



Texas Cave Conservancy

Cave Management Activities at Westside Preserve Cedar Park, Texas 2009 Report



Prepared by: Mike Walsh
President Texas Cave Conservancy
512-249-2283 Tcc-caves@austin.rr.com

Texas Cave Conservancy
1800 West Park
Cedar Park, Texas 78613
October 2009



September 26, 2009

Enclosed you will find the Texas Cave Conservancy annual Westside Preserve Report. This year we are including information on several of the caves outside of the Westside Preserve including the Discovery Well Preserve. These caves are all related and should be considered one unit for cave monitoring and protection.

Toward that end, we are working with Forestar to conduct clean up work in the following cave preserves: Forrest Trail, Pebblebrook, Primerose and the Marigold Cave Preserve. Fire ant treatment and cave monitoring is also being conducted in these sites. Overall, there is no evidence of any significant problem in the entire Buttercup Creek Cave system.

Vandalism has not been a problem this year. Regular inspection of the sites by the Texas Cave Conservancy allows us to find and mitigate problems when observed. In addition, more public visitation on the trails serves to protect the caves.

CAVE DAY activities continue to assist in the cave protection. The community involvement greatly assists the TCC in the protection of the cave related species. Over 800 visitors attended the public education CAVE DAY event in April. This was the first time that the TCC had the Dies Ranch Treasure Cave open. The TCC developed a nine-minute Power Point presentation on the Westside Cave Preserve. We have included a CD Copy with this report.

Overall, the fire ant activity surrounding the endangered species cave is lower than in past years. The lack of rain seems to have reduced the overall population. We have been careful in checking within the caves for fire ants during our monitoring work. It is a pleasure to work with the City of Cedar Park and with Forestar, (Lumberman's Investment). Please contact us if you have any questions or if you wish to visit some of the preserves. Thank you for working with the Texas Cave Conservancy.

Mike Walsh President – Texas Cave Conservancy



Preserving Texas wildlife

Written by Beth Wade and Mark Collins Friday, 18 July 2008



Williamson County officials are trying to balance the county's inevitable growth and protect several endangered species found west of IH 35. The Williamson County Conservation Foundation, which was established in December 2002, is working to maintain that balance by creating a Regional Habitat Conservation Plan.

"We are basically, through the plan, trying to preserve caves and bird habitat so that if everything else got developed, it wouldn't destroy the species, because that is what the law requires," said Valerie Covey, precinct three county commissioner and WCCF board vice president.

Endangered species

The RHCP will offer a simplified and quicker way for individuals to comply with development permitting requirements from the United States Fish and Wildlife Service. With the RHCP, the foundation can obtain a countywide 10A permit into which developers can buy. That means if a developer — private or public — wanted to develop land with an endangered species habitat, he could go to the county for a permit, rather than to Fish and Wildlife.

"We thought it was a good fit for what Williamson County is about, but it makes sense for each individual," Covey said. "It serves the purpose of the law and helps with development. Any time you build on the west side of IH 35, you have a good chance of hitting either a bird or bug habitat."

Endangered species	
<p>Golden-cheeked Warbler Listed as endangered: May 5, 1990 Length: 4.5 inches Habitat: Central Texas woodlands with cedar, oak and other hardwood trees</p>	
<p>Black-capped Vireo Listed as endangered: Oct. 6, 1987 Length: 4.5 inches Habitat: Rangelands with scattered clumps of shrubs</p>	
<p>Georgetown Salamander Listed as endangered: A candidate for listing Length: 7.6 centimeters Habitat: Fresh-water springs in the Georgetown area</p>	
	<p>Bone Cave Harvestman Listed as endangered: Sept. 16, 1988 Length: 1.4 to 2.7 millimeters Habitat: Inside caves under large rocks or moist areas</p>
	<p>Tooth Cave Ground Beetle Listed as endangered: Sept. 16, 1988 Length: 7-8 millimeters Habitat: Inside caves or sinkholes, under rocks or on damp walls and floors</p>
	<p>Coffin Cave Mold Beetles Listed as endangered: Sept. 16, 1988 Length: 7-8 millimeters Habitat: Inside caves under large rocks or moist areas, only found in Williamson County</p>

