

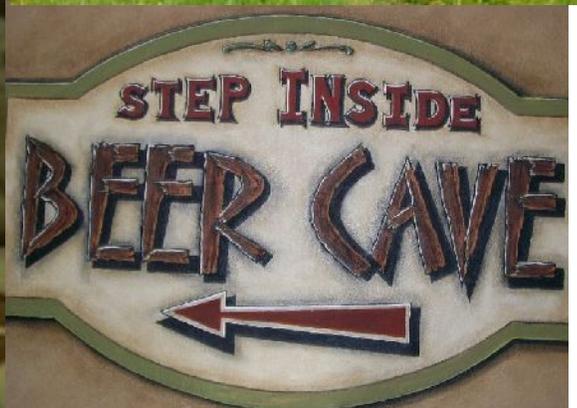


# C.O.G.nizance

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The March meeting will be Friday, March 10, 2017 at 7:30 p.m. The meeting will be at the home of Anne Ault. 



## ANNOUNCEMENTS

\*Northwest trips are scheduled the third Saturday of every month. Contact Sue or John Bozeman for details.

\*The March meeting will be Friday, March 10, 2017 at the home of Anne Ault.

### WHITE-NOSE SYNDROME DECONTAMINATION PROTOCOL, APRIL 2016

This is the latest formal revision of the national decontamination protocol to prevent spread of the fungus that causes white-nose syndrome. This document is the product of a collaborative effort with multiple federal and state agencies and several non-governmental organizations.

Go to this website to view the detailed suggestions listed to help stop the spreading of WNS.

<https://www.whitenosesyndrome.org/news/national-white-nose-syndrome-decontamination-protocol-april-2016>

For the latest information about WNS visit this site:

<https://www.whitenosesyndrome.org/>

## TREASURER'S REPORTS

### FEBRUARY 2017 TREASURER'S REPORT

INCOME	
Dividends	\$ 00.01
<b>TOTAL</b>	<b>\$ 00.01</b>
<b>CASH ON HAND</b>	<b>\$ 190.62</b>
<b>CHECKING</b>	<b>\$ 183.11</b>
<b>SAVINGS</b>	<b>\$ 2,138.88</b>
<b>TOTAL</b>	<b>\$ 2,512.61</b>

### EXPENSES

Balance as of **02/6/2017**

*PREPARED BY TREASURER JOHN TALBOT*

### MARCH 2017 TREASURERS'S REPORT

INCOME	
Dividends	\$ 00.01
Dues	\$ 42.00
<b>TOTAL</b>	<b>\$ 42.01</b>
<b>CASH ON HAND</b>	<b>\$ 214.62</b>
<b>CHECKING</b>	<b>\$ 201.11</b>
<b>SAVINGS</b>	<b>\$ 2,138.88</b>
<b>TOTAL</b>	<b>\$ 2,554.61</b>

### EXPENSES

Balance as of **03/2/2017**

*PREPARED BY TREASURER JOHN TALBOT*

## MINUTES

### CENTRAL OKLAHOMA GROTTO

Minutes of the meeting of February 10, 2017

Host: the home of John Van Dyke

Attendees: Dale Amlee, Anne Ault, Sue Bozeman, Matt Brasher, Duane Del Vecchio, Jason and John Talbot, Jon and Kelley Woltz, Carol and Dale Town, the Skillful Ogre

The Honorable Jon Woltz began the meeting at 8:00

#### OLD BUSINESS

1. We discussed the recently concluded NW bat count and the upcoming SW bat count.

2. We discussed what remained to survey in Cherylsbad Cavern that next Saturday/

#### NEW BUSINESS

Duane gave us a report about the meetings of the Oklahoma Bat Coordinating Team and their *Oklahoma Response Plan for White-nose Syndrome (WNS)* of January 2017. His report and this plan should be included in this newsletter and is also available on the COG website.

