

# THE ENVIRONMENTOR

## 2017 The 150th Anniversary of the Chisholm Trail

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The Internet Site for Environmental Information in Oklahoma

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According to Steven H. Dortch, after the Civil War, there was an overabundance of cattle throughout southern Texas which were needed (with an economic incentive) in the North and East, but the closest trail-head was in Kansas. During the heyday of the Chisholm Trail (1867-1873), drovers goaded herds of 500 to 10,000 head of cattle north to the Red River:

*"The Chisholm Trail crossed from Texas over into Indian Territory at Red River Station, near present Ringgold, Texas, heading north. Along the way it passed Fleetwood Store, Blue Grove, Reid Store, Old Suggs Camp Ground and Tank, Monument Hill, Old Duncan Store, Cook Brothers Store, and Silver City on the South Canadian River. North of Silver City, the trail divided. The western route, primarily for freight and stages, curved slightly northwestward, ran through Concho, Fort Reno, and Kingfisher Stage Station, and then turned northeast. The eastern branch, used primarily for cattle, left Silver City, curved slightly northeastward, passed west of present day Mustang, crossed through Yukon, and passed to the west of Piedmont, crossing the Cimarron where Kingfisher Creek joins that river. The eastern trail rejoined the western trail at Red Fork Ranch, or Dover Stage Stand, now the town of Dover. North of Dover the trail passed by Buffalo Springs Stage Station (near present Bison), Skeleton Ranch (near Enid), Sewell's Ranch (near Jefferson), and Lone Tree (near Renfrow), before heading into Kansas south of Caldwell."*



Several factors came together to end the use of the Chisholm Trail: fencing of the Cherokee Strip, the cattle contracted Texas fever (*Babesia*, a bovine parasite), a blizzard, and The Land Run of 1889 in Oklahoma. For a lot more information including the rest of the quoted article visit the following website: <http://chisholmtrail150.org/trail-history/oklahoma-trail/>.

For information about Chisholm Trail events go to Page 3 of this issue.

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## Not an Endorsement , but ...



## TENTH ACRE FARM

Tenth Acre Farm has a **free weekly newsletter** that includes featured posts and trending articles on all things micro-farm- and homestead-related.

When you join the 1,000s of micro-farmers who already receive the newsletter, you will get the **Tenth Acre Farm – A Year in Pictures Ebook** for free!

<https://www.tenthacrefarm.com/start-here/>



**HOMESTEAD**  
*Shopping Guide*

Learn from our mistakes before you buy!  
 search the products and resources  
 that we personally use and love

TenthAcreFarm.com

## Quiz!! Quiz!! Quiz!!

What is the common name of this bird?  
 Is this bird a male or a female?



*Photo from All About Birds*

Hint: This is a bird you might see if you are hiking at the Salt Plains National Wildlife Refuge.

Answer on Page 4



An environmental education newsletter for the citizens of Oklahoma sponsored by the Department of Biology at Oklahoma City University. Items appearing in this newsletter do not necessarily reflect the opinions or endorsement of the sponsoring organization.

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Download your EnvironMentor Newsletter in pdf form from:  
<http://www.okcu.edu/environmentor>

Visit The EnvironMentor Calendar at <http://www.okcu.edu/environmentor/>  
 Scroll down from The Newsletters. Regularly updated as information becomes available.

# CHISHOLM TRAIL MUSEUM



Within the broader historical context of the Chisholm Trail, the more than 1,300-square-foot exhibit will emphasize the history of the Chisholm Trail as it relates to Indian Territory and what is now north-central Oklahoma. The exhibit will feature artifacts, narrative, photographs, maps, video, and audio to tell the story of the Chisholm Trail in Indian Territory.



**CHEROKEE STRIP  
REGIONAL HERITAGE CENTER**

**April 1, 2017 11:00 A.M. - 3:00 P.M.  
507 South 4th Street, Enid, OK**

Join us as we kickoff our year-long celebration of the 150th anniversary of the Chisholm Trail inside Humphrey Heritage Village.