Source: Texas Parks and Wildlife, www.tpwd.state.tx.us

Salamander photo courtesy Williamson County; Bone Cave Harvestman and Tooth Cave Ground Beetle photos by Robert and Linda Mitchell; Coffin Cave Mold Beetle photo courtesy Kemble; White; Black-capped Vireo photo courtesy Texas Parks and Wildlife; Golden-cheeked Warbler photo courtesy John

The goal of the plan is to provide enough habitats for the endangered bug species that it could eventually be removed from the endangered species list, said Kemble White, a scientific consultant from SWCA Environmental Consultants.

“The only way to reconcile the growth issues with the need to protect open space is to plan on a regional basis,” White said. “It creates an entity that can step back, take stock of the entire area, and say, ‘Yes, we want growth, but we also want to protect these areas.’”

The foundation has been working on the RHCP for four years and submitted a draft of the plan and an Environmental Impact Statement to the U.S. Fish and Wildlife Service. The plan was available for public review until July 17.

Precinct Three County Commissioner candidate Gregory Windham said the plan makes it too easy for “developers to just write a check and destroy whatever they want. Of course you have to develop some of it. But I think there is already an entity in place on the federal level. I don’t see a reason to create more government and more bureaucracy when there is something already there to protect the wildlife.”

WCCF will gather all of the public feedback and take it into consideration before resubmitting the plan to USFW for final approval.

The county hopes to have its permit by October, after citizen comments have been addressed.

Interested individuals can stay up to date on the plan’s progress at www.wilcogov.org/wccf.

Protecting the animals

Because of West Williamson County’s karst landscaping — an area that has a large number of caves, sinkholes, fissures and underground streams — the area is home to several types of endangered cave bugs, including the Bone Cave Harvestman, the Tooth Cave Ground Beetle and the Coffin Cave Mold Beetles. The beetle species are exclusive to Williamson County.

“There are [species] that are endemic, meaning they only live in this little outcrop,” White said. “From a state or a North American perspective, it is a very small area. You will not find [the Coffin Cave Mold Beetle] anywhere else in the world.”

The county purchased the 145-acre Twin Springs Preserve near Lake Georgetown in February for \$2.3 million. Scientists found endemic cave bugs, the Golden-cheeked Warbler and the Georgetown Salamander, a relative of the Barton Springs Salamander, on the preserve, White said. The bugs and Golden-cheeked Warbler are both on the endangered species list. The salamander could be added in the next five years, White said.

Cave capital

There are approximately 6,000 caves in Texas, and nearly 700 of them are in Williamson County, White said.

In fall 2005, the county began management of Cobb’s Cavern, a 64-acre conservation easement approximately 6 miles northeast of Georgetown on Hwy. 195 — the owner of that land sold the county his development rights.

There are also two known caves on the Twin Springs Preserve, White said. With other scientists from SWCA, White determined there were more caves on the site, using geophysical imaging to look into the ground.

In Williamson County, cave preservation is different from bird habitat preservation because the endangered birds are found throughout the region, while the karst species are found only in this area.

“We will have enough of these [caves] that the species in the cave should be protected,” Covey said. “If everything else was developed, we would have these caves that would keep these species from being extinct.”

The RCHP’s goal is to set aside approximately 60 caves that will never be developed.

This plan does not mean that there will only be 60 caves out of 700 left; it would protect 60 caves that biologists feel could fully support the species, White said.



Funding species protection

The RHCP began with a federal planning grant of \$1.2 million and \$400,000 from the county and was designed to be self-sustaining.

“That grant was basically used for us to establish the plan,” Covey said. “Consultants have to be hired, we have environmental lawyers who are involved to help develop and write the plan and we deal with Fish and Wildlife all the time in trying to get this approved, so there are quite a lot of costs.”

Monies paid into the foundation for mitigation by developers will be used to acquire more land and monitor and maintain preserves.

