



# C.O.G.nizance

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The June meeting of the Central Oklahoma Grotto will be held at 7:30, Friday, June 8, 2007 at the home of Duane Del Vecchio.

**Address:** 1117 NW 74th Street, Lawton, OK 73013

**Home Phone:** 580-536-5097



**Directions to Duane's:** Coming from OKC: On 1-44 South... Take the Rogers Lane (Hi-way 62) West Exit. Go 5 Miles West. Exit South (left turn) in 66th St. (You should see a Wal-Mart to the south) Go 1 mile. At second stoplight corner with (Walgreens, Circle K, What-a-Burger) which is Cache road, turn right (West) and go for 0.4 miles. You will see a West Side Drug and First Baptist West Church (just past Outback Steakhouse.) Turn on 73rd St. (South) for one long block. Then turn right on Maple and 1.2 block to 74th St. Turn left on 74th St. I'm the first driveway on the left on 74th, (has a bathhouse on the basketball goal!).



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## ANNOUNCEMENTS

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

\*The next meeting will be Friday, June 8 at Duane's house, 1117 NW 74th Street, Lawton, OK 73013 at 7:30 pm. Home phone: 580-536-5097

## MINUTES

### CENTRAL OKLAHOMY GROTTO

Minutes de meetin' ob May 11, 2007; *special semi-literate edition*

*Host People:* Mark Miller

*Other members what was there:* Dale Amlee, Anne Ault, Sue and John Bozeman, Duane Del Vecchio, John Talbot, S. Beleu

De Facto Chairman/Treasurer Talbot began him the meeting 8:00

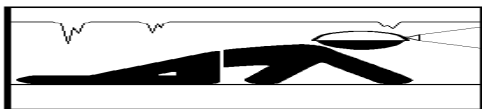
### OLD BIDNESS

CARLSBAD TRIP – we talked us 'bout the work we got to do down there where that cave be all dark. Them NPS peoples approved hour work plan, they did. We also talked us 'bout techy-nickle aspects of our'n work when we get us there. Alsa Mister Du-ane he tell us all what he make all them mo-tel rese-yashuns a'for us so we doen' got to do none o' that, us.



BOY SCOUNTIN' TRIPS – well, we got us two them Scout troops want go down in caves some'ers. We ixnay dem both for dey own good 'til a mit bit later.

Sue, she talk 'bout de Oklahomy Unnerground what we be workin' on for all five year now and countin'.



### NEW BIDNESS

Sue, she then talk at us about de "Nixon Ranch" one mile wes as de crow bird fly from Alybastard State Park up where's we cave. Them owners they say dey got dem a whopin' beeg sinkhole will we come look down inta that sucka and we say Sho next time we be up there we come right on ober look down inta that sucka!

Some feller sent him one them e-mail from Semynole County over east ta Shawnee a-bout two lo-cal cave he done heard him 'bout he want go down inta. We not gonna tell them for his own safety, him, so he not git hisself kilt.

Sue, then she axe us 'bout byin' a heap o' "Ferever" stamps what de Post Orifice be a-sellin' we say gwan 'head an' buy \$250 dolla ob dem and den dey lass' us a lawn time 'til we be ded an' gawn!

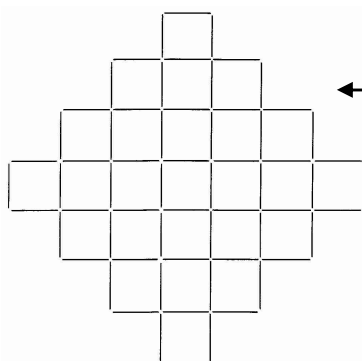
### TREASURER'S RE-PORT

Treasurer/De Facto Chairman Talbot done read us his re-port, him.

As Sergeant-at-Underarms I done brought de meetin' to its endin'-up 9:10.

In the event that these minutes have offended anybody, them, I did not take them.

Minutes taken with crayon upon Big Chief tablet. My next goal is to take meeting minutes with an Etch-a-Sketch!

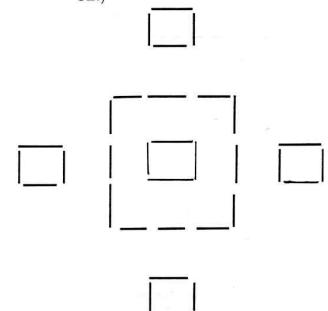


Last month's puzzle was to take away 32 sticks and leave 6 squares, not necessarily equal.

And the answer is:

Congratulations if you found other answers!

52.)