#### TREASURER'S REPORT

John Talbot gave his report.  
We concluded the meeting at 8:53

## TRIP REPORT

**Cherylsbad Cave**

Date: 2/18/17

Participants: Dale Amlee, Sue Bozeman, Matt Brasher,  
Jon Woltz, Chris Kotlowski (Matt's friend)

Written by Dale Amlee

Oklahoma caves are muddy. We sometimes tend to forget that fact if we are lucky enough to have a few months of decent weather, and are lucky enough to be surveying a few of the larger, drier passages in a cave system. However, sooner or later all the smaller extremities of the cave need to be pushed, and the realization is hammered home again: Oklahoma caves are muddy. I thought about this on the day after our cave survey trip while standing in my backyard using a garden hose to blast the mud out of my socks.

February in Oklahoma was unusually warm this year, and the weather for our survey trip was pleasantly warm and dry (at least outside of the cave). Our objective on this day was to see if we could finally finish the cave survey of Cherylsbad cave, which has been going on for a very long time. Our maps showed that we might only have a few hundred feet of passage left, and we knew from prior exploration that it was going to be wet, sluggy passage.

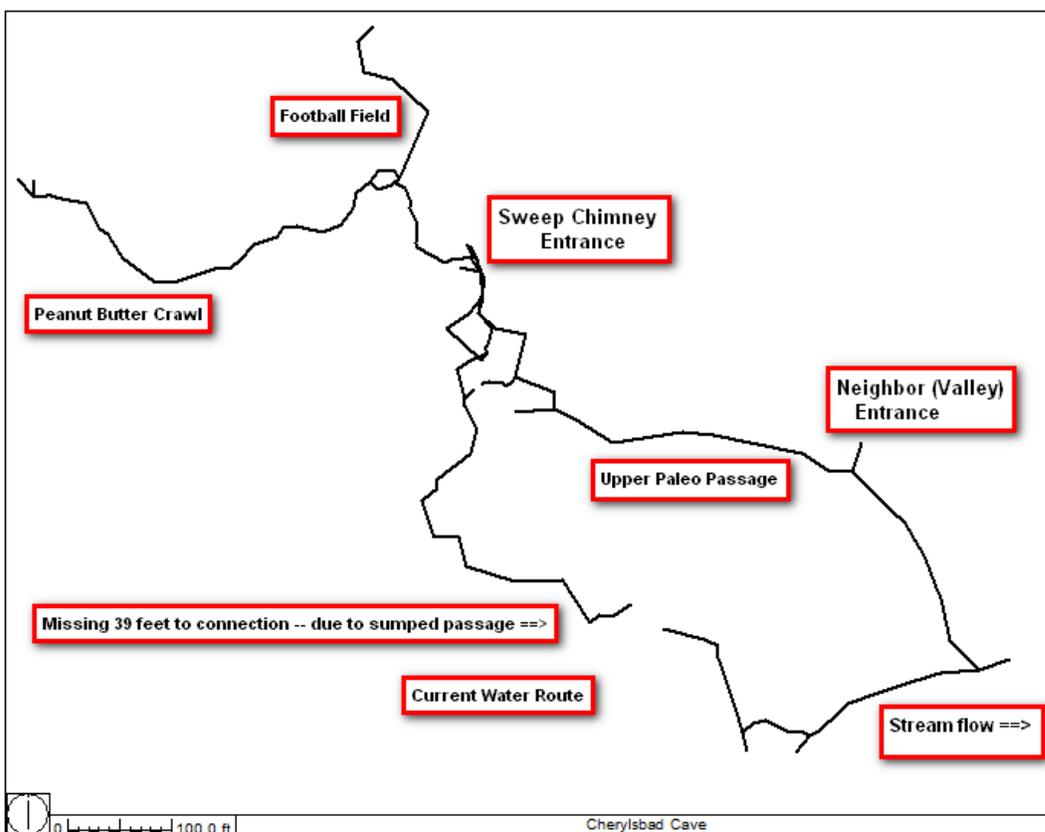
Five of us were on this trip: Sue Bozeman, Dale Amlee, Jon Woltz, Matt Brasher, and visitor Chris Kotlowski (friend of Matt's). We changed into our water-appropriate caving gear in the ranch house and headed out into the cave.

