The Wild Side!

September 2014

Cover Photo

Snow-on-the-mountain (*Euphorbia marginata*) is an early successional plant (establishing soon after a disturbance). It's seeds are high in fats and are eaten by many species of birds and small rodents. Photo by Jena Donnell.

Upcoming Events

BioBlitz! Oklahoma
October 3-5, 2014
BioBlitz! will inventory the extensive lands of the Black Kettle National Grassland and Washita Battlefield National Historic Site. Register Here!

Things That Go Bump in the Night
October 4, 2014
3:00 pm
After the sun sets in the west, many of our animal friends are just beginning to start their daily routine. Join the crew at Martin Park Nature Center as they discuss Oklahoma's nocturnal creatures and just why for some animals, life is much better when things go bump in the night.
FREE Register here!

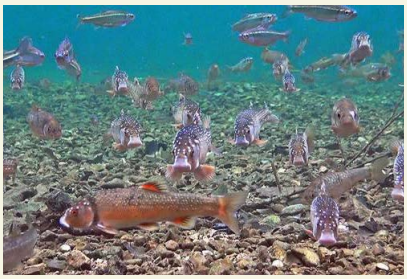
The Nature Conservancy Fall Hikes
Party on the Prairie &Trail Hike
Tallgrass Prairie Preserve (near Pawhuska)
October 17, 2014
Canyon Hike
Four Canyon Preserve (near Arnett)
October 18, 2014

Greetings Wildlife Enthusiasts!

If you're looking for a fun, family-friendly event to learn about wildlife conservation or to try an outdoor recreation activity, look no further than the 2014 Wildlife Expo held September 27th and 28th at the Lazy E Arena!

With over 100 wildlife related booths, you're sure to find something interesting! Here are a few of the Wildlife Diversity related events to consider!

Watchable Wildlife Area - Trying to figure out which feeder you should install in your backyard? Or how to build a nest box? Maybe you want to see a bat house or chimney swift tower? Then these outside booths are perfect for you! Visit the bird feeding station, see a Wildscape demonstration garden and learn about various woodworking ideas for wildlife in this area!



Underwater Oklahoma - Stop by this indoor booth to view a live fish cam and see some of the amazing fish species found Underwater Oklahoma! After seeing the beautifully colored darters; distinctively shaped shortnose gar and banded sculpin; and creative adaptations of our fish to their environment, you're sure to come away with a new appreciation of Oklahoma's 175 fish species!

Oklahoma Reptiles and Amphibians - Here's your chance to see Oklahoma's reptiles and amphibians up close! Biologists and members of the Tulsa Herp Club will be available to help with identification and discussion of species on display. Stop by this inside booth to see the barred tiger salamander, alligator snapping turtle, bullsnake and many more! This booth is organized by Bruce Burton, Okmulgee WMA Biologist.

Bats Bats Bats-Oklahoma Nightlife - Don't forget to check out the games and activities at this fun indoor booth, sponsored by Travel OK. Learn about the different species of Oklahoma bats, what they eat, and where you can see them. On your way to the next booth, pose at the "face in the hole" photo stand in!

We hope to see you there!

Jena Donnell
Wildlife Diversity Information Specialist
Oklahoma Department of Wildlife
Conservation

Species Profile - Lesser Earless Lizard

The lesser earless lizard (*Holbrookia maculata*) is a lesser-known species that inhabits grasslands of western Oklahoma. Somewhat short and stocky in appearance, this lizard can be found scurrying across sandy soils, often between clumps of grass and shrubs like sand sagebrush. At times, the lesser earless lizard may be confused for the more charismatic Texas horned lizard (*Phrynosoma cornutum*) as well as the widely distributed prairie lizard (*Sceloporus consobrinus*), as it has similar behaviors and characteristics of both. This species is unique among other lizards of the state in that it does not have external ear-openings, which can be used to identify this species if in hand. The lack of external ear-openings is likely a reflection of its burrowing lifestyle. Lesser earless lizards utilize burrows, where they can escape both predators and the high temperatures of mid-day.