## TREASURER'S REPORTS

### May, 2007

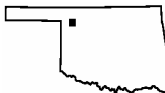
INCOME		EXPENSES	
DIVIDEND	\$ .15	POSTAGE	\$ 10.53
DUES	\$ 18.00	POSTAGE	\$ 240.00
PUBLICATION SALES	\$ 8.00	MATERIALS TO MAKE A NEW NET FOR	
NEWSLETTER SALES	\$ 18.00	CARLSBAD CAVERN'S NATIONAL GEOGRAPHIC PIT	\$ 91.54
<b>TOTAL</b>	<b>\$ 44.15</b>	<b>TOTAL EXPENSES</b>	<b>\$ 342.07</b>
CASH ON HAND	\$ 43.66	<b>TOTAL FUNDS AS OF 5/13/07</b>	<b>\$ 3133.75</b>
CHECKING	\$ 442.32		
SAVINGS	\$ 2,647.77		

PREPARED BY TREASURER  
JOHN TALBOT

## TRIP REPORTS

FROM THE EDITOR: THIS REPORT HAD BEEN MISPLACED IN THE EDITOR'S COMPUTER, AND IT WAS GRACIOUSLY RESUBMITTED TO BE PUBLISHED! THANKS ANNE!

Trip Report: Broken Horn Cave Survey  
C.O.G. Personnel: Team: Sue and John Bozeman,  
Dale Amlee, Steve Beleu, Anne Ault  
Trip Date: March 17, 2007  
written by Anne Ault



In honor of St. Patrick's Day, Dale, Steve and Anne took the high (dry) way and we gave the low (wet) way to Sue and John to survey.


For several hours the high team could hear giggles and whispers coming from the low team, so we could only politely assume that they were having quite a good time as they surveyed or did whatever they were doing.

We of the high team soldiered on and may even have gotten five or six compass shots completed. Steve's Compass Meister was refusing to cooperate, but this was advantageous because Dale needed time to sketch the very complicated cave passage we were in and Steve needed the time to perfect the "prayers" he was directing towards his compass and clinometer.

With less than an hour left before we had agreed to meet and start the long slog out, the high team let themselves be lured into one of several side passages that seemed particularly inviting, for just a wee bit of exploring. This passage could be compared to finding the leprechaun's pot of gold because it was almost entirely dry walking passage and has an enormous and just spectacular cache of selenite crystals.

As we left the cave, we reveled in the prospect of surveying this side passage, even though we knew it eventually led to a long, low crawl.

Mrs. Selman entertained us with conversation and special Blarney Stone cakes which took the edge off the hunger pains until we reached Pizza Hut.

Just like the pot of gold at the end of the rainbow, the dreams of surveying lovely dry passage disappeared when, about a week later, the drought in the State was almost ended by torrential rain of biblical proportions. 



### Carlsbad Cave Restoration Trip


Members of C.O.G. took the annual trip to Carlsbad Cave, June 1-3, to volunteer time to help with cave restoration. The last couple of years one of our projects has been to clean the pool at the bottom of the National Geographic Pit. We offered to replace the old net and Dale Amlee researched the best materials to use. A team designed and submitted a plan to the National Park Service.

The plan was approved, and this trip the *Pit Team* composed of Dale Amlee, Duane Del Vecchio, Dale Town, and Jon Woltz, successfully built and replaced the old net with a new one.

Another team cleaned flowstone in the lower cave. *Flowstone Cleaners* included Anne Ault, Sue Bozeman, Becky Hunsinger, Kelley Woltz, Steve Beleu and Mark Miller.

Those who wanted to just wanted to enjoy the cave were on *Trash Detail* and picked up any trash they saw on the trail as they walked. The lucky folks on this team were John Bozeman, Mark Hunsinger, and Lil Town. Becky and Mark Miller switched and did both flowstone cleaning as well as trail walking!

Dale Amlee brought Nick who enjoyed the beauty of the cave as well as hiking and enjoying the beauty on the surface.

A good time was had by all, even though the Go-Cart track and miniature golf course were not opened yet. We found another good restaurant and had a great dinner. Hopefully it will still be there next year! The next newsletter will have detailed reports from each team. We thank the Park Service for the opportunity to work in the cave! 

## POTPOURRI

### Water for Wildlife

Helping Western bats find a place to drink

By Daniel A.R. Taylor

Recopied from Bats, Spring, 2007; pages 11-13  
volume 25, No. 1

The rusting, round water tank in the Arizona high country is more than 12 feet (3.5 meters) across and 2 feet (61 cm) deep. The water is algae green. But each night, a near-constant stream of bats - sometimes approaching one per second - swoops smoothly down to the water's surface to sip from this vital resource.

