CENTRAL
OKLAHOMA
GROTTO
OF THE NATIONAL
SPELEOLOGICAL SOCIETY,INC

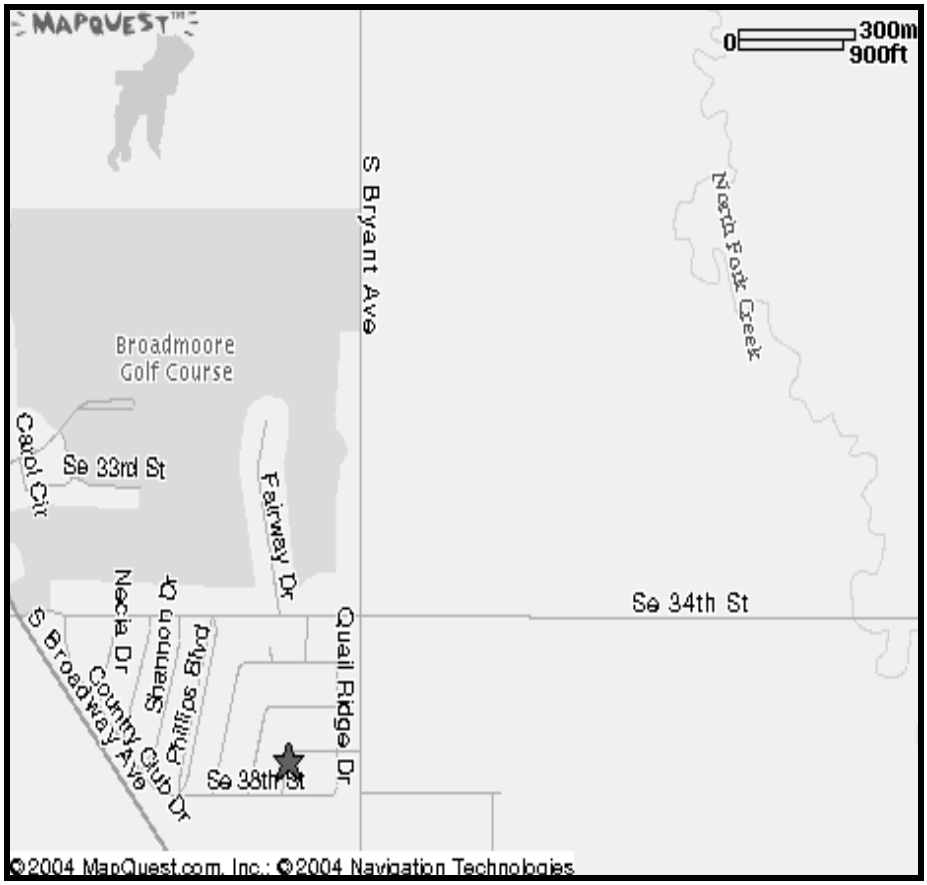
C.O.G.nizance

April, 2004

April's Meeting is at Dale Amlee's House

The April meeting of the Central Oklahoma Grotto will be held at Dale Amlee's home at 7:00 p.m. on Friday, April 9, 2004.

Address:
11905 Barrywood Drive, OKC.



Inside this Issue

Announcements 1
Minutes 1
Treasurer's Report 2
Trip Reports
Jester Scout and Landowner Trip by Sue Bosemsn 3/20/04 2
Potpourri
Fossil Hunting on Mars 3-4
Bat Saliva May offer Stroke Treatment 5
Subterra 15 by Steve Beleu 5
Cave Echoes by Steve Beleu 5
Bat Count 2000-2004 6