The lesser earless lizard can be found in sandy soils of western Oklahoma. Photo Mark Howery.

Lesser earless lizard males frequently defend territories and will conduct headbobs and "push-ups" to warn intruding males. This behavior is also seen in the prairie lizard and collared lizard (*Crotaphytus collaris*), close relatives of the lesser earless lizard. Males have a pair of black bars on each side of their bellies that are surrounded by blue borders. The bars are displayed during courtship with females as well as in territorial displays. During the breeding season, adult females will develop orange throats and sides, a signal to males they are gravid or developing eggs. Lesser earless lizards typically lay a clutch of 5-7 eggs during the spring months, with hatchlings emerging during late summer.

As with most lizards, earless lizards primarily feed on insects and other small invertebrates. Lesser earless lizards may become prey for a variety of prairie species including burrowing owls, greater roadrunners, coyotes, and bullsnakes.

In Oklahoma, the lesser earless lizard is actually comprised of two subspecies, the Great Plains (*Holbrookia maculata maculata*), found along the western edge of Oklahoma and the panhandle, and the prairie (*H. m. perspicua*), found in west-central Oklahoma. The two can be distinguished by differences of patterning on the back, with the Great Plains having two rows of blotches and the prairie having a single row of long bars.

The Oklahoma Department of Wildlife Conservation has classified the lesser earless lizard as a Species of Greatest Conservation Need, as its current population status is largely unknown. Reptile populations are often difficult to determine due to their patchy distributions and localized abundance. Additionally, the mixed-grass and shortgrass prairie ecosystems that are home to earless lizard are frequently impacted by energy development and agricultural practices.

This species can be observed on a regular basis is Hackberry Flat Wildlife Management Area or at Little Sahara State Park in Waynoka. Look for these lizards as they run across county roads and bare ground portions among bunch-grasses. The lesser earless lizard is one of the many fascinating reptile species found in the state, so keep a watchful eye while exploring the prairies of western Oklahoma.

Learn more about Oklahoma's reptiles and amphibians! Get your copy of *A Field Guide to Oklahoma's Amphibians and Reptiles* today!

Story by Matt Fullerton, Wildlife Diversity Biologist

State Wildlife Grant Action Report - Determining Factors Affecting the Distribution of Endangered Fish and Crayfish Species with Emphasis on the Ozark Region

The State Wildlife Grants Program is a solution to the nation's ever-growing number of threatened and endangered species.

Oklahoma's Ozark Region is home to 132 Species of Greatest Conservation Need (SGCN), including 21 species of fish and 41 invertebrates; many with low or unknown populations. But researchers Michael Tobler and Reid Morehouse with Oklahoma State University's Department of Zoology have recently completed two years of surveys for small-bodied fish and invertebrates to help us better understand the status of these species.

The sunburst darter was one of the Species of Greatest Conservation Need surveyed during this study. Photo by Brandon Brown. Want to see more interesting fish? Check out Brandon's "Stream Things" Facebook Page!

Surveys were conducted in the Grand-Neosho, Illinois and Spavinaw drainages in 2012 and 2013. In 2012, 46 sites were surveyed, but SGCN were only captured from 37 sites. As such, 2013 sampling efforts and all analyses were restricted to the 37 sites where target species were found. Several methods were used to capture fish and invertebrates including backpack electrofishing, kick seining, baited minnow traps and snorkeling with hand nets. In addition to sampling fish and invertebrates, researchers also collected water quality data from each sample site in an attempt to determine what factors may limit a species' distribution.

Fish Survey Results:
Overall, 44 species of fish were captured during this study; five of which were listed as SGCN. Once these species were identified and counted, they were released on site.