Water is scarce in much of the American West, and natural water holes have been disappearing rapidly for 150 years, victims of irrigation, dams and urban/sub urban developments. The many water troughs and tanks that ranchers maintain for their livestock are, quite literally, lifesavers for bats and other wildlife.

But all water is not equal. While this Arizona water trough is a safe and accessible resource tapped by thousands of bats, other water supplies can be death traps. A Colorado rancher recently reported finding 46 drowned bars in a single trough made out of an old tractor tire. Although reliable estimates are not available, anecdotal evidence suggests such wildlife drownings are frequent and widespread.

In many Western states, chronic shortages of safe, reliable water threaten the very survival of bat and other wildlife populations, especially in drought years. Bar Conservation International, with leadership support from the Offield Family Foundation the National Fish and Wildlife Foundation and the USDA-Natural Resources Conservation Service, has taken on the challenge of increasing accessible wildlife water supplies. After more than two years of research, field tests, analyses and educational efforts, BCI's Water for Wildlife program this year produced a pioneering publication: *Water for Wildlife: A Handbook for Ranchers and Range Managers*.

The handbook describes the critical water problems facing wildlife and presents the economic — as well as ecological — value of considering the needs of bats, birds and other animals while maintaining water supplies for livestock. The publication provides step-by-step instructions for ensuring that bats and birds that drink on the wing can safely access the water.

*Water for Wildlife* is being distributed to field offices of federal and state agencies, corporations and others involved in Western water issues. We believe it will make a real difference in enhancing wildlife habitat on public and private lands.

The urgency of the problem became clear as we collected standardized data with the collaboration of state

and federal agencies. Of 367 water troughs in 11 Western states, more than half had obstructions - braces, fences, wire, etc. - across the water that would prevent bats from drinking. More than a fourth of the tanks at which water levels were noted were empty and another 30 percent had water levels six inches (15 centimeters) or more below the rim, creating a proven hazard for bats and birds that fly down to drink. And fewer than 10 percent of the troughs had an adequate wildlife escape structure - a ramp-like device that allows animals that fall into the water to climb out. Clearly, we have major obstacles to overcome.

Bats, with exceptionally narrow requirements for water sources, are especially at risk when water is in short supply. Studies of bat physiology have documented water loss of up to 50 percent of body weight in a single day. Even the most desert-adapted bat species periodically need water, and the loss of a single source can threaten the survival of local populations.

To get water, bats must fly down to the water surface, scoop up a drink and keep flying up and away from the pool — a process that requires an unobstructed "swoop zone," just as airplane pilots need clear approaches to their runways. Obstacles in the flight path can prove deadly. Like many other animals, bats are very susceptible to drowning if they are trapped in a water tank without an escape route.

The smallest tank that bats can drink from varies according to each species' flight characteristics. A few bat species, such as the California leaf-nosed bat (*Macrotus californium*) and the California myotis (*Myotis californicus*), have short, broad wings that make them highly maneuverable. Such species can sometimes drink from a water source as small as 3 by 4 feet (91 x 122 centimeters), although even they seem to prefer larger tanks.

Most bat species, however, have longer, narrower wings and far less maneuverability. They need access to long swoop zones and large, open water sources.

Analysis of data collected by bat biologists around the West indicates that most bat species prefer sources that are at least 10 feet (3 meters) long and 2.5 feet (0.75 meter) wide. Some species apparently require tanks or rivers with stretches of open water at least 50 feet (15 meters) long, and a few of the most maneuverable species need 100 feet (30 meters).

Regardless of the size of the water feature, obstructions over the surface of the water are extremely dangerous for bats that must drink while flying. Collisions can injure bats or cause them to fall into the water, where they frequently drown unless appropriate escape structures are provided.

(Continued on page 5)

Safe access to drinking water also requires clear swoop paths into and away from the trough. Trees, brush and other obstructions can keep bats and swallows, nighthawks and other birds that drink in flight from taking advantage of the water.

Another common problem facing bats and birds is low water levels in stock tanks, especially those without escape routes. Turbulent winds combined with limited room to maneuver at smaller tanks can prove disastrous.

Among the most important - and least utilized - tools in ensuring safe water for wildlife are adequate escape structures. As described in the handbook, these can be relatively simple and inexpensive to make out of metal or stone, but they must meet a few critical criteria. Our experiments and field experience have demonstrated the most effective designs.

Escape structures should extend from the rim of the trough and slope no more than 45 degrees into the water. They must also include sides that are flush against the side of the trough. When trapped in water, most animals will swim frantically around the perimeter in search of a way out. They typically swim under escape ramps without sides that block their path and end up drowning.