Direction's to Dale's House

Easiest way to get here: Find your way to highway 35. Go either north or south until you reach the Moore 19th street exit (a monstrous Wal-Mart is located at the same exit). At top of ramp, at light, turn left onto 19th street and travel East. Keep going, through a couple of stoplights and under the railroad tracks, until you reach Broadway Avenue, which is the stoplight right past the railroad bridge. Turn right onto Broadway. Go Southeast on Broadway through one stoplight, until you get to the stop sign at 34th St. This will be the first stop sign since 19th St. An elementary school will be on your right at this intersection. Turn left, travel East until you get to Bryant Avenue (next stop sign, roughly 1 mile away). Turn right on Bryant (south), go about 100 yards and turn into the neighborhood on 37th St. Go straight on 37th St, it will bend to the left after about a block. The street name has now changed to Hope Dr. 3817 Hope Drive is the gray brick house on the corner at the end of Hope Drive where it intersects with the next street.

ANNOUNCEMENTS

*Northwest trips are scheduled the third Saturday of every month. Contract Sue or John Bozeman for details.
*Southwest trips are scheduled the first Saturday of every month. Contact Lil Town for details.
*The April meeting will be at Dale Amlee's house, 11895 Barrywood Drive, OKC. His phone number is 405-752-7591.

Romeo Raymond (Ray) Del Vecchio, DPh)
Father of Duane Del Vecchio,
Passed away March 19, 2004
Our thoughts and prayers are with Duane and his family.

MINUTES

CENTRAL OKLAHOMA GROTTO
Minutes of the March 12, 2004 meeting

Host: the Moose-laden home of Lil and Dale Town in Altus (stuffed and toy Moose are everywhere because Lil collects them)

Members present: Dale Amlee and son Nick, Anne Ault, Sue and John Bozeman, Duane Del Vecchio, Roy Diehl II, G'Ann Ellis, Becky Hunsinger and husband Mark from Los Alamos NM, John Talbot, the Towns, John Van Dyke, Jon Woltz, and Steve Beleu.

Chairman Diehl began the meeting at 8:05.

OLD BUSINESS

1. Duane's proposed COG website project—since only four COG members replied to his e-mail inquiry polling us about which webaddress domain names we liked, we passed the list of potential names about and discussed and debated them. We decided upon "Okcavers.org". We also decided that the most recent *COGnizance* should be mounted on it, as well as archival copies.
2. Dale Amlee is our Lead Officer in investigating laser-assisted surveying. He reported his findings to us. Good equipment is relatively expensive, costing from $200 to $300 per unit. We decided to continue monitoring this technology.
3. Duane informed us that our annual trip to Carlsbad Caverns has had to be moved to June 12 at the request of Park personnel due to CRF activities there that weekend. Becky reported that she is still researching good places to chugalug beers in the town of Carlsbad, and will report to us at a date prior to our expedition.
INTERESTED IN GOING TO CARLSBAD? CONTACT DUANE DEL VECCHIO FOR INFORMATION AND TO GET ON HIS LIST.
4. Anne Ault and I reported about our attendance of the OK Department of Wildlife Conservation meeting that we attended. My report about this meeting I have already sent to all COG members as an e-mail.

NEW BUSINESS

1. The upcoming Boy Scout trip to Jester Cave—we'll be taking two Scout troops through on March 20. We all signed a landowner release that one of the landowners has requested of us.
2. Jerry Steigerwald, the Scout Master of the troop in Bethany, although not present, has asked to become a COG member. We made him a member.
3. I asked about caves in the El Dorado, Oklahoma area. Geologist John Bozeman told me about the few dinky-do caves that COG has been in out there.
4. Lil noted that COG member Sheila Alexander will not be able to make duplicates of the *COGnizance* for membership distribution after she moves into the new Federal Building in downtown OKC. We asked other members to volunteer, and Jon Woltz stepped up to the plate.

TRIP REPORT

Roy talked about the last trip to Cattle Cave.

TREASURER'S REPORT

John Talbot read his report, which is included in this newsletter.