There will be Chisholm Trail related games for the kids to play, pony rides, square dancing, tours of the buildings and a beans and cornbread lunch served over an open fire.

At 1 p.m. Joseph McCoy will be making a presentation in the historic church convincing guests to drive their cattle to Abilene., Kansas. Prior to the presentation Joseph and Sarah McCoy will be working the crowd encouraging people to attend the presentation. McCoy was a cattleman who purchased a small village on the rail line, named it Abilene, and encouraged cowboys to drive their cattle from Texas to Abilene on what would become the Chisholm Trail.

Admission is \$6 for adults, \$3 for students. Children ages 5 and younger admitted free.

150th Anniversary Exhibit opens  
Saturday, February 11, 2017

**“Bridging the Chisholm Trail  
through Indian Territory”**

Free Admission to the Museum on  
Saturday, February 18, 2017

605 Zellers Avenue

Kingfisher, OK

Also at the  
Chisholm  
Trail Museum

**Chuck Wagon Festival and  
Living History Program**

**April 14 - April 15, 2017  
10:00 A.M. - 5:00 P.M. each day**

The event will take place in the museum's Pioneer Village. They will have 4 working chuck wagons cooking and providing cowboy food to visitors, live music, several cowboy camps, games for children, and many arts and craft demonstrators.

Hours are 10 am-5 pm each day.  
Admission \$5 for adults and \$2 for children.

## The next Great Backyard Bird Count is February 17-20, 2017

Bird watchers of all ages count birds  
to create a real-time snapshot of where birds are.

[Count birds anytime, anywhere, with eBird](#)



*“Just last year, the [Great Backyard Bird Count](#) took place  
in 130 countries and identified more than 5,000 species of birds!”*

*Quote from the Conservation Courier*

Since you are already outside ...

**Jena Donnell, Wildlife Diversity Information Specialist, at the Oklahoma Department of Wildlife Conservation urges you to take a “Winter Hik[e] on the Great Plains Trail” -- a wetland walk at the Salt Plains National Wildlife Refuge.**

*“Temperamental, unpredictable, and sometimes downright cold, the mere thought of Oklahoma winters can cause some wildlife enthusiasts to batten the hatches until spring green-up. Though our state does endure a few blustery, brutal, winter days there are also several mild reprieves when Oklahomans can stretch their legs and enjoy the wintery landscape.”*



Photo by Warren Metcalf

“Explore salt flats, ponds and wetland units along the [Salt Plains Loop](#), especially at the [Salt Plains National Wildlife Refuge](#) near Jet. The Refuge’s two walking trails and auto route are bordered by water and lead visitors through small grasslands and woodlands. Observation decks along the trails are a great place to take a short break and to scan open water and mud flats for wildlife.

**Wildlife to Watch For:** Many of the Refuge’s waterfowl species pair up in the winter, and males are especially colorful. Look for splashes of color from northern pintails, redheads, northern shovelers and other ducks, and listen for the rattling bugle call of wintering sandhill cranes.

The Great Plains Trail of Oklahoma was created as a partnership between the Wildlife Department and the Oklahoma Wildlife and Prairie Heritage Alliance and has been directing outdoor adventurers to western Oklahoma’s wildlife-watching hotspots for more than 10 years. A map of the Trail’s nearly 100 destinations can be found at [wildlifedepartment.com](http://wildlifedepartment.com). Get suggestions for one-day outings or routes that highlight bird-watching opportunities at [owpha.org](http://owpha.org).”