Participation from developers is strictly voluntary. Developers who do not wish to participate are able to seek a permit from Fish and Wildlife on their own.

“Since we don’t have the permit yet, we haven’t seen the involvement that we are going to have,” Covey said. “We anticipate it being very good because of the ease in getting the permit from the county, rather than having to deal with Fish and Wildlife.”

Sources: Endangered Species Act of 1973, U.S. Fish and Wildlife Service

“Endangered” defined

Endangered species, as defined by the Endangered Species Act of 1973, are any species in danger of extinction other than a species that is “determined by the secretary of the interior to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.”

The ESA uses the following criteria to determine if a species should be considered:

- The threat or present destruction of a species habitat
- Overuse of the habitat for commercial, recreational, scientific or educational purposes
- Disease or predators harming the species
- Inadequacy of regulatory mechanisms
- Other natural or human factors affecting the species’ continued existence.

There are two methods of getting a species on the endangered species list.

Petition process: Any individual can petition the Secretary of the Interior to add a species to the list.

Candidate assessment process: U.S. Fish and Wildlife Service biologists identify species as listing candidates.

Caves in Cedar Park

The Texas Cave Conservancy is doing its best to make sure that caves in Cedar Park are preserved, but also remain accessible to the public.

“There are approximately 700 known caves in Williamson County, and this is about the only place where you can really come and go hiking and read about the caves and where we have activities available,” Texas Cave Conservatory member Mike Walsh said. “It’s very rare to have parks that are open like this.”

The Discovery Well Cave Preserve is a 110-acre preserve located at the corner of Anderson Mill Road and Lime Creek Road. The preserve houses 10 separate caves and is one of the last known homes of the Tooth Cave Ground Beetle. A master plan showing improved trails, a nature center, parking and picnic areas has been approved, but funding for the design has not yet been designated.

The Westside Cave Preserve features a wide variety of caves sprinkled throughout the west side of Cedar Park. TCC recently placed more than 40 educational signs at the entrance to the caves. Signs include information on endangered species, cave life and plants that make their home in the caverns.

To visit these caves, stop by the Cedar Park Parks and Recreation office at 715 Discovery Blvd., Ste. 111 and pick up a handout with detailed maps and additional cave information.



CAVE DAY Saturday – September 12, 2009

Cedar Park is home to some pretty unusual characters, but one of the most reclusive may be Ricky Rhadine. That name doesn't ring a bell? Well, perhaps that's because Ricky is a bug, a cave beetle to be exact. In fact, **Cedar Park** is the only place in the world where you can find this rare cave beetle. This will be our year at our new site, the **Westside Elementary** located at the corner of **Nelson Ranch Road** and **Ryan Jordan Street**, located off Lakeline Boulevard. CAVE DAY is sponsored by the **City of Cedar Park- Parks & Recreation Department** and hosted by the **Texas Cave Conservancy**. The event is from 10:00 A.M. –4:00 P.M. There is no charge.

On Saturday, September 12, 2009 the TCC will offer cave related activities at five sites. Information on all of the sites is available at the **Westside Elementary**. Come by and choose what site or sites you want to visit.

One hike starts at **Kay Redden Park** and visits seven caves in the **Buttercup Cave Preserve**. There is no cave entry on this site You may also come on out and check out the preserve on your own any time throughout the year. Educational signs have been installed at each cave on this self-guided hike.

The second site will be the **Texas Cave Conservancy** owned **Avery Ranch Cave**. Cavers will assist you while you are in the cave. Allow for twenty minutes to drive to the cave.



The third site will be at the **Twin Creeks Historical Area**. This new park has a historical log cabin, beautiful springs, tall trees, running water year round and even an Indian Shelter Cave available for visitation. Allow a fifteen minute to drive to the site. It is available all day.



The second hike will be at the new **City of Cedar Park- Discovery Well Cave Preserve**. On this self guided tour, the caves and trails are marked by flags. Educational signs have been installed at each cave. There is no cave access on this site. There are over three miles of trails on this site. Access to the site will start from the **Westside Elementary**.