Since this was Chris's first time in a wild cave, we spent some time just doing some familiarization, poking around and such, before heading into the last section that needed to be surveyed. Prior mapping trips had surveyed nearly all of this cave system with the final exception of a wet passage that should connect from one of the northwest arms down to the area of this cave that has some particularly interesting rimstone dam formations. We spent some time training Chris in the use of the survey instruments, and he picked it up very quickly. As we began our survey the passage rapidly became wet, with the water coming up past our ankles and up to our knees in numerous spots.

Despite the warmer weather on the surface, the water in the cave was still cold. Wading through the passage was tricky, because the very soft mud under the water would suck your boots down if you stood in one spot for more than a few seconds. If both boots became mired, and you couldn't reach a wall or bank to pull yourself out with your arms, it became an interesting challenge. Now imagine performing these feats repeatedly while also trying to keep survey gear dry.

The passage had a large number of "s" turns in the waterway, but also had a few long survey shots that allowed us to make rapid headway down the channel. We finally ended up in a breakdown / sump area that had been explored in previous trips, and we spent about ten minutes poking around just to see if there were any other ways through the area, but had no luck. We finally terminated the survey with a "not human passable" note, and headed back to the surface.

Back at the ranch house we were very glad of the opportunity to grab a quick hot shower after changing out of our gear. Review of the cave notes showed that we mapped 539.5 feet of passage. As of this last survey addition, the total length of Cherylsbad Cave stands at 2,932 feet in length (.56 miles).



## POTPOURRI

### Biologists find weird cave life that may be 50,000 years old

SETH BORENSTEIN

Associated Press February 17, 2017

<https://www.yahoo.com/news/biologists-weird-cave-life-may-50-000-years-221916918.html?.tsrc=fauxdal>

BOSTON (AP) — In a Mexican cave system so beautiful and hot that it is called both Fairyland and hell, scientists have discovered life trapped in crystals that could be 50,000 years old.

The bizarre and ancient microbes were found dormant in caves in Naica, Mexico, and were able to exist by living on minerals such as iron and manganese, said Penelope Boston, head of NASA's Astrobiology Institute.

"It's super life," said Boston, who presented the discovery Friday at the American Association for the Advancement of Science conference in Boston.

If confirmed, the find is yet another example of how microbes can survive in extremely punishing conditions on Earth.

Though it was presented at a science conference and was the result of nine years of work, the findings haven't yet been published in a scientific journal and haven't been peer reviewed. Boston planned more genetic tests for the microbes she revived both in the lab and on site.

The life forms — 40 different strains of microbes and even some viruses — are so weird that their nearest relatives are still 10 percent different genetically. That makes their closest relative still pretty far away, about as far away as humans are from mushrooms, Boston said.

The Naica caves — an abandoned lead and zinc mine — are half a mile (800 meters) deep. Before drilling occurred by a mine company, the mines had been completely cut off from the outside world. Some were as vast as cathedrals, with crystals lining the iron walls. They were also so hot that scientists had to don cheap versions of space suits — to prevent contamination with outside life — and had ice packs all over their bodies.

Boston said the team could only work about 20 minutes at a time before ducking to a "cool" room that was about 100 degrees (38 Celsius).

NASA wouldn't allow Boston to share her work for outside review before Friday's announcement so scientists couldn't say much. But University of South Florida biologist Norine Noonan, who wasn't part of the study but was on a panel where Boston presented her work, said it made sense.

"Why are we surprised?" Noonan said. "As a biologist I would say life on Earth is extremely tough and extremely versatile."