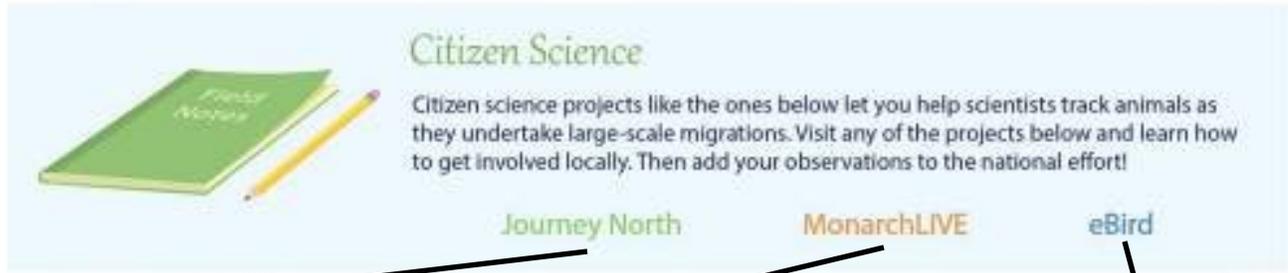
*Answer to Quiz!! Quiz!! Quiz!!*

For more Winter Hikes click on the following URL:

*Northern Pintail -- Find this name in the article above*

<http://www.wildlifedepartment.com/wildlife/wildlife-diversity/wildside/winter-hiking-great-plains-trail>

At the URL above there is a free, downloadable activity guide which includes Monarch Mapping, Make Your Own Birdfeeder, and Create a Mental Map. Scroll to the bottom of that page to find the hyperlink. This activity guide is full of fun ways to learn about animal migrations in the US. **Show us what you made!** Take a photo of your birdfeeder or mental map and share it with NEEF on [Facebook \(link is external\)](#) or [Twitter \(link is external\)](#)!



<https://www.learner.org/jnorth/>

<https://monarch.pwnet.org/>

<http://ebird.org/content/ebird/>

**Looking for more?**

Check out [this map of bird migrations \(link is external\)](#) to see which migratory paths pass closest to your town.

Find bird migration forecasts for your region in real time with [The Cornell Lab of Ornithology's BirdCast \(link is external\)](#).

**And more from  
The Cornell Lab of Ornithology**

*Happy 30th Birthday,  
Project Feederwatch!*



“The story of Project FeederWatch – a citizen-science program where participants track birds visiting their backyard feeders from November to April – shows how technology has helped citizen science grow bigger in unexpected ways.

This winter, [Project FeederWatch](#) celebrates its 30th anniversary. With 20,000 participants across the U.S. and Canada, it features one of the largest databases of feeder bird populations in the world ...”

*“For FeederWatch participants and scientists, the project is more than just counting birds; it can bring people together and helps backyard data become more than the sum of its parts.” Listen to the audio for this bird at the URL below.*

Read the rest of the article at:

<http://www.news.cornell.edu/stories/2017/01/technology-sends-project-feederwatch-soaring-30>

An article in full from the Conservation Courier:

## Monarch butterfly designated as a national priority species



In January, the monarch butterfly was designated by the [Working Lands for Wildlife](#) as a priority species in the United States.

Plans to conserve the species and its habitat will take place in Oklahoma and nine other states in the midwest and Great Plains, which are in the monarch's migration path and host breeding habitats.

According to [The Wildlife Society](#), "the monarch butterfly will join species whose habitat needs are representative of healthy, functioning ecosystems, and where [conservation efforts](#) benefit a wide variety of species." [Both of these articles are more in-depth and worth a look.]

Learn more about the program from the U.S. Department of Agriculture's Natural Resources Conservation Service and U.S. Fish and Wildlife Service by [clicking here](#)

The Nature Conservancy 

The Cornell Lab 

## Habitat Network

powered by yardmap

DRAW A MAP  
LEARN ABOUT HABITAT  
CREATE CHANGE

Join others to

## Map Your Yard!

422,964 acres  
mapped

23,922 sites  
created

When you click  
on this URL:

[content.yardmap.org/?utm\\_expid=52012137-3.7u5RXZFLRVctckmUpkKAmw.0&utm\\_referrer=http%3A%2F%2Fapp.yardmap.org%2Fmap](http://content.yardmap.org/?utm_expid=52012137-3.7u5RXZFLRVctckmUpkKAmw.0&utm_referrer=http%3A%2F%2Fapp.yardmap.org%2Fmap)

you will be asked to  
join the network. It  
is easy and FREE!

