



The Wild Side!

October 2016

John Fisher and Mary Helen Quinn assisted with the [2016 BioBlitz!](#) held at Lake Texoma Sept. 30-Oct. 2. More than 350 people attended the event and documented 627 species in 24 hours. Invertebrates accounted for 71 percent of the species. Photo by Mike Quinn.

Upcoming Events

[Watch for Whooping Cranes](#) October 2016

The federally endangered whooping crane will soon be migrating through Oklahoma from Canada's Wood Buffalo National Park to their winter home in Texas's Aransas National Wildlife Refuge. Report your sightings at wildlifedepartment.com.

Tracking Oklahoma's Dragonflies and Damselflies

Get updates from the field as a team from the Oklahoma Biological Survey searches for Oklahoma's Odonates.

Dragonfly enthusiasts can follow a team of biologists' journey to record the dragonflies and damselflies in each of Oklahoma's 77 counties through their [newsletter](#). Each letter, [emailed](#) to subscribers and [archived](#) on the Oklahoma Biological Survey's website, describes the season's expectations and discoveries and shares encounters reported by other Odonate enthusiasts.



Get updates on Oklahoma's dragonfly season, like the documentation of this swamp darner found by Abigail and Ruth Mills in Tulsa, from the Oklahoma Biological Survey.

The "Oklahoma Odonata" team, comprised of Brenda Smith-Patten and Michael Patten, has played an integral part in growing Oklahoma's species list in the last 10 years from 136 to 169 species! When the "Oklahoma Odonata Project" first began, 29 counties had fewer than 30 dragonflies and damselflies recorded. After searching through field notes, archived photographs, publications dating to 1925

Tracking Oklahoma's Dragonflies and Damselflies, Continued:

and inventorying more than 8,000 museum records, the team began conducting intensive statewide surveys. Smith-Patten and Patten also work with a network of dedicated citizen scientists, including Bill Carrell, John Fisher, Bryan Reynolds, Abigail and Ruth Mills, Cliff and Jon Ivy and David Arbour, regularly submits records of the dragonflies and damselflies they've seen across the state. Together, they have since brought each county's list to at least 50 species!

Smith-Patten and Patten have also compiled an [online checklist](#) of Oklahoma dragonflies and damselflies, as well as species records for each county and the [earliest and latest date](#) a species has been recorded in the state. The team has also provided a [detailed assessment](#) of Oklahoma's odonates.

Learn more about the project at biosurvey.ou.edu.

Species Profile: Dark-sided Salamander

adapted from Dr. Laurie Vitt's species account available at wildlifedepartment.com



Dark-sided salamanders are moderately small, thin-bodied salamanders with broad heads, large eyes, and relatively long legs. The thin tail is considerably longer than the body. The background color is yellow to orange and the body, tail and legs are covered with irregular black markings. A dark stripe extends from the eye down each side of the body. These salamanders are typically four to six inches in total length.

Diet: Dark-sided salamanders larvae feed on tiny invertebrates in the pools in which they live, and adults feed on small insects and other arthropods.

Distribution: Dark-sided salamanders are one of three recognized subspecies of the long-tailed salamander. The dark-sided subspecies can be found in Oklahoma, Missouri, Arkansas and Illinois. They prefer moist woodlands and are frequently found in cave entrances. Within Oklahoma, this subspecies is restricted to a six county area of the Ozark Mountains.

Reproduction: Females deposit clutches of eggs in pools of water in limestone caves and fissures from December through March. The aquatic larvae usually follow trickles of water out of caves and live in clear-water pools on the surface where more food is available.

Find more information about this and other salamanders can be found at wildlifedepartment.com and in "A Field Guide to Oklahoma's Amphibians and Reptiles" by Greg and Lynnette Sievert, published by the Wildlife Diversity Program.

Wildlife Diversity Program Funds New Research

Where can Oklahoma's species of greatest conservation need be found? That's the basis for many of the research projects recently funded by the Wildlife Department through the State Wildlife Grants program. Seven projects - led by researchers from multiple universities, a state agency and a private organization - will focus on the location and habitat requirements of our state's rare fish, amphibians, birds and invertebrates.

