CENTRAL OKLAHOMA GROTTO
OF THE NATIONAL SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

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The December meeting of the Central Oklahoma Grotto will be held Friday, December 13, 2013 at 7:00 p.m. The meeting will be at the home of John and Sue Bozeman.

It is the annual grotto Christmas Party. Be sure to bring a goodie to share!

Oklahoma Bats caught unaware when recent Winter Storms come early!!

Announcements

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

*The December meeting of the Central Oklahoma Grotto will be held Friday, December 13, 2013, at the home of John and Sue Bozeman.

Don't forget the Christmas Party at the Bozemans!

National White-Nose Syndrome Decontamination Protocol - Version 06.25.2012

The fungus *Geomyces destructans* (*G.d.*) is the cause of white-nose syndrome (WNS), a disease that has devastated populations of hibernating bats in eastern North America. Since its discovery in New York in 2007, WNS has spread rapidly through northeastern, mid-Atlantic, and Midwest states and eastern Canada. It continues to threaten bat populations across the continent. For the protection of bats and their habitats, comply with all current cave and mine closures, advisories, and regulations on the federal, state, tribal, and private lands you plan to visit. In the absence of cave and mine closure policy, or when planned activities involve close/direct contact with bats, their environments, and/or associated materials, the following decontamination procedures should be implemented to **reduce the risk of transmission** of the fungus to other bats and/or habitats. For the purposes of clarification, the use of the word "decontamination," or any similar root, in this document entails both the 1) cleaning and 2) treatment to disinfect exposed materials.

Under no circumstances should clothing, footwear, or equipment that was used in a confirmed or suspect WNS-affected state or region be used in a WNS-unaffected state or region. Some state/federal regulatory or land management agencies have supplemental documents1 that provide additional requirements or exemptions on lands under their jurisdiction.

I. TREATMENTS TO REDUCE RISK OF TRANSFERRING *GEOMYCES DESTRUCTANS*2:

Applications/Products:

The most universally available option for treatment of submersible gear is:

Submersion in Hot Water: Effective at sustained temperatures ≥50ºC (122ºF) for 20 minutes

Secondary or non-submersible treatment options (for a minimum of 10 min.) include:

PRODUCTS: **Clorox® (6% HOCl) Bleach**
Lysol® IC Quaternary Disinfectant Cleaner
Professional Lysol® Antibacterial All-purpose Clean

Minutes

CENTRAL OKLAHOMA GROTTO

Minutes of the meeting of November 8, 2013

Host: the home of Steve Beleu, The Skillful Ogre
Attendees: Dale Amlee, Anne Ault, John and Sue Bozeman, Duane Del Vecchio, John Talbot, Carol and Dale Town, John Van Dyke, Jon and Kelley Woltz

Our meeting I christened *The First Annual Gary Harrington Memorial Hang-tough COG Meeting* for this reason: although we first met inside to shoot the bull and eat $84 worth of Billie Sim's barbeque and drink 3 cases of Diet Rite sodas, we went outside into my back yard for our business meeting. We sat on lawn chairs, using caving lights as our only light except for those officers who needed flashlights to conduct the business of our meeting. The wind was blowing and it was cold as a witch's…nose, but we hung tough out there for 20 minutes. Then, meeting over, we went back inside to eat more barbeque. Next year will be *The Second Annual Gary Harrington Memorial Hang-tough COG Meeting*, and I can only hope that it's snowing and sleeting with wind gusts of 70 mph with lightning, wildfires, and earthquakes so we can hang even tougher. Grunt!

His Grand Imperial Muchness Jon Woltz began the meeting at 8:31.

OLD BUSINESS

None

NEW BUSINESS

- John Talbot noted that the Treasurer's report in the previous COGnizance of October was actually last year's report. The correct October 2013 report will be printed in the next COGnizance, which should be this issue.
- John then gave his report for November.
- Sue reported that Joe Looney paid his dues, and also that he plans to make corrections to the "Cave Life of Oklahoma" issue of the "Oklahoma Underground" that we published in Volume 4, nos. 1 and 2 and present it to his local public library in Bartlesville. John Bozeman read aloud a letter of his to this effect.