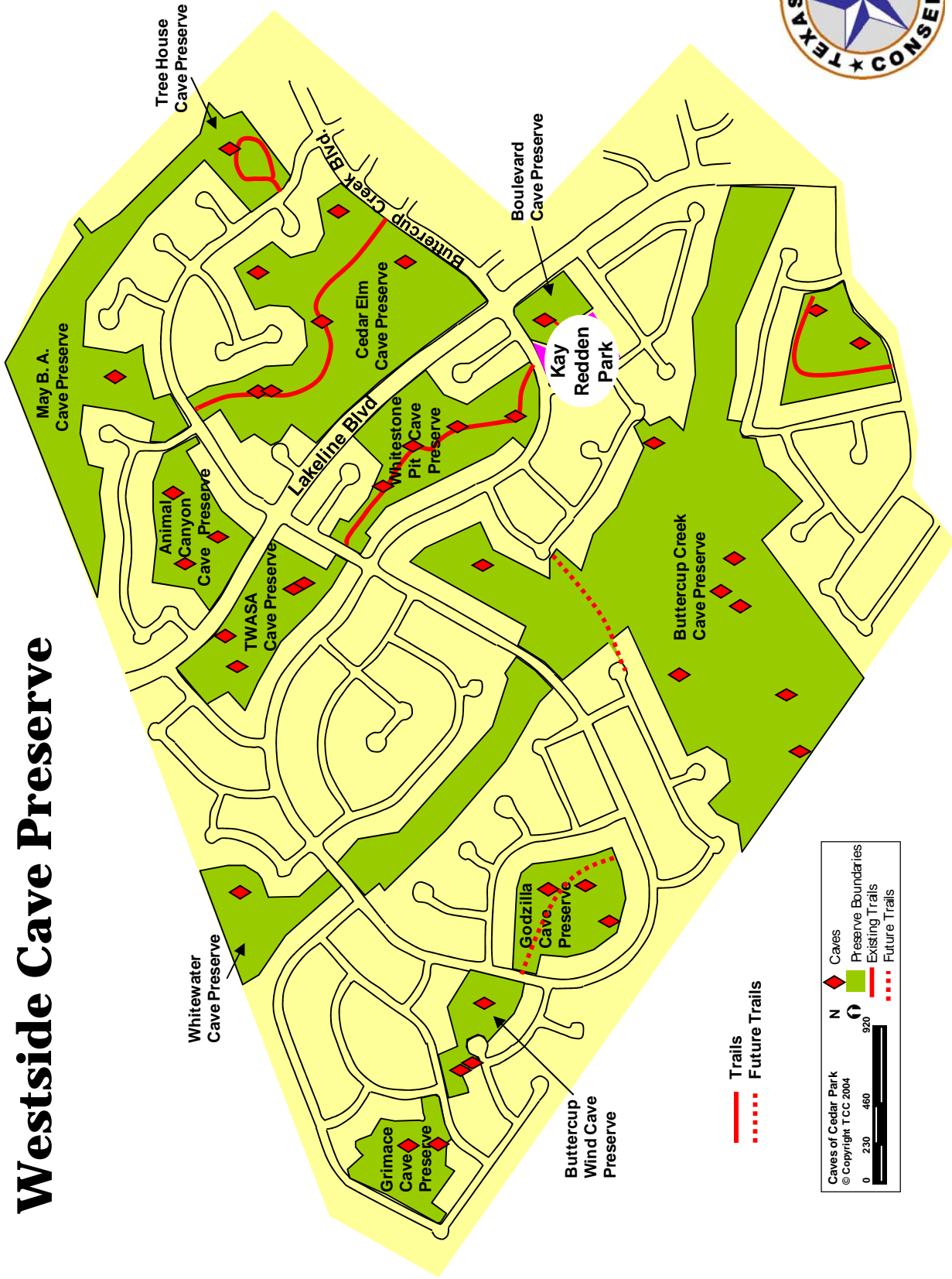
This year we have a fifth site where you will be able to enter another cave. This year, the TCC owned **Dies Ranch Treasure Cave** may be entered. Allow for ten minutes to drive from the **Westside Elementary** to the parking area.