To drive those points home to a wide audience, BCIs Water for Wildlife program is initiating a series of demonstration projects to show how appropriately designed, wildlife-friendly water developments can increase local numbers and diversity of bats. This summer, we will be collaborating with range managers and biologists at the Cabeza Prieta National Wildlife Refuge in Arizona, the Department of Defense's White Sands Missile Range in New Mexico and the Humboldt-Toiyabe National Forest in Nevada.

After identifying existing water tanks that are difficult or impossible for bats to use, we plan to modify the water sources or add new ones to ensure bats have safe, reliable access. Then we will monitor the bat populations to develop before-and-after profiles that should demonstrate how even modest modifications to water size and configuration can benefit bats.

We also have several collaborative workshops planned this year to provide hands-on training to more than 200 livestock operators and range and wildlife managers. Workshops are scheduled for Cascabel, Holbrook and Kirkland, Arizona with the Natural Resources Conservation Service (NRCS), the U.S. Forest Service and the Arizona Game & Fish Department as cosponsors; in Elko and Winnemucca, Nevada, with the Forest Service, U.S. Bureau of Land Management and the NRCS cosponsoring; and in Socorro, New Mexico, with the NRCS, the Forest Service, BLM and the Quivira Coalition as cosponsors.

Countless bats are searching for water throughout the North American West, and BCI and its partners are working to make sure they find it.

*DANIEL A. R. TAYLOR is the coordinator of Bat Conservation International's Water for Wildlife program.*

*You can help keep this vital program growing across the West.*

*Please contact BCI's Department of Development at*

*development@batcon.,org. *

## OKLAHOMA EARTHQUAKE

*Written by Lil Town  
statistics from the USGS website*

This could be a sobering thought for Oklahoma cavers. How many thought the caves we crawl through were stable, except for the fact gyp is gyp! I bet there are many who felt there was more of a danger of a tornado than an earthquake, after all, we aren't on the west coast! Here are some of the Earthquake details reported by the USGS of an earthquake that happened in Oklahoma.

**Magnitude:** 3.6

**Date:** Sunday, May 27, 2007

**Time:** 4:03:22 PM

**Location:** 35.328°N, 96.008°W

**Depth:** 5 km (3.1 miles) set by location program

**Region Distances:**

7 km (4 miles) NNE (21°) from Dustin, OK

12 km (7 miles) E (100°) from Weleetka, OK

13 km (8 miles) S (189°) from Henryetta, OK


90 km (56 miles) S (184°) from Tulsa, OK

290 km (180 miles) NNE (14°) from Dallas, TX

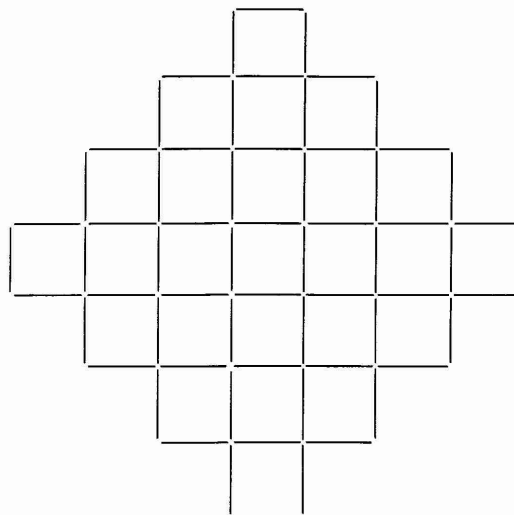
**Location Uncertainty:** horizontal +/- 11.7 km (7.3 miles); depth fixed by location program

**Parameters:** Nst= 8, Nph = 8, Dmin=238.7 km, Rmss=1.05 sec, Gp=144°, M-type="Nutli" surface wave magnitude (MLg), Version = 6

*This event has been reviewed by a seismologist.*

Maybe there is a good thing about this event. The earthquake was east of Oklahoma City and the caves we survey are in the western part of the state! Maybe gypsum is more stable! Just remember to make sure you have a good handhold when hanging on to a gypsum wall. After all, you don't want to be gypped! Gypsum does have a habit to be brittle. 

**Here is a new challenge: Use the same lay out, but take away 16 sticks to leave 12 EQUAL squares.**



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 or Dale Town, 3208 Gettysburg Dr., Altus, OK 73521: Telephone: (580)477-4027: E-mail: [oklmt@cableone.net](mailto:oklmt@cableone.net). 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!*

*The June meeting will be at Duane's house,  
Friday, June 8, 2007*



**Central Oklahoma Grotto  
C/o 3208 Gettysburg Drive  
Altus, Oklahoma 73521**