere coincidences but possibly effects softly orchestrated by its design. Tony jotted down all the changes he noticed, each more starkly standing out in the light of the new truth. It struck him how meticulously everything seemed planned.

Engineered to mimic and influence

The creature was a genetically engineered hybrid bat, crafted to mimic and influence human behavior. Tony flipped through the scattered notes, summarizing DNA studies and behavioral analyses. 'It was designed for something,' he murmured in awe. This wasn't an outcome of natural evolution. The creature's intelligence and traits were the result of sophisticated gene editing. Tony stared at its delicate frame, realizing it was designed to be part of, and to influence, human interactions intricately.

Stunned by the truth

Tony was stunned by the enormity of the truth. Realizing that every interaction, every behavior was part of a larger, orchestrated plan made him shiver. The creature on his shoulder now represented not just a mystery but a grand scheme of ambitious science. 'Why was this done? ' he questioned, feeling both anger and curiosity. The intentional design behind their bond shifted his perspective, making him wonder what he had stumbled into.

Expose or protect?

He faced a gut-wrenching decision: should he expose the truth or keep it hidden to protect others? The more he pondered, the heavier the burden felt. 'What if this knowledge causes panic?' he thought. Voices of concerned friends echoed in his mind, urging caution. Tony weighed his sense of responsibility against the potential consequences of revealing such a controversial discovery. The risk of unleashing fear battled his duty to unveil the hidden truth.

Deciding to go public

Tony decided to go public with his findings, hoping to lead to answers and possibly justice. He reached out to journalists, scientists, anyone who would listen to his incredible story. 'People need to know,' he reasoned, determined to shed light on the clandestine experiments. As he prepared his evidence, he felt the weight lift slightly, believing that transpar-

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ency would serve the greater good. The dominoes were set to fall, initiating an unyielding quest for the truth.

Media frenzy

The revelation of the creature's true nature caused a media frenzy, drawing attention from scientists and researchers around the globe. Journalists flocked to Tony's door, eager for interviews, while research teams scrambled to understand this marvel's implications. 'This is groundbreaking,' one scientist commented on live television. Tony watched as the story he unveiled took on a life of its own, catapulting a hidden scientific endeavor into the glaring light of public scrutiny.

Health improves

With the creature taken into professional care for further study, Tony's health began to improve. No more dizziness, no more relentless headaches. He observed Daisy too, noting her return to her playful self. 'It's like a veil lifted,' Tony mused, feeling relief flood his senses. The professionals assured him they'd get to the bottom of it. Tony felt his life reclaiming normalcy, though the absence of the creature left an indelible mark.

Finding peace

In the end, Tony found peace knowing that he was part of uncovering a hidden truth. The mysterious creature continued to intrigue and puzzle science, but Tony took solace in having played a crucial role. As he watched researchers on TV scrutinize the creature, he felt a sense of accomplishment. 'We did it,' he whispered to Daisy, feeling light for the first time in weeks. He had unveiled a secret, now transforming curiosity into potential for new discoveries.

Scientists solve 'cocktail party' mystery of bat echolocation When emerging at night by the thousands, bats avoid colliding by changing how they move and echolocate

March 31, 2025

Source: Max Planck Institute of Animal Behavior

Science Daily https://www.sciencedaily.com/releases/2025/03/250331151152.htm

Every night, bats emerge out of roosts in massive numbers, creating what scientists have called a "cocktail party nightmare" of clashing echolocations. Nobody knew how bats managed this severe sensorial challenge. Now, scientists from Tel Aviv University and the Max Planck Institute of Animal Behavior (MPI-AB) have tracked bats within a group of thousands to find out: when bats first emerge from the roost, they increase their distance from the center of the group and adjust their echolocation to maneuver safely in the areas of highest bat density. The study is published March 31 in Proceedings of the National Academy of Science.

Aya Goldshtein, Omer Mazar, and Yossi Yovel have spent many evenings standing outside bat caves. Even so, seeing thousands of bats erupting out of a cave and flapping into the night, sometimes in densities so high that they appear liquid, astounds the scientists every time. But until recently, the bat biologists were even more baffled by what they didn't see. "The bats don't run into each other," says Goldshtein from the Max Planck Institute of Animal Behavior, "even in colonies of hundreds of thousands of bats all flying out of a small opening."