The Westside Elementary is located at the corner of Nelson Ranch Road and Ryan Jordan Street, located east of Lakeline Boulevard in Westside Preserve.

For additional information, contact the City of Cedar Park-Parks & Recreation Department. 512-401-5500.

Westside Cave Preserve



Caves of Cedar Park
 © Copyright TCC 2004

0 230 460 920

N

Caves

Preserve Boundaries

Existing Trails

Future Trails

Trails
 Future Trails



KEY	ITEM
1	Park Amenities
2	Walking Paths
3	Two-way Entry with Vehicle Gate
4	Right-of-Way with Vehicle Gate
5	Temporary Parking Area
6	Information Desk
7	Restrooms
8	North-Northwest
9	7' Metal Vehicle Fence
10	Vehicle Gate
11	Spade Creek Enclosed with Fence
A	Unexcused Closure
B	Hunter-Lena Class
C	Discovery Hill
12	Blue Block Area
13	Blue Parking
14	Discovery Entry Access
15	Perimeter of 6' Bulbous Fence with 100' Buffer
16	Maintenance Vehicle Entry Gate
17	6' Concrete Path
18	Older Fungus Area of Sp. Cave
19	Older Fungus Area of Cave
20	Little Creek Cave
21	Overlook and Cave
22	Jurassic Rocks Cave
23	Zip Zip Cave
24	Group Group Site
25	Hole in the Dome
26	Upper Fossil Oaks Cave

SWINGLOUT
 Planning & Landscape Architecture
 1001 West Loop West
 Suite 200, Fort Worth, TX 76102
 Phone: 817.339.1111
 www.swinglout.com

THE CITY OF CEDAR PARK
CURT RAMDA
 The Department of Parks & Recreation Director



Discovery Well Preserve City of Park (Under Development)



CAVE DAY 2009

CAVE DAY Saturday - April 18, 2009

Cedar Park is home to some pretty unusual characters, but one of the most reclusive may be Ricky Rhadine. That name doesn't ring a bell? Well, perhaps that's because Ricky is a bug, a cave beetle to be exact. In fact, Cedar Park is the only place in the world where you can find this rare cave beetle. This was our first year at the new assembly site, the Westside Elementary School. It is located at the corner of Nelson Ranch Road and Ryan Jordan Street. Over 800 visitors took part in some of the following activities: hiking into the Westside Cave Preserve, visiting the Twin Creeks Historical Area, entering Avery Ranch Cave or entering Dies Ranch Treasure Cave.



CAVE DAY Saturday – September 12, 2009

The day opened with reports of 100% chance of rain and rain it did. Over three inches poured down on Cedar Park. Even in the rain over 180 visitors came out to explore the Avery Ranch Cave and the Dies Ranch Treasure Cave. Cedar Park is the Texas Cave Capital and the cave related species have their support. Public education equals public support.

Texas Cave Conservancy

TCC Monthly Inspections
October, 2008-September, 2009

October 20, 2008

Surface Temperature 71.7 Relative Humidity 76.4% Weather Conditions Clear

	Temperature	Humidity	Rhadine	Fire ants
Whitestone Pit	62.4	72.7%	1	0
Godzilla Cave	66.9	71.7%	0	0
Harvestman Cave	71.9	69.4%	0	0

November 15, 2008

Surface Temperature 74.2 Relative Humidity 73% Weather conditions Clear

	Temperature	Humidity	Rhadine	Fire ants
Animal Canyon	72.4	68.9%	1	0
TWAS Cave	73.9	59.4%	0	0
May B A Cave	73.2	66.3%	2	0
Good Friday	71.3	73.2%	0	0

December 17, 2008

Surface Temperature 66.3 Relative Humidity 87.9% Weather Conditions Overcast

	Temperature	Humidity	Rhadine	Fire ants
Tree House Cave	73.2	71.9%	0	0
Boulevard Cave	69.0	74.8%	0	0
Nelson Ranch Cav	72.2	74.3%	0	0
Whitewater Cave	71.6	73.3%	0	0