Here's a highlight of two recently funded projects:

- **Investigation of Shinnery Oak Propagation and Establishment as a Framework for Restoration**

Principal Investigators: Matthew Carroll ([Oklahoma State University](#))
Dwayne Elmore (Oklahoma State University)
Samuel Fuhlendorf (Oklahoma State University)
Craig Davis (Oklahoma State University)

Project Start Date: October 1, 2016

Sand shinnery oak shrublands are unique to the mixed-grass prairie and cover an estimated 117,000 acres in western Oklahoma. At least 18 species of birds, invertebrates, mammals and reptiles that are considered to be of greatest conservation need live in these diverse shrublands.

This project will begin with field and greenhouse studies to determine the ideal soil, temperature and moisture requirements to allow for germination and successful transplant of seedlings. Later, researchers hope to identify areas where shinnery oak restoration may benefit sensitive wildlife species at a regional scale. Finally, songbird surveys will be conducted to provide information on how the density and structure of shinnery oak patches may influence Bell's vireo and Cassin's sparrow densities.



- **A Survey for Rare Mayfly and Caddisfly Species of Greatest Conservation Need**

Principal Investigators: Rickey Cothran ([Southwestern Oklahoma State University](#))
Peter Grant (Southwestern Oklahoma State University)
Elizabeth Bergey ([Univeristy of Oklahoma](#))

Project Start Date: January 1, 2017

Mayflies and caddisflies - small aquatic insects - are the base of many aquatic food chains and are indicators of stream health. Eight mayfly and caddisfly species have been identified as species of greatest conservation need in Oklahoma.

Researchers will visit many streams and springs in Oklahoma's Ouachita Mountains and Arbuckle Mountains to learn more about the distribution and habitat needs of nine rare mayfly and caddisfly species. When rare species are found, habitat characteristics will be described, as well as any other species associated with the rare mayflies and caddisflies. Brenda Smith-Patten will collaborate with the project by conducting similar surveys in the Ozark Mountains.

State Wildlife Grant funds are only available in Oklahoma because the Wildlife Department's Wildlife Diversity Program holds an approved [Comprehensive Wildlife Conservation Strategy](#). First developed in 2005, the strategy identifies wildlife species considered to be of "greatest conservation need," outlines current research needs and prioritizes potential conservation actions. The document was updated in 2015 and the U.S. Fish and Wildlife Service approved the revised strategy in June, 2016.

Land Partnership in Oklahoma and Arkansas To Protect Endangered Species

The Wildlife Diversity Program recently partnered with the [U.S. Fish and Wildlife Service, Arkansas Game and Fish Commission, Arkansas Natural Heritage Commission](#) and the Oklahoma and Arkansas chapters of [The Nature Conservancy](#) to protect 153 acres of land for the federally-endangered [gray bat](#) and federally-threatened [Ozark cavefish](#). Both species rely on sensitive cave systems and high quality water sources for survival.

Funding for the land acquisition is being provided by the USFWS's Cooperative Endangered Species Conservation Fund Recovery Land Acquisition Grant Program. Through the project, a 30-acre parcel of land in Oklahoma and three parcels of land in Arkansas (totaling 123 acres) will be purchased to buffer currently protected caves.

The Oklahoma parcel consists of oak-hickory-pine Ozark forest and riparian area that adjoins [The Nature Conservancy's Twin Cave Preserve](#). Fee title of the property will be held by the Oklahoma chapter of The Nature Conservancy with management assistance from the [USFWS's Ozark Plateau National Wildlife Refuge](#).

The [USFWS funded projects in 20 states](#) this year to support conservation planning and acquisition of vital habitat for threatened and endangered species across the country.



Ann Froschauer/USFWS

Upcoming land purchases in Oklahoma and Arkansas will help protect habitat for the federally-endangered gray bat as well as other federally-protected species.



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

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