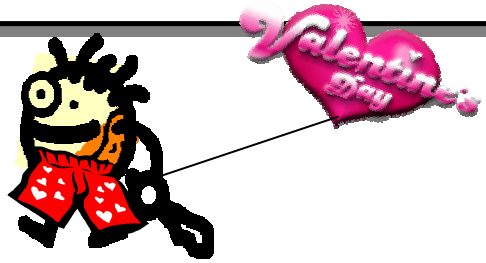
CENTRAL
OKLAHOMA
GROTTO
OF THE NATIONAL
SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

Inside this Issue

Announcements ……..……..……..……..……..2
Minutes January, 2011……..……..……..……..…..2
Treasurer's Report 2011, January, 2012…..…..…..3
Trip Reports
Last Survey trip to Broken Horn, Jan. 21, 2012
Written by Jon Woltz ……..……3
Potpourri
North American Bat Death Toll Exceeds 5.5 Million From White-nose Syndrome
From: FWS News and Information …..……////……..…4
Strange life found in underwater caves- Biologists finding new microbes totally unknown elsewhere on Earth
By Charles Q. Choi, OurAmazingPlanet Contributor…….5

The February meeting of the Central Oklahoma Grotto will be held at 7:00 p.m., Friday, February 10, 2012. at the home of John Talbot,



Picture below taken by Jon Woltz of fungus rock in Brokenhorn Cave during a surveying trip, October 11, 2011.

ANNOUNCEMENTS

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

*The 7:30 p.m. January meeting will be, Friday, February 10th at the home of John Talbot,

Remember Anne in your thoughts and prayers. She is at home and her son is staying with her.

MINUTES

CENTRAL OKLAHOMA GROTTO

Minutes of the January 13, 2012

Host: the home of COG member John Talbot.

Attendees: Dale Amlee, John and Sue Bozeman, Duane Del Vecchio, John Talbot, Jeremiah Van Dyke, Jon and Kelley Woltz, S. Beleu

Grand Imperial Chairman Amlee opened the meeting at 8:00

OLD BUSINESS

· We have yet to re-establish contact with the NPS personnel of Carlsbad Caverns. Unless and until we do we will not be able to return there to volunteer to work a day or two there in the cave. Duane reported that he hasn't been able to talk with any NPS staff. So Dale Town is considering driving there from the nearer port of Altus to attempt to persuade park personnel in person.

· TROG will look at the caves reported to be on New Life Ranch since they reside in the northeast caving sector of our state.

NEW BUSINESS

· Dale A. stated his belief that we have only one final passage left to complete the 6-year survey of Broken Horn Cave. We decided in our infinite wisdom to not survey through The Room of Godless Muck, which has already been voice-connected and that's good enough for this crapper of a cave passage that's all deep mud and thick water. Only the thinnest, leanest COG cavers can make it through this last passage, and then only with difficulty, and they are Sue, Jon, and Dale A.

· Duane discussed our current knowledge of WNS and the caves of Oklahoma.

· We may be doing an abbreviated bat-count at Dr. Caire's request. Otherwise we will do the Washita Bat Caves on February 18, and others on February 11.

· It seems that the old version of TROG has disbanded due to the effects of aging and the decrepitude that accompanies it—the effects of which COG has also very much experienced in the past few years. Therefore we ask the question: where are TROG's records and files? Are they safely secured? Have they wandered far and near? Or are they safely in the custody of the newly reformed TROG, about which next--

· It appears that a new TROG has been formed under the feeding and handling of its new chairman, Casey Evans. Duane has invited Casey on our bat count to learn how we do it so that TROG can do a bat count too.

TREASURER'S REPORT

John Talbot gave his treasurer's report.

The Sergeant-At-Underarms concluded the meeting at 9:20 when he couldn't take it any more.