Fish Species of Greatest Conservation Need	% of Sites Species was Collected	# of Specimens Collected
Cardinal Shiner (*Luxilus cardinalis*)	89%	950
Ozark Minnow (*Notropis nubilus*)	30%	150
Redspot Chub (*Nocomis asper*)	35%	58
Sunburst Darter (*Etheostoma mihileze*)	65%	135
Southern Brook Lamprey (*Ichthyomyzon gagei*)	3%	1

Crayfish Survey Results:
Based on the survey results, the ringed crayfish (*Orconectes neglectus neglectus*) appears to be the dominant crayfish species in the Ozark Region. Researchers reported they only captured one crayfish SGCN, the midget crayfish (*Orconectes nana*). This species' distribution appears to be restricted to the upper Illinois River drainage north of Tenkiller Lake. Crayfish were only sampled during the 2013 field season.

Invertebrate Survey Results:
Invertebrates were sampled in both 2012 and 2013 using kick seines. Samples were collected and later identified in the lab.

Survey Year	Lowest # of Invertebrates Collected at a Site	Highest # of Invertebrates Collected at a Site	Lowest # of Taxa Represented at a Site	Highest # of Taxa Represented at a Site
2012	15	619	12	26
2013	19	1519	11	29

In addition to collecting information about the population status and distribution of small-bodied fish and invertebrate SGCN, the researchers also created maps of these species past and present distribution. To accomplish this, researchers performed an in-depth search of Oklahoma fish museum collections. These distribution maps will be useful in planning future projects and in identifying streams in need of conservation.

New Certified Wildscape Property #466

Congratulations John Cleal & Marion Homier, of Oklahoma County for your recently certified wildscape!

Tools of the Trade - Field Guides

Field guides are invaluable tools that aid in the identification of wildlife or objects and are generally small enough to be brought into the field. Field guides exist for a variety of topics including wildlife, plants, animal tracks, minerals and many others. These guides can be comprehensive or narrow in focus. For example, waterfowl hunters might carry a smaller field guide for ducks and geese that easily fits in a coat or wader pocket, whereas birders might carry larger field guides that include all the birds in a region.

Roger Tory Peterson published the first modern field guide, A Field Guide to the Birds, in 1934. His identification system offered a practical method for identifying wildlife by field marks at a distance rather than relying on characteristics only seen when the bird was in hand. Field marks are distinguishing characteristics that can be observed from a distance. Identifying characteristics often include color, size and shape. Peterson not only identified filed marks for birds, but he also produced plane-spotting manuals that incorporated field marks to help World War II troops identify enemy aircraft. The Peterson Identification System has since become the near-universal standard for modern field guides.

Biologists often refer to field guides when identifying species. In this photo, Curtis Tackett and Buck Ray use the Mammals of Oklahoma guide to identify a mouse captured during the monthly Crosstimbers WMA inventory. Photo by Jena Donnell.

Today, a multitude of field guides exist in the traditional hard copy book format. But more recently, field guides have become available for smart phones and tablets. An added benefit of having a digital field guide is that audio content may be available for bird and mammal guides. However, choosing between a hard-copy book and digital copy often is best left to personal preference as both have their pros and cons.

Want to add wildlife field guides to your personal library? Find your next guide at the Wildlife Diversity Outdoor Store! For an added bonus, many of these guides come with a one-year subscription to Outdoor Oklahoma!

Story provided by Jeff Tibbits, Wildlife Diversity Intern

In Other News...

Check out these Wildlife Diversity News Stories

- Prairie Dog Town Established on Wildlife Management Area
- Biologists Survey Ouachita Mountains Streams for Threatened Fish

The Wild Side e-newsletter is a project of the Oklahoma Department of Wildlife Conservation Wildlife Diversity Program. The Wildlife Diversity Program monitors, manages and promotes rare, declining and endangered wildlife as well as common wildlife not fished or hunted. It is primarily funded by the sales of Department of Wildlife license plates, publication sales and private donors.

Visit wildlifedepartment.com for more wildlife diversity information and events.

For questions or comments, please email jena.donnell@odwc.ok.gov