January 22, 2009

Surface Temperature 43.7 Relative Humidity 86.9% Weather Conditions Light rain

	Temperature	Humidity	Rhadine	Fire ants
Animal Canyon	73.1	72.4%	1	0
TWAS Cave	76.4	75.8%	0	0
May B A Cave	71.9	69.2%	0	0
Good Friday Cave	69.8	77.4%	1	0

February 5, 2009

Surface Temperature 39.7 Relative Humidity 56.2% Weather Conditions Cloudy

	Temperature	Humidity	Rhadine	Fire ants
Animal Canyon	71.9	64.7%	0	0
TWAS Cave	76.3	55.4%	0	X
May B A Cave	75.3	62.0%	0	0
Good Friday Cave	70.9	69.2%	0	0

March 27, 2009

Surface Temperature 69.5 Relative Humidity 74.3% Weather Conditions Cloudy

	Temperature	Humidity	Rhadine	Fire ants
Tree House Cave	72.6	71.7%	1	0
Boulevard Cave	68.3	69.4%	0	0
Nelson Ranch Cave	73.2	66.1%	0	0
Whitewater Cave	70.5	72.9%	0	0

April 11, 2009

Surface Temperature 66.0 Relative Humidity 90.4% Weather Conditions Clear

	Temperature	Humidity	Rhadine	Fire ants
Whitestone Pit	69.9	77.1%	0	0
Godzilla Cave	67.3	84.2%	0	0
Harvestman Cave	73.7	69.4%	0	0

May 8, 2009

Surface Temperature 78.3 Relative Humidity .2% Weather Conditions Overcast

	Temperature	Humidity	Rhadine	Fire ants
Animal Canyon	70.9	63.9%	1	0
TWAS Cave	72.6	69.4%	0	0
May B A Cave	72.7	54.3%	0	0
Good Friday	75.7	71.4%	1	0

June 8, 2009

Surface Temperature 77.9 Relative Humidity 76.2% Weather Conditions Light rain

	Temperature	Humidity	Rhadine	Fire ants
Tree House Cave	74.2	66.9%	0	0
Boulevard Cave	71.9	73.2%	0	0
Nelson Ranch Cave	73.6	65.3%	0	0
Whitewater Cave	73.5	72.4%	0	0

July 13, 2009

Surface Temperature 84.4 Relative Humidity 62/8% Weather Conditions Cloudy

	Temperature	Humidity	Rhadine	Fire ants
Whitestone Pit	67.9	64.3%	0	0
Godzilla Cave	71.3	69.4%	0	0
Harvestman Cave	72.6	69.1%	0	0

August 21, 2009

Surface Temperature 75.2 Relative Humidity 89.4% Weather Conditions Clear

	Temperature	Humidity	Rhadine	Fire ants
Animal Canyon	79.4	65.3%	3	0
TWAS Cave	74.8	64.9%	0	0
May B A Cave	74.3	64.6%	0	0
Good Friday	71.4	78.4%	0	0

September 14, 2009

Surface Temperature	Relative Humidity	Weather Conditions		
87.7	55.4%	Clouds		
	Temperature	Humidity	Rhadine	Fire ants
Tree House Cave	71.0	61.5%	0	0
Boulevard Cave	73.9	68.6%	0	0
Nelson Ranch Cave	71.8	59.4%	0	0
Whitewater Cave	73.9	58.4%	1	0



**Biological Monitoring - Buttercup Creek Caves,
Williamson County, Texas.**

Grimace Cave			
Grimace Cave Preserve		Williamson County, Texas	
Date:	November 17, 2008		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 15 mins			
Cave Temperature:	63F	Cave Humidity:	47%
<u>Species:</u>			
Amphipods	3		
Coleoptera	6		
Flatworms	2		
Crickets	100+		
Ispods	1		
Millipedes	6		