TREASURER'S REPORTS

2011 TREASURY REPORT

1/1/2011	**BANK BALANCE**	**$2,611.44**
	CASH ON HAND	**$ 204.49**
	UNDEPOSITED FUNDS	**$ 39.00**
	TOTAL	**$ 2,854.93**

INCOME		**EXPENSES**	
Dividend	$ 5.29	Postage	$ 54.56
Dues	$120.00	Newsletter printing	$ 25.96
Publication Sales	$ 37.00	Equipment	$487.40
TOTALS	**$162.29**		**$567.82**

12/31/2011	**BANK BALANCE**	**$2,372.20**
	CASH ON HAND	**$ 77.10**
	TOTAL	**$2,449.30**

PREPARED BY TREASURER JOHN TALBOT
NSS#30254RE

JANUARY 2012 TREASURER'S REPORT

INCOME		**EXPENSES**
Dividend	$ 1.13	
Dues	$ 24.00	NONE
TOTALS	**$ 25.13**	
CASH	**$ 77.10**	
CHECKING	**$ 239.69**	
SAVINGS	**$2,132.51**	
TOTAL FUNDS AS OF 1/7/2012	**$2,449.30**	

PREPARED BY TREASURER JOHN TALBOT
NSS#30254RE

TRIP REPORTS

Broken Horn Cave Last Survey Trip
January 21, 2012
Cavers: Jon Woltz, Sue Bozeman, Dale Amlee
Written by Jon Woltz

HISTORY

The last remaining piece of Broken Horn that had remained unsurveyed was an inflow passage that Mary Hicks, Dale Amlee, and I had explored on an earlier trip. On that trip, we'd completed our surveying in another passage and decided to poke into this entrance to see if it was worth surveying on a future trip. Though the cave entrance could be entered in a crouch, the passage quickly turned into a low and muddy crawl. We pushed the passage for some distance until we hit a piece of breakdown that partially blocked the left side of the passage. After a lot of wriggling, we figured out that we could just barely squeeze past the boulder if we lay on our sides, curled around the rock, and used leverage against the obstruction to push ourselves through the mud into what looked like a wide passage on the other side.

Almost immediately after we popped out into the larger passage, we saw sticks poking out of the floor and a couple of small rock piles -- the telltale signs of past surveys. However, there were no markers to tell us exactly which survey points we'd found. Our goal for the January trip was to survey this inflow passage from the dripline to the intersection with the main passage. Once we'd surveyed the inflow passage, we'd resurvey the main passage for a short distance. This would give Dale enough data points to match the intersection's location with the existing Broken Horn survey map.

SURVEYING TRIP

We met up at landowner's ranch house. It was cold in the house -- the heater wasn't working and temperatures had been in the teens overnight. After quickly changing into our coveralls, we drove out to the cave (with a brief stop on the way to the landowner's home to let her know about the broken heater). Since we were going to be using an entrance into Broken Horn further north than usual, we parked up on the bluff above our usual parking area.

Sue was on book and Dale and I were doing instruments. Based on the previous trip through this passage, we expected mud, cold, and tight squeezes. The cold and the squeezes were all present, but the drought and a strong airflow in the passage had left the floor dry and rocky.

The survey went smoothly. There were the usual problems of surveying in tight passages -- mostly a lack of prominent natural survey points and difficult sightlines. The same breakdown at the intersection that had nearly blocked our progress on the previous trip was still there, of course.

This time, however, the mud had dried into a solid bank of dirt. Dale was in the lead, and after some difficult kicking and digging, he was able to push through into the main passage. I followed, and we resumed taking survey shots in the main passage. Sue dug out the dirt bank some more, which made it possible for the three of us to get around the boulder and back into the inflow passage fairly easy.

After we exited the cave, we cleaned up at the ranch house (Betty had called a repairman for the heater) and chatted with Betty about our future survey plans. Then we piled into the cars for the traditional post-caving pizza in Fairview.