Chairman Diehl concluded the meeting at 9:25

Minutes by The Skillful Ogre

TREASURER'S REPORTS

INCOME		EXPENSES	
DIVIDEND	$ 0.06	POSTAGE	$ 17.76
DUES	$ 66.00		
TOTALS	**$ 66.06**		**$ 17.76**
CASH ON HAND	**$** 103.54		
CHECKING	$ 311.98		
SAVINGS	$ 2,571.09		
TOTAL FUNDS AS OF 3/5/04	**$2,986.61**		

PREPARED BY TREASURER

JOHN TALBOT

TRIP REPORTS

TRIP REPORT: Jester Cave, Landowner Guest and Combo Boy Scout Trip (2 troops) Trip
DATE: March 20, 2004
COG MEMEBERS: Roy Diehl, Anne Ault, Jon Woltz John Bozeman, G'Ann Ellis, and Sue Bozeman
SCOUTS: Jerry Steigerwald (leader and newest COG member!), Daryl Burton, Casey Smith, Justin Brown; Aaron McAdams (leader and possible future COGer), Tristan Jensen, Joseph and Austin Goodner, Shannon McAdams (wife to Aaron and possi ble future COGer, but prefers climbing and scuba diving!), Joe Goodwin, Johnny Tucker
GUESTS: Phillip, Leon and Bob Willsie -- landowners from the Sayre area, whose property we toured last year and who were interested in a Jester trip when next we held one.

We had good weather for the big day. Our only real concern was the number of participants that suddenly appeared at the end of the week: 23! More scouts wanted to come from McAdams' group than we had expected. We have difficulty doing more than 15, because of the lack of lights -- but a sage advisor suggested that ofttimes, people back out. Sage advisor was correct. Participant numbers dropped substantially. So each group of 4 or 5 had a head and tail COGer. Worked out well.

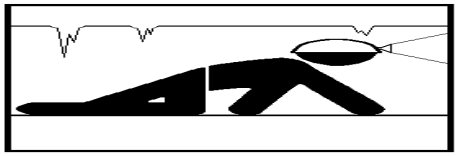
The groups did their normal thing: sometimes the lead group was out of hearing, sometimes we all bunched up together. We were very surprised at the absence of bats. The warm February and March weather had removed the bats from hibernation and they had scattered to their spring and summer roosts. This was good in one way -- we would NOT have to be concerned about histoplasmosis and airborne rabies crossing through the bat rooms. We saw the normal types of bats (Myotis velifer and Pipistrellus subflavus), but no big eared bats. And we did look!

We were very surprised at the absence of bats. The warm February and March weather had removed the bats from hibernation and they had scattered to their spring and summer roosts.

Everyone did very well. We had some slips and sudden landings, but everyone enjoyed the cave. Even some of the scouts that thought they might have been bored or scared thought the actuality really "cool". We, of course, could NOT imagine anyone being bored in a cave! Muddy? Yes. Cold? Yes. And we did get wet, so some of the smaller scouts had some issues with the cold, but continued activity warmed them up so that we did not have any hypothermia.

For all the water that had fallen recently, Jester was very well behaved. Yes, there was more water than had been seen during Bat Count 2004 in early February, but actual water level during our tour was 'normal'. We did see a dozen or so crayfish, light in color from being inside the caves all their lives, and several thoroughly full-grown leopard frogs -- and I mean eating-sized! (But we don't DO that, do we Anne?!) The black bullheads were few in number -- except there might have been unseen numbers lurking under the water that got muddied from the Dallas-Ft. Worth/Maverick grotto's group of 27 that met us halfway into the cave! They had gone in the north end; we had gone in the south. John and Roy had seen about 3 black bullheads in a pool near Snot Slope, under the ledge.

We spent about 4 hours in the cave and then trekked overland back to the trucks. Everyone accounted for! Needless to say, good times had by all.



POTPOUURI

Dear Friends,

The Ray Del Vecchio family wishes to thank all of you for the beautiful basket of mixed flowers, roses, carnations, delphiniums, wild larkspur and pom-poms with gerber daisies and lisianthus.

We are overwhelmed with all the love from our friends.