Whitewater Cave			
Whitewater Cave Preserve		Williamson County, Texas	
Date:	Nov 17, 2008		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 25 mins	Outside Temp/Humidity: 62F/49%		
Cave Temperature:	71F	Cave Humidity:	71%
<u>Species:</u>			
Rhadine persephone	1		
Coleoptera	1		
Crickets	25		
Millipedes	1		
Spiders	3		
Springtails	18		

Nelson Ranch Cave			
Nelson Ranch Cave Preserve		Williamson County, Texas	
Date:	Nov 17, 2008		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	Replaced Lock
Fire Ants:	No	Trash:	Yes
Time Spent: 30 mins	Outside Temp/Humidity: 66F/53%		
Cave Temperature:	71F	Cave Humidity:	64%
<u>Species:</u>			
Amphipods	3		
Rhadine persephone	2		
Coleoptera	1		
Crickets	25		
Isopods	1		
Millipedes	2		
Spiders	2		
Springtails	1		

Harvestman Cave			
Harvestman Cave Preserve		Williamson County, Texas	
Date:	Dec 14, 2008		
Weather Conditions:	Sunny, clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 15 mins	Outside Temp/Humidity: 73F/69%		
Cave Temperature:	70F	Cave Humidity:	81%
<u>Species:</u>			
Amphipods	2		
Rhadine persephone	4		
Coleoptera	2		
Centipedes	2		
Crickets	18		
Millipedes	8		
Spiders	6		
Springtails	5		
Snails	2		

Maybe A Cave			
Maybe A Cave Preserve		Williamson County, Texas	
Date:	Dec 14, 2008		
Weather Conditions:	Sunny, clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	Yes
Time Spent: 30 mins	Outside Temp/Humidity: 75F/63%		
Cave Temperature:	72F	Cave Humidity:	87%
<u>Species:</u>			
Amphipods	2		
Rhadine persephone	2		
Coleoptera	1		
Centipedes	3		
Crickets	12		
Flies	2		
Flatworms	3		
Isopods	3		
Millipedes	7		
Spiders	5		
Springtails	30		
Snails	3		
Salamanders	1		
Mouse	1		

Animal Canyon Cave			
Animal Canyon Cave Preserve		Williamson County, Texas	
Date:	Dec 14, 2008		
Weather Conditions:	Sunny, clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 45 mins	Outside Temp/Humidity: 79F/68%		
Cave Temperature:	72F	Cave Humidity:	81%
<u>Species:</u>			
Rhadine persephone	1		
Coleoptera	1		
Centipedes	1		
Crickets	25		
Millipedes	5		
Spiders	2		
Springtails	12		
Snails	1		
Salamanders	1		
Bats	3		

Tree House Cave			
Tree House Cave Preserve		Williamson County, Texas	
Date:	Jan 25, 2009		
Weather Conditions:	Overcast	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	Yes
Time Spent: 20 mins	Outside Temp/Humidity: 38F/84%		
Cave Temperature:	70F	Cave Humidity:	67%
<u>Species:</u>			
Rhadine persephone	1		
Crickets	35		
Isopods	2		
Spiders	3		
Springtails	13		

TWAS Cave			
TWAS Cave Preserve		Williamson County, Texas	
Date:	Jan 25, 2009		
Weather Conditions:	Overcast	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	Yes
Time Spent: 30 mins	Outside Temp/Humidity: 39F/84%		
Cave Temperature:	68F	Cave Humidity:	71%
<u>Species:</u>			
Amphipods	1		
Coleoptera	2		
Crickets	15		
Isopods	2		
Spiders	4		
Springtails	7		

Good Friday Cave			
Good Friday Preserve		Williamson County, Texas	
Date:	Jan 25, 2009		
Weather Conditions:	Overcast	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 30 mins	Outside Temp/Humidity: 38F/85%		
Cave Temperature:	70F	Cave Humidity:	73%
<u>Species:</u>			
Amphipods	1		
Rhadine persephone	1		
Crickets	30		
Flies	1		
Millipedes	1		
Spiders	4		
Springtails	15		
Snails	1		