As a benefit of joining the Network, you can use your login name and password to access these citizen science projects:

The Great Backyard Bird Count <http://birdcount.org/>  
Celebrate Urban Birds <http://celebrateurbanbirds.org/>  
Project FeederWatch <http://feederwatch.org/>  
eBird <http://eBird.org/>  
NestWatch <http://nestwatch.org/>

## Just announced (on January 17th)

NOAA launches a **contest** for **K-12 and college students** to design content for NOAA's **Science On a Sphere (SOS)<sup>®</sup>**

"Is there a story you've heard about how Earth is changing that you can tell using maps and images? Where do major weather events (like hurricanes and tornadoes) occur and why? What are the "hot spots" of activity in the ocean and what animals are found there? These are just a few examples of the many stories you could choose to tell about our dynamic planet using Science On a Sphere."

"We invite you to create new maps, visualizations, and stories that help share NOAA's mission in creative and innovative ways. Winners will receive a \$250 gift certificate to be used on educational products, a certificate from NOAA, and have their work featured at the 2017 SOS Users Collaborative Network workshop as well as in our online catalog of content that is available to our worldwide user community."

With public installations of Science On a Sphere<sup>®</sup> (SOS) around the world at more than 130 institutions, we use SOS to support NOAA's mission of understanding and predicting changes in climate, weather, oceans, and coasts, sharing that knowledge and information with others, and conserving and managing coastal and marine ecosystems and resources."

**Submissions are due March 17, 2017.**

For more information: [http://www.noaa.gov/sosnetwo.../workshops/2017/student\\_contest](http://www.noaa.gov/sosnetwo.../workshops/2017/student_contest)



Historically event clean-up has not included plans for recycling the food and container



**The Met.**  
The Metropolitan  
Environmental Trust

waste. Even when recycling is on the to-do list, event planners and volunteers alike are unsure how to go about accomplishing this.

There is help in the Tulsa area:

## Bin Loan & Event Recycling

"The M.e.t. loans recycling bins to schools, non-profit organizations and local events. We offer a variety of bin types and can offer helpful recycling suggestions for your group or event. We offer a long-term loan program to help organizations start recycling and for events, we can provide bins, volunteers or both."

"If you are interested in applying for a bin loan or event recycling, call 918-584-0584 or [email The M.e.t.](mailto:email@metrecycle.com) at least two weeks prior to the event. To be considered for our Bin Loan Program, please download and fill out the appropriate form(s)" at this website: <http://metrecycle.com/bin-loan-program/>



**in OK runs from March 1 and ends on May 31!**

**Join 50,000+ Oklahomans and millions nationwide to keep OK beautiful!**

Keep Oklahoma Beautiful, a state affiliate of Keep America Beautiful, is taking part in the nation's largest annual cleanup, beautification and community improvement program with the help of our sponsors. We are encouraging you and your volunteer groups to make a visible difference where you live by getting on board with this effort!

Participating groups include scouting troops, civic organizations, chamber beautification committees, schools, families, businesses, adopt-a-highway groups, sports teams, municipalities and county governments.

Clean up litter along roadsides, in parks, streams, forests, schoolyards and neighborhoods. But don't stop there! Additional event ideas include flower & tree plantings, recycling drives, educational workshops, graffiti removal and freshening up buildings by giving them a fresh coat of paint. There are many ways to participate and make our state and nation sparkle. For more project ideas & tips, [click here](#).

#### "Pretty, Clean Places Stay Pretty Clean"

Research shows that attractive, clean environments tend to stay that way. Conversely, unattractive, litter-strewn areas will only worsen. Prevent future community eyesores by cleaning up, painting up and fixing up today!

#### KEEP OKLAHOMA BEAUTIFUL WILL HELP!

KOB is able to offer registered groups FREE supplies and support materials for your project!

KOB also offers grants which are made possible by funding from OGE Energy Corp.

For more information about the grants, supplies and resources made available to registered groups, [click here](#).

Since KOB began participating in the Great American Cleanup™ in 2002, 203 million pounds of litter and debris has been collected by 276,000 volunteers & participants. In addition, 471,000 trees, shrubs, and flowers have been planted in communities across Oklahoma.



Join members of the Friends of Pennington Creek for the following events. Or better yet, become a member of the Friends of Pennington Creek, that is a friend.