COG has now surveyed all of the human-passable sections of Broken Horn. **Broken Horn is done!**

POTPOURRI

North American Bat Death Toll Exceeds 5.5 Million From White-nose Syndrome

From: FWS News and Information <fws-news@lists.fws.gov>
Submitted by Steve Beleu

On the verge of another season of winter hibernating bat surveys, U.S. Fish and Wildlife Service biologists and partners estimate that at least 5.7 million to 6.7 million bats have now died from white-nose syndrome. Biologists expect the disease to continue to spread.

White-nose syndrome (WNS) is decimating bat populations across eastern North America, with mortality rates reaching up to 100 percent at many sites. First documented in New York in 2006, the disease has spread quickly into 16 states and four Canadian provinces. Bats with WNS exhibit unusual behavior during cold winter months, including flying outside during the day and clustering near the entrances of caves and mines where they hibernate. Bats have been found sick and dying in unprecedented numbers near these hibernacula.

"This startling new information illustrates the severity of the threat that white-nose syndrome poses for bats, as well as the scope of the problem facing our nation. Bats provide tremendous value to the U.S. economy as natural pest control for American farms and forests every year, while playing an essential role in helping to control insects that can spread disease to people," said Fish and Wildlife Service Director Dan Ashe. "We are working closely with our partners to understand the spread of this deadly disease and minimize its impacts to affected bat species."

Estimating the total number of bat deaths has been a difficult challenge for biologists. Although consistent population counts for federally listed endangered bats, like the Indiana bat, have been a priority for state and federal biologists, establishing population counts of once "common" bat species, like little brown bats, was historically not the primary focus of seasonal bat population counts.

"White-nose syndrome has spread quickly through bat populations in eastern North America, and has caused significant mortality in many colonies," said National WNS Coordinator, Dr. Jeremy Coleman, "Many bats were lost before we were able to establish pre-white-nose syndrome population estimates."

More than 140 partners, including tribal, state and federal biologists and bat researchers convened in Carlisle, Pennsylvania for the 2012 Northeast Bat Working Group (NEBWG) meeting last week to discuss challenges facing bat research, management and conservation. Coordinating with wildlife officials in Canada, the group discussed population-level impacts to hibernating bats and developed the estimate of bats lost to WNS.

In addition to the lack of population data for many bat species, there has also been a lack of consistency in how bat population data was reported among agencies. As part of the May 2011 national WNS response plan, which was developed by the Service in partnership with a team of federal, state, tribal, and NGO scientists, agencies are addressing this by establishing methods for consistent data collection.

The National Plan for Assisting States, Federal Agencies and Tribes in Managing White-Nose Syndrome in Bats provides a framework for the coordination and management of the national WNS investigation response, and the Service leads an extensive network of partners in implementing the plan.

The Service serves as the primary resource for up-to-date information and recommendations for all partners, such as important decontamination protocols for cave researchers and visitors and a cave access advisory that requests a voluntary moratorium on activities in caves in affected states to minimize the potential spread of WNS.

In addition to developing science-based protocols and guidance for land management agencies and other partners to minimize the spread of WNS, the Service has funded numerous research projects to support and assess management recommendations and improve our basic understanding of the dynamics of the disease.

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We are both a leader

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service.

For more information about white-nose syndrome, visit www.fws.gov/whitenosesyndrome. Connect with our Facebook page at www.facebook.com/usfwswns, follow our tweets at www.twitter.com/usfws_wns, and download white-nose syndrome anbat photos from our Flickr page at http://www.flickr.com/photos/usfwshq/collections/72157626455036388/.

Strange life found in underwater caves

Biologists finding new microbes totally unknown elsewhere on Earth

By Charles Q. Choi, OurAmazingPlanet Contributor
OurAmazingPlanet
updated 2/6/2012 7:35:13 PM ET 2012-02-07T00:35:13

Clues to how life evolved, not only on this planet but also possibly on alien worlds, might be found in underwater caves in the Bahamas, researchers say.

The caves in question are called "blue holes," so-named because from the air, their entrances appear circular in shape, with different shades of blue water in and around them. There are estimated to be more than 1,000 such caves in the Bahamas, the greatest concentration of blue holes in the world.