We concluded the meeting at 9:25:42

Treasurer's Report

INCOME			EXPENSES	
Dividends	$	0.02	Postage	$ 2.32
Donations	$	0.68		
Dues	$	41.00		
Postage	$	2.32		
TOTAL	**$**	**44.02**	**TOTAL**	**$ 2.32**
CASH ON HAND	**$**	**120.20**		
CHECKING	**$**	**477.59**		
SAVINGS	**$**	**2,135.23**		
TOTAL	**$**	**2,733.02**		

TOTAL FUNDS AS OF 12/07/2013 $2,623.24

PREPARED BY TREASURER JOHN TALBOT

Trip Report

Greene's Cathedral
November 28, 2013 (yes one week later than normal)
Cavers: Jon Woltz, Sue Bozeman, and Dale Amlee
Written by Sue Bozeman

The normal caving weekend presented problems for one of our current caving quattro, minus Steve, so we adjusted and went the next weekend.

We planned to continue from the last point of the internal survey done in March by Dale, Jon and Steve. We did so. And very quickly got into real walking passage -- well scrambling passage, anyway. Ceilings of 14 feet, cave width 22 feet in places, many on a diagonal up a mud slope. Steve would have been thrilled -- he did the crap part == ah, my foul tongue, but it truly is garbage passage especially if mucky wet from recent rains, so I wish to give Steve credit for sloppy crawling. I, however, encountered mildly damp mud, not muck.

We did a bit over 400 feet and stopped ... astoundingly .. at a PREVIOUS SURVEY POINT! ~!! BT-22 Whaaat? Yes, aargh. Here we go again -- notes missing, so we are STILL redoing the survey of Greene's. Who knew? Well, Jon found a way through some huge breakdown area ahead and off he went to 'take a look'. He came back in about 20 minutes. saying, "I found BT-31 -- this passage has already been surveyed!!" And he showed us a photo of it on his phone! crap

Yes, foul language again. So even as far as we have come and another survey to go -- and it has all been done before. Ahead of BT-31 lies crawling wall-to-wall water in front of Jon and a really icky low side passage to the right.

Not great prospects -- for our future surveys -- but we had a good day.

Just for informational purposes, we passed many bats -- one cluster of about 200 -- velifer, of course. A few pips along the way decorated the ceilings and 5 salamanders of varying sizes greeted our grunts of effort. The air temperature was 58 degrees and the water temp was 56. Needless to say, we were not cold.

Intriguing cave. More to come. Stay tuned.

REMEMBER WHEN

First Wild Cave

Theresa Martinez

On a warm day in March, 1985, I visited my first wild cave. I know it was warm because I did not take a jacket. March winds can be fickle in eastern Oklahoma, the sun promising spring but the wind denying it. However, this was truly a warm day.

I had been to a number of commercial caves in my younger days. My paternal grandmother lived in Jefferson City, Missouri. My mother and I would stop at a different commercial cave each time we drove to visit her. I found them interesting, although some of the special effect lighting actually detracted from the natural beauty. I had also been in a few tiny shelter caves and grottos, none deeper than fifteen feet. *(CONTINUED ON PAGE 4)*

I knew Sam Martinez from my time at the University of Tulsa, and from International Folk Dancing. I sort of invited myself along when he mentioned he was going caving the next day one Friday evening. Sam was supposed to pick me up at7:00 a.m. to go explore and survey one cave and finish surveying a second one. He was late and did not arrive until 8:30 a.m. I was still living at home and my mother was not impressed!

In preparation for this new adventure, I had to purchase a pair of jeans and a flannel shirt. I was told to bring a spare set of clothing to change into after caving, which I did. I had my old Girl Scout backpack, Girl Scout flashlight, some trail mix and a little water.

My mother was not exactly happy about this adventure. I was quizzed about what I knew about "this boy" and how long we would be gone. I asked Sam, and he said, "a few hours." Little did I know at that time that he had no time sense and tended to greatly underestimate the time.

We traveled to Cherokee County to Ball's Crystal Cave, CK-10. We surveyed as we explored. I say "we", but my lessons in using a compass from back in Girl Scouts did not include surveying, so I was dummy on the tape most of the time.