March 4 – Pennington Creek Cleanup at Pennington Creek Park in Tishomingo

April 22 – 2<sup>nd</sup> Annual Pennington Creek Regatta at Pennington Creek Park in Tishomingo

Bring your canoe or kayak and enjoy a day on Pennington Creek! A small number of kayaks and canoes will be available for rent.

For more information about these events contact Candice Miller at

[candice.miller@conservation.ok.gov](mailto:candice.miller@conservation.ok.gov)  
or call 701-659-0008.

During the week if you have to be inside at work or doing homework, you can still take breaks outside:

[http://www.suttoncenter.org/  
live-bald-eagle-nest-camera/](http://www.suttoncenter.org/live-bald-eagle-nest-camera/)



Photo from Mother Nature Network

If you have clicked on the URL above you have a clear view inside the bald eagle nest in the Sequoyah National Wildlife Refuge beside Sooner Lake north of Stillwater, near Vian, Oklahoma. You can see the eggs, one of the eaglets, and you can even hear the sounds they are making. Enjoy!!

## What is a penumbral lunar eclipse?

The answer to this question can be found at the following URL:

<http://earthsky.org/astronomy-essentials/what-is-a-penumbral-eclipse-of-the-moon>

The photograph here can give you an idea what to look for this weekend.

The next penumbral lunar eclipse is February 10-11.

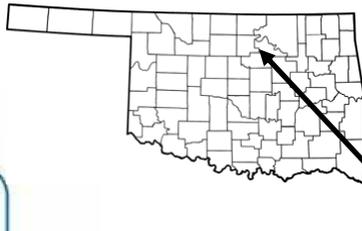
And for further information about the eclipse this weekend click on the following URL:

[http://earthsky.org/tonight/  
penumbral-eclipse-on-night-of-  
february-10](http://earthsky.org/tonight/penumbral-eclipse-on-night-of-february-10)



*Left, an ordinary full moon with no eclipse. Right, full moon in penumbral eclipse on November 20, 2002. Master eclipse photographer Fred Espenak took this photo when the moon was 88.9% immersed in Earth's penumbral shadow. There's no dark bite taken out of the moon. A penumbral eclipse creates only a dark shading on the moon's face.*

## Oklahoma Natural Areas Registry



# Field Day

## Copperhead Ridge Natural Area

**Saturday, March 11, 2017**  
10 a.m. - 2 p.m.

**Picnic lunch provided.**  
**Bring a lawn chair or blanket.**

*Expect to walk at a leisurely pace for a couple miles on trails through property. Not difficult, but ground will be uneven. Long pants and sturdy shoes recommended.*

Copperhead Ridge has been in Larry Andrews's family since the 1930s when his great aunt ran cattle. Larry has been managing the land for the last 25 years using a combination of traditional grazing, prescribed burning, and plant restoration to improve wildlife habitat and native plant diversity. As a retired fireman, Larry does not shy away from utilizing prescribed fire to control brush and other invasive plants. Also an expert in reptiles and amphibians, Larry knows all these species on his property and breeds alligator snapping turtles for rare species recovery.

### Habitat:

Copperhead Ridge Registered Natural Area is a biologically diverse track of 162 acres on the western edge of Pawnee County. The upland features an excellent example of **tallgrass prairie** with an abundance of native wildflowers and grasses. **Crosstimbers** cover the slopes down to the Arkansas River floodplain. This habitat is dominated by large chinkapin and blackjack Oaks with a variety of understory trees. **Springs and seeps** can be found along the hillsides creating microhabitats that are refuge for uncommon native plants. Parcels of bottomland along **Red Rock Creek** had been cropland, but are currently undergoing restoration to remove invasive plants and to reestablish native bottomland hardwoods.