Karin Del Vecchio and family

Fossil hunting on Mars

By Leonard David
(SPACE.com)
Contributed by Ted Blasingame

Those on-the-prowl Mars robots -- Spirit and Opportunity -- are sending back extraordinary images and science data about the Red Planet and its history of climate and water. Both rovers have found evidence of water at their respective landing sites. But the question remains open as to whether Mars was, or is today, a planetcapable of supporting life.

The tell-tale clues of water left behind hint that some spots on Mars did have a persistent wet look that might have been sociable to extraterrestrial creatures. While Mars scientists have their eyes focused on finding tiny microbes, the question remains: just how far along could martian biology, if any, have evolved?

Yet answering this question is a difficult task to answer robotically and it might take rock-splitting fossil hunters, hammer in hand, to chronicle the true life on Mars saga.

Eye of the beholder Peter Schultz, a planetary geologist at Brown University in Providence, Rhode Island, said you don't have to look out to Mars to see how hard it is to spot fossils…

"We even have trouble identifying fossils on Earth that are older than 3 billion years old. There continues to be debate today," Schultz said. Many primitive life forms leave only subtle traces and often require sophisticated techniques to prove that they indeed were produced by something living, he said.

Those studying the incoming Mars rover images clearly get an eye-full. For many a casual observer, the zones in which the robots tread appear to be chocked full of objects, from weird rocks to leftover remains of long-gone life.

"There are slow geochemical processes that can create spherical shapes and filamentous forms. The 'eye of the beholder' may guide us where to look...but that is not proof," Schultz advised.

Schultz explained that astronomer Percival Lowell, a keen observer who, in the late 1880s into the early 1900s, advocated that Mars was a populated world, once ironically said: "So easily are we the dupes of our own prejudice.

"This certainly is true for what we think we may see in these unprecedented close-up views of Mars [provided by the rovers]. Science requires testing and proving, not simply suggesting," Schultz concluded.

Recognizable pattern The identification of fossils is often difficult, explained Ron Greeley, Mars Exploration Rover team scientist from Arizona State University in Tempe, even by scientists observing them with the full spectrum of lab instruments.

"Remember that fossils are defined as the traces -- such as leaf imprints in rocks, or the remains, such as shells or bones -- of formerly living organisms. Typically, recognizable patterns are sought, such as bilateral symmetry," Greeley said. "Unfortunately, similar patterns often occur in rocks that result from non-biological processes, which make the identification more difficult."

On Mars, Greeley said, there is no reason to expect the same patterns as fossils that are seen on Earth. Nonetheless, patterns of some sort are being formulated by the astrobiological community -- so-called biomarkers – in the on-going search for life elsewhere. Furthermore, while the Athena science gear onboard the two Mars rover are great assets, "analyzing patterns and other features remotely is not so easy," he added.

For Greeley, Mars fossil hunting has a bottom line: Unless something really obvious pops out in the images and/or other information, "it's going to take a while to sift through the data and derive some clear answer."

There is a lot of interest in trying to see fossils in the Mars rover images, Greeley said. "The team is looking at the data fairly rigorously, but nothing has emerged along these lines."

Preserved in stone Prior to 21st century astronauts putting foot and exploration flag down on Mars, there is much that can be done remotely. Future on-the-surface rovers are already being designed, profoundly more capable than the golf cart-sized Spirit and Opportunity.

"Ultimately, it will take sample return of any putative 'fossils' to convince the scientists of the world. But we can tell a lot in situ [on-the-spot] before such a time," said James Garvin NASA Lead Scientist for Mars and Lunar Exploration in the Office of Space science at the space agency's headquarters in Washington, D.C. Garvin, a long-time fossil hunter himself, cautioned about the definition of the word. Fossils come in many varieties, Garvin advised, from the micro- and nano-fossils of single-celled primitive microbes, to preserved-in-stone bones

(Continued on page 4)

of organisms as big as automobiles.