This isn't the oldest extreme life. Several years ago, a different group of scientists published studies about microbes that may be half a million years old and still alive. Those were trapped in ice and salt, which isn't quite the same as rock or crystal, Boston said.

The age of the Naica microbes was determined by outside experts who looked at where the microbes were located in the crystals and how fast those crystals grow.

It's not the only weird life Boston is examining. She is also studying microbes commonly found in caves in the United States, Ukraine and elsewhere that eat copper sulfate and seem to be close to indestructible.

"It's simply another illustration of just how completely tough Earth life is," Boston said.

Follow Seth Borenstein at <http://twitter.com/borenbears> and his work can be found at <http://bigstory.ap.org/content/seth-borenstein>



### Wind Turbine Blades Could Decimate North America's Most Widespread Bat Species.

Biological Conservation

Volume 209, May 2017, Pages 172–177

*New research published yesterday in Biological Conservation puts fresh urgency on the need to pursue a workable solution for the wind industry, and at least one bat species' survival may depend on it.*

Thousands of spinning wind turbine blades may be threatening the survival of one of North America's most widespread migratory bats, says a study published yesterday in Biological Conservation. While scientists and the wind industry have known for more than a decade that wind turbines kill bats, the research is the first of its kind to reveal how those fatalities may directly cause dire impacts on a whole population and future of a bat species.

"The hoary bat could be the next spotted owl. This species is headed for the emergency room if we don't act now," says Mike Daulton, Executive Director of Bat Conservation International.

The hoary bat, *Lasiurus cinereus*, is the species most frequently killed by wind turbines in the U.S. and Canada. Although currently widespread across the continent, an estimated 128,000 are killed each year.

The study, which brought together international experts, academics and biologists from several federal agencies, looked at hoary bat mortality at wind energy facilities. It revealed that populations of the species may plunge by a staggering 90 percent over the next 50 years if no action is taken to curb the bat mortality.

"These findings are a wakeup call. Our study focused on the hoary bat, which has the highest observed fatalities. Other migratory bats also have high levels of mortality from wind turbines," explains Winifred Frick, Senior Director of Conservation Science for Bat Conservation International and lead author on the paper.



**LAMENT OF THE ICED CAVERS**

Crawling between and over ice-covered rock  
Clinometer and compass in hand  
We shiver, measure, and record in book  
Left, right, up, and down, unable to stand

Beneath a ceiling two feet above us.  
It seems we've been here a month,  
Every hour a heart-numbing year,  
And think to ourselves: "dunce!"  
And would talk but our mouths are numb,  
Teeth chattering like a snare drum.  
We encourage one other moaning "we're almost done"  
Then suddenly without warning we *are* done.

Struggling up hill to our cars our overalls freeze.  
None of us can move elbows or knees  
So we stumble left, right, like cheap movie robots,  
Fall in, turn our car heaters on to defreeze,

And drip great puddles as ice melts off us and falls.  
By tomorrow noon we should be properly thawed  
And hopefully not suffering too badly from freezer burn.  
But this is the life of a caver: we never learn.

Next month we'll pack up and do this again.  
All of us should be fully defrosted by then  
So we'll open our survey book to a new page  
And continue surveying this remnant of an ice age.

(c) 2017 Steve Beleu

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**Incredible 38,000-year-old cave art of extinct aurochs may shed light on the early life of modern humans**

By Phoebe Weston For Mailonline

Published: 13:22 EST, 30 January 2017 | Updated: 14:26 EST,  
30 January 2017 <http://www.dailymail.co.uk/sciencetech/article-4171770/Cave-art-sheds-light-early-life-modern-humans.html>

Anthropologists have uncovered a 38,000-year-old engraved image in a rock shelter in France - a finding that marks some of the earliest known graphic imagery in Western Eurasia.

The findings provide a rare insight into the early modern humans' Aurignacian culture, which existed from approximately 43,000 to 33,000 years ago.