The cave was very pretty, to my eyes. I would guess that to the eyes of someone who has been caving for years, it would be an average small, 65.7 foot long cave. I found it exciting and interesting. This cave was still living, but it was only oozing water, no running water. I was thankful that there was no crawling involved. At this point, I didn't own knee or elbow pads or other essentials. Sam lent me a helmet, which was too large on the smallest setting, and a carbide light. The glistening formations made me feel like I was in a different world.

After we completed Ball's Crystal Cave we traveled to Single Barrel Cave, CK-11, to complete a survey started by Sam and other members of the Tulsa Grotto. Sam wanted to try and make a connection with another entrance he found. This did involve some crawling, but it wasn't bad.

Exploring, surveying, and travel to and from the caves takes time. It was after 3pm before we went to a rest area to change clothing. Unfortunately, it was not yet open for the year, so I found a large bush to hide behind! I'm afraid my mother was rather upset when I eventually arrived home many more than the 'few' hours Sam had mentioned. It didn't matter to me, I was hooked. I was to visit many more caves before I moved to the land of vertical caves, Montana, and had to give up most caving. Sam and I had many interesting adventures. He loved caves and caving all the rest of his life.

IF YOU HAVE A CAVING EXPERENCE YOU'D LIKE TO SHARE FROM THE GOOD OLD DAYS, PLEASE DO!

Potpourri

Endangered and Threatened Wildlife and Plants; Listing the Northern Long-Eared Bat as an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.
ACTION: Proposed rule; extension of comment period.

SUMMARY: On October 2, 2013, we, the U.S. Fish and Wildlife Service (Service), announced a 12-month finding on a petition to list the eastern small-footed bat (Myotis leibii) and the northern long-eared bat (Myotis septentrionalis) as endangered or threatened under the Endangered Species Act of 1973, as amended (Act) and to designate critical habitat. After review of the best available scientific and commercial information, we found that listing the eastern small-footed bat is not warranted but listing the northern long-eared bat is warranted. Accordingly, we proposed to list the northern long-eared bat as an endangered species throughout its range under the Act. In the October 2, 2013, proposed rule, we also determined that critical habitat for the northern long-eared bat is not determinable at this time.

We announce the extension of the comment period for our October 2, 2013, proposed rule to ensure the public has sufficient time to comment on the proposal for this wide-ranging species that involves many stakeholders. The Service seeks data and comments from the public on the October 2, 2013, proposed listing rule for the northern long-eared bat.

DATES: The comment period for the proposed rule published October 2, 2013 (78 FR 61046), is extended. We request that comments on this pro-

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posal be submitted by the close of business on January 2, 2014.

ADDRESSES: Document availability: You may obtain copies of the proposed rule on the Internet at http://www.regulations.gov at Docket No. FWS-R5-ES-2011-0024, or by mail from U.S. Fish and Wildlife Service, Green Bay, Wisconsin Field Office (see FOR FURTHER INFORMATION CONTACT). Written comments: You may submit comments by one of the following methods:

(1) Electronically: Go to the Federal eRulemaking Portal: http://www.regulations.gov. In the Search box, enter Docket No. FWS-R5-ES-2011-0024, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on ''Comment Now!'' If your comments will fit in the provided comment box, please use this feature of http://www.regulations.gov, as it is most compatible with our comment review procedures. If you attach your comments as a separate document, our preferred file format is Microsoft Word. If you attach multiple comments (such as form letters), our preferred format is a spreadsheet in Microsoft Excel. (2) By hard copy: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R5-ES-2011-0024; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042-PDM; Arlington, VA 22203.

We request that you send comments only by the methods described above. We will post all information received on http://www.regulations.gov. This generally means that we will post any personal information you provide us (see the Information Requested section below for more details).