"Searching for fossils also comes in many flavors, from microscopic siftings through tiny grains, to overland reconnaissance for suitable bedding settings to uncover bones," Garvin said.

Microscopic to macroscopic. Assuming that Mars rover data confirms the existence of sedimentary systems of rocks on Mars, searching for fossils can then take many forms, Garvin related. "One would involve the recognition that depositional environments were interrupted and that they are preserved at scales ranging from microscopic to macroscopic."

On Earth, such "preservational" environments are almost always sedimentary, but can include volcanic and impact 'sedimentary' environments.

"So, if the kind of putative sedimentary deposits we have identified on Mars from orbit are validated, then we can gainfully start our first searches for at least indirect, morphological [form and structure of plants and animals] signs of life in such localities," Garvin suggested.

However, expecting fossil formation to operate on Mars the same way as it does on Earth is not a sure bet, Garvin pointed out.

Nooks and crannies The recent finding by the Opportunity Mars rover of a very high concentration of sulfur in the rock outcrop at Meridiani Planum bodes well for biology and fossil hunting. The chemical form of this sulfur appears to be in magnesium, iron or other sulfate salts.

Moreover, Mars is rich in landscape where vestiges of life may be found.

"My overall fossil-hunting bias is heavily weighted to natural caves and fissures and overhangs," said Penelope Boston, Director, Cave and Karst Studies Program at New Mexico Institute of Mining and Technology in Socorro, New Mexico. "I know from personal experience how these environments serve as both original home for organisms and as great places to preserve the evidence," she said.

"I'm particularly excited about the sulfate results...because so much of the material we are looking at is in sulfur rich caves where gypsum and other sulfate minerals play a huge role in the biology and the subsequent preservation of traces of that biology," Boston observed.

Along with caves, Boston said some top-notch nooks and crannies on Earth to look for fossils are in things with vertical relief that slices down through layers, like canyon walls, fault escarpments, and river/stream outflow channels. For Mars and other crater-rich environments, obviously crater walls where things are excavated down to some deeper strata are first-rate sites.

"The best thing about these places is that large -- as in macroscopic -- buried fossilized material is usually weathering out of the outcrops. One can see them laying about and follow the fragments to the source," Boston said. "For microscopic fossils, of course, no clear obvious clues are usually present. The exception is large scale microbial mats like those that made stromatolites and algal travertiles and tufa."

Happy hunting ground Thanks to picture-taking Mars orbiters, snapshots of Newton Basin on Mars reveal it to be a site were ponded standing water appears to have been present, Boston said. That landscape feature is a great place to look for significant sedimentary rocks, "not to mention Martian critter remains," she added.

"That kind of a no-doubt-about-it pond with minimal shallow excavation could be a goldmine of microfossil material! I'd want to sample its beautiful rims ... and do a small core down through the middle somewhere," Boston explained.material! I'd want to sample its beautiful rims ... and do a small core down through the middle somewhere," Boston explained.

Another promising happy hunting ground for biologists on Mars may be in the cracks within so-called patterned ground or polygonal terrain.

"On Earth, the bottoms of these cracks can house organisms in a much more pleasant environment than the surface at large. Obviously, if such communities thrive or thrived on Mars, some of the evidence may well be at the bottom of these cracks," Boston said. "We have much imaging evidence of these terrains on Mars for comparison to the similar terrains here on Earth, not just at the poles but many other high latitude and high altitude places."

Place your bets So far there have been no shouts of "eureka!" from Mars rover scientists spotting a signature of past or present life.

"I flat out see no evidence for any fossils in our data," said Jim Rice, a Mars Exploration Rover team scientist and a planetary geologist from Arizona State University in Tempe. "If a trilobite, for example, evolved on Mars and we came across a rock with it, we could resolve it."

Rice noted that the twin Mars rover's each carry a Microscopic Imager. It has a resolution of 30 microns per pixel. That device, however, has the ability to only see objects that are about 100 microns across and above, he added.