The limestone slab is engraved with an image of aurochs, or extinct wild cow, and was discovered at Abri Blanchard in France's Vézère Valley.

A key feature of Aurignacian culture is the use of core and blade technology and much of our understand about their culture comes from the artefacts they left behind.

The limestone slab is engraved with an image of an extinct wild cow. It was discovered at Abri Blanchard in France and is believed to be 38,000 years old.

**AURIGNACIAN ART**

Aurignacian culture was marked by a diversification and specialisation of tools, including the invention of engraving tools which made much of this art possible. Cave art was made almost exclusively in Western Europe.

By the end of the Aurignacian Period, hundreds of paintings, engravings and reliefs had been executed inside limestone caves.

One of the finest examples of Aurignacian art is the paintings of animals on the walls and ceilings of the cave at Lascaux in southwestern France.

Paleolithic artists have five main colors at their disposal: yellow, red, brown, black and white.

White is more rare, but it is seen at Lascaux cave.

These depictions show close observation to nature and a one-dimensional approach that characterized mature Aurignacian art.

New York University anthropologist Randall White, who led the excavation, believes this rock offers a window into the lives and minds of its makers—as well as the societies they created.

'The discovery sheds new light on regional patterning of art and ornamentation across Europe at a time when the first modern humans to enter Europe dispersed westward and northward across the continent,' Dr White said.

'Following their arrival from Africa, groups of modern humans settled into western and Central Europe, showing a broad commonality in graphic expression against which more regionalized characteristics stand out,' he explained.

'This pattern fits well with social geography models that see art and personal ornamentation as markers of social identity at regional, group, and individual levels.'

Their tools were primarily made of bone or antlers.

By the end of the Aurignacian period, hundreds of paintings, engravings and reliefs had been executed inside limestone caves.

The archaeological evidence such as art and human remains from this culture provide an insight into people's lives at the time.

Most Aurignacian drawings and paintings are of large animals, including horses, mammoths and bison.

The drawings were fairly accurate anatomically and they often emphasized distinctive characteristic, such as the tusks of the mammoth or the horn of a rhinoceros.

Of all the known prehistoric works of art, some 70 per cent are attributed to hunter-foragers.

They are thought to depict animals they could see around them and which they hunted.

Human figures are much rarer and often more symbolic.

Women particularly were depicted as being overweight with exaggerated pelvic regions and reproductive organs.

Abri Blanchard and its sister site, Abri Castanet, previously excavated by Dr White's team, have long been recognized as being among the oldest sites in Eurasia bearing artifacts of human symbolism.

The limestone slab was discovered at Abri Blanchard in France's Vézère Valley. hundreds of personal ornaments have been discovered at this site, including pierced animal teeth, pierced shells and soapstone beads

In the early 20th century archaeologists excavated a slab bearing a complex image of aurochs, or wild cow, surrounded by rows of dots from the same site.

Dr White and his team members began their methodical exploration of remaining deposits at the site in 2011.

Over time, hundreds of personal ornaments have been discovered, including pierced animal teeth, pierced shells, ivory and soapstone beads, engravings, and paintings on limestone slabs.

The image bears many similarities to other sites in France and other Aurignacian sites in Germany.

As well as a broad commonality in rock art from this time, there are also regional differences, showing that identity was constructed at both individual, group and regional levels.



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Central Oklahoma Grotto is a non-profit organization and a chapter of the NSS (National Speleological Society), Cave Avenue, Huntsville, AL., 35810. Dedicated to cave conservation and safety, C.O.G. published 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](mailto: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 a SASE with submission. All materials in this newsletter is available for reproduction, provided proper credit is given with the article when you print it. Trade publications are welcomed. *Cave softly and safely!* Website: <http://www.okcavers.com>

***The March meeting will be***  
At the home of Anne Ault  
Friday, March 10, 2017



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