### Topics:

- Planning and conducting a prescribed fire (conditions permitting, we may observe a prescribed fire)
- Invasive plant species management
- Feral pig control
- Applying for financial and technical assistance to implement conservation practices
- Long-term land protection through conservation easements

### Speakers:

Larry Andrews  
*Landowner, Registry Program Member*

Rusty Grimpe  
*Registry Program Member*

Daniel Meyer  
*NRCS, District Conservationist*

Conrad Kleinholz  
*Langston University, retired Research Professor*

### Registration:

Online — [okregistry.wordpress.com](http://okregistry.wordpress.com)

By phone — (405)325-7658 — leave a message with your name and phone number

**Registration is Required.** Space is limited. Maps and directions will be provided to all registrants. Field day is subject to postponement due to inclement weather. Rain date is March 25th. Registrants will be notified by email or phone.

Accommodations on the basis of disability are available by contacting Priscilla Crawford at the Oklahoma Biological Survey (405-325-7658; [prill@ou.edu](mailto:prill@ou.edu)) by March 15, 2017.

The Oklahoma Natural Areas Registry is a program of the Oklahoma Biological Survey, a research unit of the University of Oklahoma.



**OKLAHOMA  
BIOLOGICAL  
SURVEY**



## Have you ever wanted to be a scientist? Or help a scientist make new discoveries?

Join the Herpetology Department, Sam Noble Museum in a brand-new citizen science project, where YOU become the scientist collecting real-world data!

**What is Citizen Science?** Citizen Science is an up and coming method of gathering scientific data collection by members of the general public, rather than traditional scientists. It is a great way to collect large quantities of data over a larger spatial scale than what can be collected by a couple of scientists. It also gives non-scientists new skills and an appreciation for nature.

**What is herpetology?** Herpetology is the study of reptiles (i.e. lizards, snakes, turtles) and amphibians (i.e. frogs, salamanders).

**What is chytrid?** The word chytrid is short for chytridiomycosis, a fungal disease that infects the keratinized structures on amphibians, such as skin and tadpole mouthparts (keratin is also present in your hair, skin, and nails). There are two forms of virulent chytrid: *Batrachochytrium dendrobatidis* (Bd) infects frogs and salamanders and *Batrachochytrium salamandrivorans* (Bs or Bsal) infects only salamanders. This study will focus on frogs, because Bs has not yet been found in the US. Bd however, is found in every state in the US, but very little is known about how common the disease is among frogs in Oklahoma. This is where you all come in!

### What will you get in the citizen science kit?

- 10 pre-sterile, individually packaged cotton swabs
- 10 pre-sterile, 1.5mL screwtop vials
- Instructions, datasheets, and a permanent marker
- Oklahoma frog identification guide

If you are an Oklahoma teacher with **easy access to a local pond or stream**, we encourage you to participate with your students. We can determine if a frog has chytrid by rubbing a swab, similar to a Q-tip, along certain places of their body and then testing for the presence of chytrid DNA.

Request your FREE kit to receive the above supplies and then go to <http://cameronsiler.com/citizen-science/> to download your teacher packet, which contains lesson plan, student worksheets, science standards, and background information. In the coming months, as the results are analyzed, we will share them with you.

Contact Herpetology Collection Manager Jessa Watters ([jwatters@ou.edu](mailto:jwatters@ou.edu)) or download a form from <http://cameronsiler.com/citizen-science/> to request your kit by April 8!



Sam Noble Museum



Correction: The EnvironMentor Newsletter incorrectly published a flyer from last year's Annual Conference in the December 2016 -- January 2017 issue. We are sorry for any confusion this may have caused. Please see below for the correct information for this year's conference.

## OCLWA 26<sup>TH</sup> ANNUAL CONFERENCE

***Value of Informed Water  
Quality Management***

*More details to come!*

Session ideas? Contact Greg at:  
[greg.kloxin@conservation.ok.gov](mailto:greg.kloxin@conservation.ok.gov)

Wes Watkins Center, Stillwater, Oklahoma

**April 5-6, 2017**

**SAVE THE DATE**



## **Lek Treks & More Lesser Prairie-Chicken Festival Woodward, Oklahoma**



**Registration is now open for the  
2017 Lesser Prairie-Chicken Festival!  
April 19-26, 2017**

**Featuring keynote speaker Sheri Williamson  
from the  
Southeastern Arizona Bird Observatory**

Join us in Woodward, Oklahoma, in northwest Oklahoma April 13-19 for the 2016 Lesser Prairie-Chicken Festival. The 2017 festival will feature keynote speaker Sheri Williamson. Besides seeing the Lesser Prairie-Chickens (and so far 99% of participants have had close looks!) and birding around northwest Oklahoma, we are again offering these special features for 2017:

An opportunity to [view Greater Prairie-Chickens](#) from blinds in Osage County, Oklahoma!  
[Packages](#) designed specifically for photographers!