Marigold Cave			
Marigold Cave Preserve		Williamson County, Texas	
Date:	Feb 14, 2009		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	Yes
Time Spent: 45 mins	Outside Temp/Humidity: 61F/67%		
Cave Temperature:	72F	Cave Humidity:	73%
<u>Species:</u>			
Amphipods	2		
Coleoptera	1		
Centipedes	3		
Crickets	10		
Isopods	3		
Millipedes	3		
Spiders	6		
Springtails	9		
Snails	1		

Buttercup Wind Cave			
Buttercup Wind Cave Preserve		Williamson County, Texas	
Date:	Feb 14, 2009		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	Replaced Lock
Fire Ants:	No	Trash:	No
Time Spent: 20 mins	Outside Temp/Humidity: 63F/66%		
Cave Temperature:	69F	Cave Humidity:	54%
<u>Species:</u>			
Centipedes	2		
Crickets	25		
Isopods	5		
Millipedes	2		
Spiders	5		
Springtails	15		

Boulevard Cave			
Boulevard Cave Preserve		Williamson County, Texas	
Date:	Feb 14, 2009		
Weather Conditions:	Clear	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Time Spent: 35 mins	Outside Temp/Humidity: 66F/65%		
Cave Temperature:	72F	Cave Humidity:	78%
<u>Species:</u>			
Rhadine persephone	1		
Crickets	17		
Flatworms	2		
Isopods	5		
Spiders	6		
Springtails	11		
Snails	1		

Special Cave Biology Report

This special report was conducted in the summer of 2008 and is included in this report to have a more complete picture of the biology of the Westside Cave Preserve area. The cave monitoring report was conducted by P. Paquin & M. Archambault on July 20, 2008.

Primrose Cave			
Primrose Cave Preserve		Williamson County, Texas	
Date:	July 20, 2008		
Weather Conditions:	Sunny	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Cave Temperature:	92F	Cave Humidity:	75%
<u>Species:</u>			
Collembola	3		
Cicurina eyeless	4		
Achaearanea porteri (spider)	3		
Hahnildae (spider)	2		
Cicurina varians	1		
Milepede (not Speodesmus)	1		
Eidmanella (spider)	3		
Ceutophilus	10		
Pseudouroctenus reddelli	1		
Toad	1		
Small snake	1		

Bev's Grotto Cave			
Primrose Cave Preserve		Williamson County, Texas	
Date:	July 20, 2008		
Weather Conditions:	Sunny	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Cave Temperature:	85F	Cave Humidity:	84%
<u>Species:</u>			
Cicurina eyeless	10		
Achaearanea porteri (spider)	2		
Symphyla	1		
Eidmanella (spider)	1		
Ceutophilus	50		
Pseudouroctenus reddelli	2		

Marigold Cave			
Marigold Cave Preserve		Williamson County, Texas	
Date:	July 20, 2008		
Weather Conditions:	Sunny	Gate:	OK
Chemicals or Sewage:	No	Lock	OK
Fire Ants:	No	Trash:	No
Cave Temperature:	73F	Cave Humidity:	100%
<u>Species:</u>			
Collembola	4		
Cicurina eyeless	4		
Rhadine	1		
Cicurina varians	3		
Texoredellia	1		



This year the Texas Cave Conservancy has included a Westside Cave Preserve related CD. This includes the 2009 Discovery Well Report and the Texas Cave Conservancy nine- minute Power Point presentation on the Westside Cave Preserve, TCC President, Mike Walsh interviews Mike Warton of Mike Warton & Associates, Barry Allison representing Lumberman's Investment (now Forestar) and Curt Randa, the Cedar Park-Parks & Recreation Director. To play this CD it is necessary to open it as a Power Point and not just to click on the icon. Other related documents are included on this CD.

CD Index:

Cave Management Activities at the:
Westside Preserve-Cedar Park, Texas 2008-2009

Cave Management Partnerships Power Point
The Westside Cave Preserve
Cedar Park, Texas

Westside Cave Preserve Map

Discovery Well Map

Tooth Cave Ground Beetle
Rhadine persephone

Cedar Park Parks