



CENTRAL
OKLAHOMA
GROTTO
OF THE NATIONAL
SPELEOLOGICAL SOCIETY, INC

C.O.G.nizance

Inside this Issue

Announcements	2
Treasurer's Report for October	2
Minutes	3
Trip Reports	3
No reports submitted for this month.	
Potpourri	
Metal exposure: Factor in bat population decline.	
Reprint from Science Daily 6/9/16.....	4

The January meeting will be Friday, January 13, 2017 at 7:00 p.m. The meeting will be at the home of John Talbot.



Past Expiry by Johnny Ancich 941

New Year's Eve 10 B.C.



www.PastExpiry.com

Goodbye 2016
Hello 2017

Happy New Year

MINUTES

CENTRAL OKLAHOMA GROTTO
Minutes of the meeting of November 11, 2016

Host: the home of Matt Brasher
Attendees: Dale Amlee, Anne Ault, John and Sue
Bozeman, Matt Brasher, Jason Talbot, John Talbot, The Skillful
Ogre

The Honorable Dale Amlee began the meeting at 8:00

OLD BUSINESS
None

NEW BUSINESS
None

2017 OFFICERS BEATEN INTO OBEDIENCE
We forced these sorrowing individuals into these officer
posts for 2017 –

Chair – Jon Woltz (notice that he didn't attend, so he's
Chair)
Vice-Chair – Dale Amlee
John Talbot – Treasurer
The Skillful Ogre – Secretary and Sergeant-at-Underarms

TREASURER'S REPORT
John Talbot gave his reports for November.

We ended the meeting at 8:25

TRIP REPORT

NO TRIP REPORTS FOR THIS MONTH

POTPOURRI

Metal exposure: Factor in bat population decline

June 9, 2016

Science Daily

<https://www.sciencedaily.com/releases/2016/06/160609064340.htm>

Scientists at the University of York have led the first full-scale national assessment of metal contamination in bats, showing that many bats in the UK contain levels of metals high enough to cause toxic effects.

With bat species across the world in decline, exposure to chemicals is one of many potential threats to the species, along with urbanisation, loss of habitats, decline in food and water, agricultural intensification and climate change.

Metals are present in a wide range of habitats, with a large number of land sites in the UK remaining contaminated since the industrial revolution. Records show areas that were once extensively mined, such as the Pennines, still contain high concentrations of metal deposits. Soil-associated metals are accumulated by invertebrates and plants which then move along the food chain into the bat species. However, the potential risks of metal in bats has, until now, been poorly understood.

Beatrice Hernout, who recently received her PhD from York's Environment Department, studied metal levels in 190 common pipistrelle bats, found dead in locations across England and Wales.

Bat organs and tissues were analysed for a range

of metals and the results compared to levels known to cause toxic effects in mammals.

Approximately 21 percent of bats sampled contained residues of at least one metal at concentrations high enough to elicit toxic effects, such as kidney damage. Lead was found to pose the greatest risk, as seven to 11 percent of bats sampled had levels of lead above the toxic threshold for this metal in small mammals.

Copper, zinc and cadmium was also prevalent in bat tissue, with levels often above the upper levels measured in other mammal species.

Professor Alistair Boxall, who supervised Dr Hernout, said: "The percentage of bats in which concentrations of metals exceeded toxic thresholds suggest that a significant proportion of the bat population in England and Wales may be affected by metal exposure.

"As bats are exposed to a wide range of environmental stressors, a better understanding of stressor interactions would be beneficial to bat conservation. Further studies could investigate whether different sources of metal pollution in habitats, such as water and sediments, affect accumulation, and further research into how metals interfere with the immune system could be carried out."

HAPPY NEW YEAR! MAY CAVING AND HEALTH BE BETTER IN 2017!

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. 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>

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at the house of John T
Friday, January 13, 2017



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