A "nightmare" cocktail party

How bats don't fatally crash into each other every night when they squeeze out of caves to forage was a scientific mystery. Many bats perceive their world mostly through echo

How bats don't fatally crash into each other every night when they squeeze out of caves to forage was a scientific mystery.

location: they emit a call and listen for the reflected echo, which in turn allows them to "see" what is around them. But if many bats are echolocating at once -- such as when a whole colony emerges from a cave in the space of a few minutes -- then the calls of others should drown out the important echoic information that bats need. Scientists call this loss of acoustic information "jamming" and they expect that bats should collide because of it.

And yet, aerial accidents outside caves are so rare, "you're almost excited when you witness one," says Goldshtein.

For decades, scientists have tried to figure out how bats solve this "cocktail party nightmare" in which ambient chatter deafens you to

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the voice you need to hear. For example, they examined how bats echolocate in groups. In the laboratory, scientists observed that individual bats in a small group each echolocated at a slightly different frequency, which in theory should reduce jamming. Was this the solution?

Yovel says that past studies like these are important stepping stones, but they have

"No one had looked at this situation from the point of view of an individual bat during emergence.

fallen short of providing a compelling answer to the cocktail party mystery because of a crucial missing piece. "No one had looked at this situation from the point of view of an individual bat during emergence. How can we understand a behavior if we don't study it in action?"

Stepping into the bat cave

For the first time, Goldshtein and colleagues have collected data from wild bats emerging from a cave at dusk. They used a combination of high-resolution tracking, developed by Ran Nathan and Sivan Toledo, ultrasonic recording, and sensorimotor computer modeling -- all of which allowed the researchers to step into the bats' sensory world as the animals squeezed out of the cave opening and flew through the landscape to forage.

The team, which was led by scientists from Tel Aviv University, studied greater mouse-tailed bats in Israel's Hula Valley. Over two years, they tagged tens of bats with lightweight trackers that recorded the bats' location every second. Some of these tags also included ultrasonic microphones that recorded the auditory scene from the individual bat's point of view. Each year, data was collected on the same night that bats were tagged.

A caveat: the tagged bats were released outside the cave and into the emerging colony, meaning that real data were missing at the cave opening when density is highest. The team filled in this gap with a computational model that was developed by Omer Mazar and simulated emergence. The model incorporated data collected by the trackers and microphones to recreate the full behavioral sequence starting from the entrance of the cave and ending after bats had flown two kilometers through the valley. "The simulation allows us to verify our assumptions of how bats solve this complex task during emergence," says Mazar.

Sidestepping a sonic dilemma

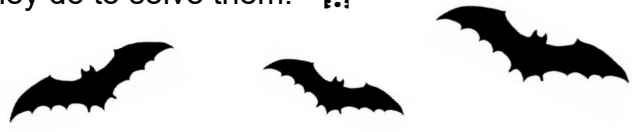
And the picture that emerged was remarkable. When exiting the cave, bats experience a cacophony of calls, with 94 percent of echolocations being jammed. Yet, within five seconds of leaving the cave, bats significantly reduced the echolocation jamming. They also made two important behavioral changes: first, they fanned out from the dense colony core while maintaining the group structure; and second, they emitted shorter and weaker calls at higher frequency.

The researchers suspected that bats would reduce jamming by quickly dispersing from the cave. But why did bats change their echolocation to a higher frequency? Wouldn't more calling only increase the problem of jamming and therefore collision risk? To understand that result, the authors had to approach the scene from a bat's point of view.

Says Mazar: "Imagine you're a bat flying through a cluttered space. The most important object you need to know about is the bat directly in front. So you should echolocate in such a way that gives you the most detailed information about only that bat. Sure, you might miss most of the information available because of jamming, but it doesn't matter because you only need enough detail to avoid crashing into that bat."

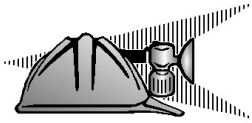
In other words, bats change the way they echolocate to gain detailed information about their near neighbors -- a strategy that ultimately helps them to successfully maneuver and avoid collisions.

The authors emphasize that this unexpected result for how bats solve the cocktail party dilemma was made possible by studying bats in their natural environment as they perform the relevant task. "Theoretical and lab studies of the past have allowed us to imagine the possibilities," says Goldshtein. "But only by putting ourselves, as close as possible, into the shoes of an animal will we ever be able to understand the challenges they face and what they do to solve them."



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
MAY 9, 2025
There will be a virtual meeting.
See you online!



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