If you have any questions, feel free to contact John Kennington at [johnkennington@gmail.com](mailto:johnkennington@gmail.com).

# Why Bear Sleeps All Winter



*Photo from the North American Bear Center webpage*

In the autumn, Black Bear was very hungry. All summer she had eaten whatever she could find: berries, honey, fish, crab apples, even earthworms! But as winter approached, she needed more and more food to build a layer of insulating fat under her fur.

Black Bear got so hungry that she raided the squirrels' hidden stashes of acorns. She took the pumpkins and ears of corn that Rabbit had swiped from the humans' fields. Every time Rabbit tried to collect some food for winter, Black Bear followed her and ate up the food. She even climbed into Rabbit's hollow log house, ate up the food Rabbit had stored there, and then curled up in the log to take a nap.

Rabbit felt helpless. "How can I stop Black Bear? She's big and I'm small."

But the other animals had an idea. "Let's close up the end of the log with Black Bear inside!"

Mole, remembering the stolen earthworms, brought rocks.

Squirrel, remembering the stolen acorns, brought leaves.

Frog, remembering the stolen fish, brought mud to serve as cement.

Together they piled these materials into the open end of the log. Rabbit tamped it all in firmly with his big back feet.

When Black Bear woke from her little nap, she saw no light. "I guess I napped until night time! I may as well sleep again until morning."

But every time she woke, it was still dark. Warm and comfortable, she fell back to sleep.

Meanwhile, Rabbit found a new home and stored up enough food for the winter.

Black Bear kept sleeping and waking until finally she heard bird songs. Melting snow and winter rain had weakened the mud cement. She easily pushed aside the rocks and leaves.

Black Bear stretched and looked around. Spring had come! "I slept the winter away," she thought. "That was a good idea. From now on, that's what I'll do." And so it has been.

*From The Earthteller,*

*Fran Stallings*

*(Continued on Page )*

(Continued from Page )

Technically bears do not "hibernate" but can go into "torpor." Both hibernation and torpor save these animals a lot of energy. A truly hibernating animal's body temperature drops as low as outside; their heart and breathing rates slow down extremely, and they can't wake up when disturbed.

A torpid bear's heart rate slows down but she keeps a fairly high body temperature and can wake up quickly. Mother bears can even give birth and nurse their babies during their torpor! Although bears can go into torpor for as much as 6 months, not eating or drinking all that time, they only do it if they live in really cold places.



Oklahoma's winters can flip from spring-like mild spells to hard below-zero freezes. That makes it difficult for animals to adjust. Can they risk becoming inactive for a long time if the weather might have let them go out finding food? Here are some animals that try different strategies.

**Wood frogs** can hibernate so deeply that they completely stop breathing, their blood freezes, and their hearts stop. They certainly look dead! But when they defrost, they're as good as new.

Photo from <http://infinitespider.com/wintering-wood-frogs-freeze-solid/>  
This is a very relevant article.

**Bats** are true hibernators, with heart rates dropping from 400 to 25 beats per minute and breathing very slow. Solo or in groups, they hibernate in caves or isolated spots where they won't be disturbed.

Families of **skunks** or **raccoons** hole up in their dens and experience torpor during the cold months, rousing occasionally to go out hunting snacks.



Photo from <https://www.bu.edu/cecb/bat-lab-update/bats/bat-facts-and-folklore/>. There is a paragraph on this website about bat hibernation.



Photo from [http://kenstoreylab.com/?page\\_id=396](http://kenstoreylab.com/?page_id=396)  
Read the paragraph on the website about this pair.