FOR FURTHER INFORMATION CONTACT: Peter Fasbender, Field Supervisor, U.S. Fish and Wildlife Service, Green Bay Ecological Services Office, 2661 Scott Tower Dr., New Franken, Wisconsin 54229; by telephone (920) 866-3650 or by facsimile (920) 866-1710. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION: Background

On October 2, 2013, we published a 12-month finding on a petition to list the eastern small-footed bat (Myotis leibii) and the northern long-eared bat (Myotis septentrionalis) as endangered or threatened under the Endangered Species Act of 1973, as amended (Act) and to designate critical habitat (78 FR 61046). After review of the best available scientific and commercial information, we find that listing the eastern small-footed bat is not warranted but listing the northern long-eared bat is warranted. Accordingly, we proposed to list the northern long-eared bat as an endangered species throughout its range under the Act and also determined that critical habitat for the northern long-eared bat is not determinable at this time (78 FR 61046).

We received several requests to extend the public comment period on the proposed endangered species status of the northern long-eared bat beyond the December 2, 2013, due date. The northern long-eared bat has an extensive range; in the United States, it occurs in 39 states, and thus there are many involved stakeholders. Thus, in order to ensure that the public has an adequate opportunity to review and comment on our proposed rule, we are extending the comment period for an additional 30 days.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned Federal and State agencies, the scientific community, or any other interested party concerning this proposed rule. We particularly seek comments regarding the northern long-eared bat concerning:

(1) The species' biology, range, and population trends, including:

(a) Habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Any information on the biological or ecological requirements of the species, and ongoing conservation measures for the species and its habitat.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof)

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to this species and regulations that may be addressing those threats.

(4) Current or planned activities in the areas occupied by the species and possible impacts of these activities on this species.

(5) Additional information regarding the threats to the species under the five listing factors, which are:

(a) The present or threatened destruction, modification, or curtailment of its habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; and

(e) Other natural or manmade factors affecting its continued existence.

(6) The reasons why areas should or should not be designated as critical [[Page 72059]] habitat as provided by section 4 of the Act (16 U.S.C. 1531 et seq.), including the possible risks or benefits of designating critical habitat, including risks associated with publication of maps designating any area on which this species may be located, now or in the future, as critical habitat.

(7) The following specific information on:

(a) The amount and distribution of habitat for the northern long-eared bat;

(b) What areas, that are currently occupied and that contain the physical and biological features essential to the conservation of this species, should be included in a critical habitat designation and why;

(c) Special management considerations or protection that may be needed for the essential features in potential critical habitat areas, including managing for the potential effects of climate change;

(d) What areas not occupied at the time of listing are essential for the conservation of this species and why;

(e) The amount of forest removal occurring within known summer habitat for this species;

(f) Information on summer roost habitat requirements that are essential for the conservation of the species and why; and

(g) Information on species winter habitat (hibernacula) features and requirements for the species.

(8) Information on the projected and reasonably likely impacts of changing environmental conditions resulting from climate change on the species and its habitat.

For more background on our proposed rule, see the October 2, 2013,
Federal Register. The proposed rule is available at the Federal eRulemaking Portal at http://www.regulations.gov (see ADDRESSES section above).

If you previously submitted comments or information on the proposed rule, please do not resubmit them. We have incorporated them into the public record, and we will fully consider them in our final rulemaking. Our final determination concerning this proposed rulemaking will take into consideration all written comments and any additional information we receive.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section (b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made ''solely on the basis of the best scientific and commercial data available.''

You may submit your comments and materials concerning this proposed rule by one of the methods listed in ADDRESSES. We request that you send comments only by the methods described in the ADDRESSES section.

If you submit information via http://www.regulations.gov, your entire submission--including any personal identifying information--will be posted on the Web site. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review.

However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on http://www.regulations.gov. Please include sufficient information with your comments to allow us to verify any scientific or commercial information you include.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on http://www.regulations.gov, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Green Bay, Wisconsin Field Office (see FOR FURTHER INFORMATION CONTACT). You may obtain copies of the proposed rule on the Internet at http://www.regulations.gov at Docket No. FWS-R5-

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ES-2011- 0024, or by mail from U.S. Fish and Wildlife Service, Green Bay, Wisconsin Field Office (see FOR FURTHER INFORMATION CONTACT).