"It's really incredible to be swimming down a passage that no one has ever been in before, to experience that thrill of discovery," said researcher Tom Iliffe, a marine biologist at Texas A&M University at Galveston. "At the bottom of a cave, there's no telling what might be around the next corner."

Iliffe and his colleagues examined three inland blue holes in the Bahamas. They discovered that layers of bacteria exist in all three, but each of these water-filled sinkholes had significantly different microbes living in them from the others.

"We're finding new forms of life that are totally unknown elsewhere on Earth," Iliffe told Our Amazing Planet.

Blue hole bacteria

Within each blue hole, the microbes the researchers found varied depending on the depth, owing to how the water in them was separated into distinct fresh- and saltwater layers as well as oxygen-poor or virtually completely oxygen-depleted layers. The blue holes also varied from each other due to differences such as food sources.

"We examined two caves on Abaco Island and one on Andros Island," Iliffe said. "One on Abaco, at a depth of about 100 feet, had sheets of bacteria that were attached to the walls of the caves, almost one inch thick. Another cave on the same island had bacteria living within poisonous clouds of hydrogen sulfide at the boundary between fresh- and saltwater. These caves had different forms of bacteria, with the types and density changing as the light source from above grew dimmer and dimmer."

"In the cave on Andros, we expected to find something similar, but the hydrogen sulfide layer there contained different types of bacteria," Iliffe added. "It shows that the caves tend to have life forms that adapt to that particular habitat, and we found that some types of the bacteria could live in environments where no other forms of life could survive. This research shows how these bacteria have evolved over millions of years and have found a way to live under these extreme conditions." [Harshest Environments on Earth]

'Natural laboratories'

The fact that each cave has different conditions from the others and thus a different palette of life helps scientists analyze the diverse routes life might have taken on Earth, given slight tweaks in their initial brews.

"These bacterial forms of life may be similar to microbes that existed on early Earth and thus provide a glimpse of how life evolved on this planet," Iliffe explained. "These caves are natural laboratories where we can study life existing under conditions analogous to what was present many millions of years ago."

Specifically, "these caves have no light and therefore no photosynthetic production of oxygen, which means the dissolved oxygen levels are either low or nonexistent, similar to the environments that probably existed on the early Earth," Iliffe said.

These findings might also shed light on how life might have developed on distant planets and moons.

"As far as we know, no surface waters currently exist anywhere else in our solar system, but there might be water beneath the surface, say on Mars or moons like Europa," Iliffe said. "These are areas of total darkness, and so the caves on Earth we are exploring might be similar."

More known about the moon

There are tens of thousands of underwater caves scattered around the world, but less than 5 percent of these have ever been explored and scientifically investigated, Iliffe said.

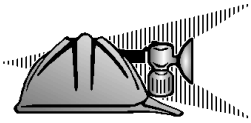
"We know more about the far side of the moon than we do about these caves right here on Earth," Iliffe said. "There is no telling what remains to be discovered in the many thousands of caves that no one has ever entered. If life exists elsewhere in our solar system, it most likely would be found in water-filled subterranean environments, perhaps equivalent to those we are studying in the Bahamas."

Iliffe, along with Brett Gonzalez and their colleagues, detailed their findings in the November issue of the journal Hydrobiologia.

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 3208 Gettysburg Dr., Altus, Oklahoma, 73521. All submissions to the newsletter should be sent to the editor: Lil Town, 25692 Mosier Circle, Conifer, Colorado 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

Decontamination protocols specific to WNS have been developed and will continue to be revised to incorporate the best available information. Source: DRAFT WNS Plan - v. 10.21.2010 from **A National Plan for Assisting States, Federal Agencies, and Tribes in Managing White-Nose Syndrome in Bats**
Duane has put the decontamination protocols in the COG website http://www.okcavers.com/wns

The FEBRUARY meeting will be Friday, February 10, 2012 at the home of John Talbot.



Central Oklahoma Grotto
1117 NW 74th St.
Lawton, OK 73505-4234