While white-tailed **prairie dogs** truly hibernate, the black-tailed species just goes torpid for days at a time and rarely hibernates unless conditions get extremely cold.

Nocturnal **deer mice** also hole up with relatives, sharing warmth and sleeping through cold days but hunting food outside at night.



Photo from <http://jimccormac.blogspot.com/2009/06/white-footed-mouse.html>

## SOURCES

Folktales: Motif A2481.1 Why Bears Hibernate has been found in stories of the Nez Percé nation and also among North Carolina African American folk tellers.

Facts: <http://www.conservationinstitute.org/10-animals-that-hibernate/>  
<http://www.sciencemadesimple.com/hibernation.html>

On February 23, 2013 The EnvironMentor dipped a toe into social media. We made this decision because, at this time, there are two to three months between issues of the Newsletter. During this past gap an important event had an application deadline of April 1st so an announcement went out from Facebook. We won't bother you with anything trivial, so ...

**“Like” The Environmentor on Facebook!!**



## QUIKList Oklahoma

Leopold Education Project

<http://www.aldoleopold.org/Programs/lep.shtml>

Type in Oklahoma

Oklahoma Blue Thumb

<http://bluethumbok.com/>

Oklahoma Blue Thumb Association

[ok.bluethumb.association@gmail.com](mailto:ok.bluethumb.association@gmail.com)

Oklahoma Green Schools

<http://www.okgreenschools.org/>

Oklahoma Master Naturalists

<http://okmasternaturalist.org/>

Oklahoma Native Plant Society

<http://oknativeplants.org/>

Oklahoma Recycling Association (OKRA)

<http://www.recycleok.org/okra/>

Project Learning Tree (PLT)

<http://www.plt.org/>

<http://www.forestry.ok.gov/project-learning-tree>



10301 South Sunnyslane Road  
405-814-0006

<http://>

[www.museumofosteology.org/](http://www.museumofosteology.org/)

Monday - Friday 8 a.m. - 5 p.m.

Saturday 11 a.m. - 5 p.m.

Sunday 1 p.m. - 5 p.m.

Project WET

(Water Education for Teachers)

<http://projectwet.org/>

[http://projectwet.org/where-we-are/host/oklahoma\\_conservation\\_commission/](http://projectwet.org/where-we-are/host/oklahoma_conservation_commission/)

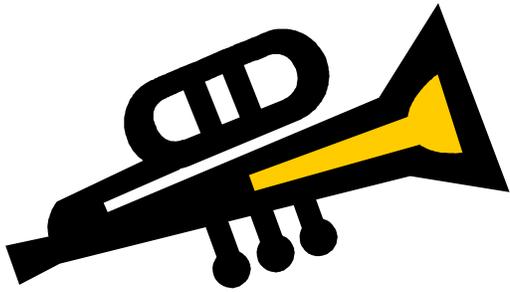
Project WILD

<http://www.projectwild.org/>

As with all hyperlinks in The EnvironMentor Newsletter, these are clickable.

Do you know an environmental group in Oklahoma that should be listed. Send that information to:

[environmentor@okcu.edu](mailto:environmentor@okcu.edu)



# The Calendar

Most people who remember The EnvironMentor Newsletter know that the pages at the end of the issue were reserved for The Calendar. Being online has some great advantages. When you downloaded your copy of the newsletter you may have noticed the box on the right side of the webpage. This is a convenient listing of the next events from The Calendar. This will always be up-to-date because it happens automatically. For more information on the event just click on it and a window will open up with all the details. If you wish, you can access the rest of the calendar from the there.

To have your event posted to The Calendar, copy and paste the following list into an email, fill in as much information as you wish, and send it to: [Environmentor@okcu.edu](mailto:Environmentor@okcu.edu)

Title of your event:

Start Date and Time

End Date and Time

Location

Location Address

Contact Name

Contact Phone

Contact Email

Details in Narrative Form

Location Link

Event Link

Map Link

Please note: We are not able to publish for-profit information.

To go directly to The Calendar click on:

<http://www.okcu.edu/environmentor>