Authors

The primary authors of this notice are the staff members of the Green Bay, Wisconsin, Field Office.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Dated: November 21, 2013. Stephen Guertin, Acting Director, U.S. Fish and Wildlife Service.[FR Doc. 2013-28705 Filed 11-29-13; 8:45 am] BILLING CODE 4310-55-P

A BAT DETECTOR

Need a little project to do? Check out this website for detailed directions,

http://www.sciencetronics.com/geocities/electronics/projects/batdetector.html

The drawing shows the complete schematics of the bat detector. No, you are not supposed to see this image clearly, nor to completely grab the function from this figure. A high-resolution PDF file can be downloaded by just clicking on the image or its caption. And below follows a more detailed description of the individual sections of this design.

Just to give a brief overview over the bat detectors specifications: the audio path is layed out in stereo in order to use two microphones and give a directional sensitivity to the detected bat signals. The heart of the detector is a switched mixer which is controlled by a two-phase digital clock generated from a voltage controlled oscillator. Since the shaping of the two-phase clock is done by synchronous division, the VCO runs at twice the tuning frequency.

White-Lipped Peccary Trails Lead to Archeological Discovery in Brazil:
4,000 To 10,000-Year-Old Cave

Drawings\http://www.sciencedaily.com/releases/2013/11/131107162302.htm

Nov. 7, 2013 — While tracking white-lipped peccaries and gathering environmental data in forests that link Brazil's Pantanal and Cerrado biomes, a team of researchers from the Wildlife Conservation Society and a local partner NGO, Instituto Quinta do Sol, discovered ancient cave drawings made by hunter-gatherer societies thousands of years ago.

The drawings are the subject of a recently published study by archeologists Rodrigo Luis Simas de Aguiar and Keny Marques Lima in the journal *Revista Clio Arqueológica* (see link below). The diversity of the renderings, according to the authors, adds significantly to our knowledge of rock art from the Cerrado plateau region that borders the Pantanal.

"Our work with the Wildlife Conservation Society focuses on promoting sustainable land use practices that help protect important wildlife species and the wild places where they live," said Dr. Alexine Keuroghlian, researcher with WCS's Brazil Program. "Since we often work in remote locations, we sometimes make surprising discoveries, in this case, one that appears to be important for our understanding of human cultural history in the region."

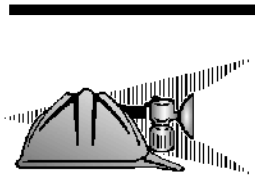
The discovery was made on Brazil's Cerrado plateau in 2009, when Keuroghlian and her team were conducting surveys of white-lipped peccaries, herd-forming pig-like animals that travel long distances and are environmental indicators of healthy forests. The peccaries are vulnerable to human activities, such as deforestation and hunting, and are disappearing from large swaths of their former range from southern Mexico to northern Argentina. While following signals from radio-collared white-lipped peccaries and the foraging trails of peccary herds, the team encountered a series of prominent sandstone formations with caves containing drawings of animals and geometric figures.

Keuroghlian contacted Aguiar, a regional specialist in cave drawings who determined that the drawings were made between 4,000-10,000 years ago by hunter-gatherer societies that either occupied the caves, or used them specifically for their artistic activities. The style of some drawings, Aguiar noted, was consistent with what archeologists call the Planalto (central Brazilian plateau) tradition, while others, surprisingly, were more similar to Nordeste (northeastern Brazil) or Agreste (forest to arid-land transition in NE Brazil) style drawings. The drawings depict an assemblage of animals including armadillos, deer, large cats, birds, and reptiles, as well as human-like figures and geometric symbols. Oddly, the subject of the WCS surveys in the area -- peccaries -- are absent from the illustrations. Aguiar hopes to conduct cave floor excavations and geological dating at the sites in order to fully interpret the drawings.

"These discoveries of cave drawings emphasize the importance of protecting the Cerrado and Pantanal ecosystems, both for their cultural and natural heritage," said Dr. Julie Kunen, Director of WCS's Latin America and the Caribbean Program and an expert on Mayan archeology. "We hope to partner with local landowners to protect these cave sites, as well as the forests that surround them, so that the cultural heritage and wildlife depicted in the drawings are preserved for future generations."

Central Oklahoma Grotto is a nor -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.co

The December meeting will be at Sue and John Bozeman's house Friday, December 13, 2013.



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