"Fossil finding will be a very difficult job on Mars. I don't think robotic missions will do it," Rice said. "It will take astronauts and even then it will be a tough job," he said.

And that job ahead most likely means drilling and cracking a lot of rocks open. On Earth, Rice added, even when you go to a known fossil field location it still requires work to find them.

"We are a lot farther along in the game now that we have identified a rock outcrop on Mars that involved liquid water. We still have much to learn about where to go for any future fossil hunting on Mars. It will be sheer luck if robots discover conclusive evidence for fossils on Mars," Rice said, making the point: "I am putting my bets on astronauts."

Find this article at:

http://www.cnn.com/2004/TECH/space/03/17/creature.features/index.html

Bat Saliva May Offer Stroke Treatment

By Daniel Q. Haney
The Associated Press
Monday, February 9, 2004; 8:07 A.M.

San Diego– Considering the lack of good treatments for strokes, it probably is no surprise that researchers will consider must about anything. But still, vampire bat saliva?

New data released Saturday suggest that idea, farfetched as it sounds, actually may work.

Doctors would like to quickly dissolve the clots in grain arteries that cause about 0 percent of all strokes, the third leading cause of death behind heart disease and cancer. But their only widely available treatment, a bioengineered human protein called TPA, has drawbacks and is given to only about 5 percent of U.S. stroke victims.

If used improperly, the drug can trigger disastrous bleeding. One of its chief limitations is that it must be given within three hours of the start of stroke symptoms, Many victims, hoping their symptoms will go away, do not get to the hospital quickly enough.

So, in search of something better, researchers have been experimenting with another natural anticlotting substance, the saliva of Desmodus rotundus, the vampire bat. The hope is that the active protein, called desmoteplase, will be more precisely targeted at clots and can be used several hours longer after symptoms. begin.

In theory, desmoteplase may break up blood clots in the brain without affecting the rest of the body 's clotting system and with less risk of hemorrhaging inside the head.

Certainly it works for the bat, a one-ounce, grayish-brown creature that ranges over Central and South America and preys mostly on livestock. The protein keeps its victims' blood flowing clot-free so it can feed.

In the first pf two mid-size studies on the approach, doctors in Europe, Australia, and Asia randomly gave either a genetically engineered version of the saliva protein or dummy injections to 104 stroke victims. All had suffered their strokes within the previous three to nine hours.

Dr. Steven Warach, chief of stroke therapy at the National Institute of Neurological Diseases and Stroke, presented the results at a meeting of the American Stroke Association in San Diego.

The researchers tested several different doses. Sixty percent of those getting the largest amount had an excellent recovery after three months, compared with 22 percent in the untreated comparison group.

"This is a promising new stroke therapy," he said.

The study was sponsored by Paion, a German company developing desmoteplase. A similar study, still under way, is expected to enroll more than 100 patients at 17 hospitals in the United States. Already being planned is a much larger study intended to prove the drugs safety and effectiveness.

"These are very important results, because they suggest that with a different drug we can extend the therapeutic window from three hours, which is pretty severe when trying to get patients to treatment," said Dr. Michael Moskowitz of Massachusetts General Hospital.

Doctors were especially impressed that only one patient getting the saliva protein suffered brain bleeding.

"It's very good that bleeding is not occurring,' said Dr. Daniel Hanley of Johns Hopkins University. "That, of course, will require further study to be sure."

The researchers gave MRI scans and limited treatment to patients who had significant amounts of brain tissue that was a risk of dying but still was potentially salvageable. Warach said about half of all stroke patients seen after three hours fit this criteria.

"There are patients we can help after three hours and maybe even after nine hours," Warach said.

SUBTERRA 15

Written by Steve Beleu

The cold has deep roots here.
Summer is no more than a veil
Lightweight and thin thrown across
Chill fields whose caves plunge
Down through bedrock as deeply
As mountains thrust into the sky
Above them. We hike to the cave
Two long days through thick forests
Over trails that we see too often

Just barely etched into meadows and talus.
Then we come to the cave: snow upon ice
Surrounds its 4-feet high entrance.
Crawling in, pushing, pulling, chimneying,
We stoop, walk, and enter two domerooms
Each 80 feet high, chambers of limestone
White as the winter world outside.
Surely gods dwelled in this luxury
When they walked upon earth's mountains
Judging human foibles and crimes
And laughing at our clumsy mistakes.
But this cave is as quiet now as the silence
Living within all caves that no longer
Grow by any process--dissolution by water
Or acid eating into stone-encircled darkness
Darker than the cold void between planets.
Are these quiet, still chambers the tombs
Of the long-vanished gods of earth?.

****

CAVE ECHOES

Steve Beleu

Forget great cathedrals and temples,ancient monasteries,
Ten-feeet-sware huts, and forest branches-and-leaves—
In our caves we can hear faint primal echoes
Of the creation of the universe and birth of life.

BAT COUNT 2000-2004 CENTRAL OKLAHOMA GROTTO

MYOTIS VELIFER (Cave Bat)

CAVE NAME	CAVE NUMBER	2/19 2000	2/17 2001	2/16 2002	2/8&16 2003	2/5 2004
Jester	GR-011	22330	14186	12561	17844	25970
Selman: C.O.G.	WD-041	11379	32357	4484	12118	9207
Selman: U.C.O.	WD-041	41713	40339	71912	52565	68103
Washita Bat: North	WA-039	nc	73	62	173	83
Washita Bat: Center	WA-038	nc	11026	602	2304	6322
Washita Bat: South	WA-040	nc	15	11448	7420	1460
Wired	GR-020	63	117	6	0	nc
TOTALS		75485	98113	101075	92424	111145

CORYNORHINUS TOWNSENDII PALESCENS (Big-eared)

CAVE NAME	CAVE NUMBER	2/19 2000	2/17 2001	2/16 2002	2/8&16 2003	2/5 2004
Jester	GR-011	6	0	12	13	9
Selman: C.O.G.	WD-041	0	0	0	0	0
Selman: U.C.O.	WD-041	0	0	0	0	0
Washita Bat: North	WA-039	nc	0	0	0	1
Washita Bat: Center	WA-038	nc	0	0	0	0
Washita Bat: South	WA-040	nc	0	0	0	0
Wired	GR-020	0	0	0	0	nc
TOTALS		6	0	12	13	10

PIPISTRELLUS SUBFLAVUS (Pipistrel)

CAVE NAME	CAVE NUMBER	2/19 2000	2/17 2001	2/16 2002	2/8&16 2003	2/5 2004
Jester	GR-011	61	116	56	44	52
Selman: C.O.G. (area)	WD-041	29	48	44	22	47
Selman: U.C.O. (area)	WD-041	10	10	18	46	39
Washita Bat: North	WA-039	nc	41	0	39	42
Washita Bat: Center	WA-038	nc	3	0	0	4
Washita Bat: South	WA-040	nc	32	0	0	66
Wired	GR-020	0	1	4	0	nc
TOTALS		100	219	122	151	184

EPTESICUS FUSCUS (Big Brown)

CAVE NAME	CAVE NUMBER	2/19 2000	2/17 2001	2/16 2002	2/8&16 2003	2/5 2004
Jester	GR-011	0	0	0	0	0
Selman: C.O.G.	WD-041	0	0	0	0	1
Selman: U.C.O.	WD-041	0	3	0	0	1
Washita Bat: North	WA-039	nc	0	0	0	0
Washita Bat: Center	WA-038	nc	0	0	0	0
Washita Bat: South	WA-040	nc	0	0	0	0
Wired	GR-020	0	0	0	0	nc
TOTALS		0	3	0	0	2

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. 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!*

Happy Easter! Don't forget to come to the April meeting at Dale Amlee's house on April 9.

Central Oklahoma Grotto
C/O 3208 Gettysburg Drive
Altus, Oklahoma 73521