



Greetings Wildlife Enthusiasts!

'Tis the month of Thanksgiving. As you give thanks each day from this month forward, don't forget to stop and look outside. Oklahoma is among the top five ecologically diverse states. We have the luxury of seeing a multitude of wildlife species right in our backyards. Or, we have the option of going off the beaten path and traveling the [Great Plains Trail](#) or attending the annual [Red Slough Birding Convention](#) for an even greater viewing of diverse wildlife species. No matter how you spend your time outdoors, there is always something new to see, and for that we give thanks.

With the support from you and our agency partners, the Wildlife Department is able to conserve these precious resources. From birders and citizen scientists to hunters and anglers, we all play a role in conservation. As our old educational traveling trailer noted when The Wildlife Department was formerly known as Oklahoma Game and Fish Department, "Conservation Needs You, You Need Conservation." It is a partnership. We need

each other's help in conserving our natural resources for generations to come.

So this Thanksgiving, the Wildlife Department thanks you for your support!

Share your outdoor holiday photos with us this season on [Facebook](#), [Twitter](#), [YouTube](#), and now, Instagram @OutdoorOK!



Historical photo of the Wildlife Department. Photo by Bob Jenni.

Give Thanks,

Rachel

Rachel Bradley
Wildlife Diversity Information Specialist



The Evolutionary Performance of Wetlands

By Micah Holmes, information supervisor

A pine ridge has its charms, an open prairie has a subtle kind of beauty, and deep, dark timber has a grandeur that can rival any cathedral. But give me a wetland any day.

A slough, marsh, swamp, pothole, whatever you call it, the best wetlands share one thing in common - they are always changing. Always in a state of flux, wetlands can't make up their mind between a wet or dry state. Like teenagers trying to find themselves, they go from rock-hard dirt, to a tangle of verdant weeds, to acres of open water. The good ones don't play by the rules either. They're wet when we think they should be dry, and they have cracks in the ground when we want them to hold water. This rebellious spirit makes it tough on managers and hunters, but it breeds a fertility and abundance unmatched by any other ecosystem.

Water is the wild card. A big rain in the early spring can radically change the plant community in late fall. When a wetland misses a series of thundershowers in a season, it's nature way of hitting ctrl-alt-dlt and creating a blank canvas just waiting for the next rains. We note these cycles by the month or even a year, but most wetlands have been in this seesaw state for centuries.

Sometimes the deck is stacked for the duck hunter. The rains come when they should, and the wetlands grow an all-natural duck smorgasbord, and the water level is just right - not too high, not too low. When this happens there is no better place to be on a midwinter morning. Find an oak tree, some cattails or even tumbleweed and sit back and watch the show.



Micah Holmes prepares to leave the field after a successful hunt in Lincoln County. Photo by wildlifedepartment.com.

Species Spotlight: The Dark-eyed Junco

By Kelly Adams, information technician

It is not unusual to find dark-eyed juncos (*Junco hyemalis*) at backyard feeders or on the ground beneath them during the winter in Oklahoma. In fact, they are an excellent indicator that winter has arrived. These small birds prefer cooler climates and retreat north as spring arrives. Some populations of juncos can be found in the northeastern United States and Rocky Mountains year-round. Dark-eyed juncos are one of the most abundant forest birds in North America. These birds are also one of the most variable species with several "races" or subspecies. They have round heads, a fairly long tail, a stout bill and crisp markings. Juncos' color patterns differs in various regions across its range. In Oklahoma, juncos have a slate-gray head and chest with a white belly and pale bill. The outer tail feathers are white and can be seen during flight.

Juncos live in a variety of habitats. In the spring and summer, they can be found in coniferous and deciduous forests. In the winter, juncos can be found anywhere from parks to backyards and along roadsides. Juncos are usually solitary, but during cold winter months, they will form small flocks. They may also form mixed flocks with other small, seed-eating birds like chickadees and nuthatches. Within the flock, a strong hierarchy is present and centered around one dominant male. At feeders, this hierarchy may lead to aggressive behavior and flashing of the tail feathers.

Dark-eyed juncos are ground foragers and hop rather than walk. Like many other species of birds, they are primarily seed eaters although they do eat insects during their breeding season. They mainly forage for food on the ground but sometimes they fly very low in underbrush collecting food from twigs and leaves. At feeders they favor millet, but will also eat milo, thistle and finely cracked corn.

In the summer breeding months, males are very territorial. They claim their territory by singing



from the top of the tallest tree in a two to three acre area. Juncos are monogamous and only have one mate per breeding season. Males will fan or flick open their wings and tail, hop up and down, and pick up pieces of nesting materials to lure a mate. Usually males with the most white in their tail are the female's first choice. Juncos do not reuse their nests, causing females to build a new nest annually. Nesting material such as twigs and moss are woven together while the female uses her body to give the nest its shape. It can take a female three to seven days to build a nest. The male often helps by bringing material.

Like many other bird species, dark-eyed juncos play an important role in maintaining a balanced ecosystem. As seed and insect eaters, they help disperse seeds and help control insect populations. Watching these birds at backyard feeders is an enjoyable pastime for many people. Birding is easy to learn, fairly inexpensive, and fun for all ages. Dark-eyed juncos are one of the most common visitors to backyard feeders so there is an excellent chance of spotting them. They favor yards with older, mature trees and low shrubbery. Platform or ground feeders are preferred, but they will also eat fallen seeds from hanging feeders.

Every winter the Oklahoma Department of Wildlife Conservation encourages people to participate in the annual Winter Bird Feeder Survey. The survey allows bird enthusiasts to contribute to bird conservation while enjoying their favorite pastime. For more information, visit the Winter Bird Feeder Survey website, okwinterbirds.com. Then, take some time out of your day to enjoy Oklahoma's winter visitors, including the dark-eyed junco.

Wild Game Recipes

Wild Ohio Jambalaya (From "[Wild Ohio Cookbook](#)")

2 Tbsp olive oil
1½ cups chopped onion
1 tsp bottled-minced garlic
1 cup chopped green bell pepper
1 cup chopped red bell pepper

1½ tsp paprika
½ tsp salt
½ tsp dried oregano
½ tsp crushed pepper (red or black)
½ tsp black pepper
1 cup uncooked long-grain rice
2 cups fat-free, less-sodium chicken broth
1 14½ oz. can diced tomatoes, undrained
2 cups shredded, cooked turkey
6 oz. Andouille sausage, chopped
2 Tbsp sliced green onions

Heat the oil in a large Dutch oven over medium-high heat. Add onion and garlic; sauté 6 minutes or until lightly browned. Stir in bell peppers and next five ingredients (bell peppers through black pepper); sauté 1 minute. Add rice and sauté 1 minute. Stir in broth and tomatoes; bring to a boil. Cover, reduce heat, and simmer 15 minutes. Add turkey and sausage; cover and cook 5 minutes. Sprinkle with green onions.

Pot Pie (From "[Wild Ohio Cookbook](#)")

1 lb. cooked chicken, turkey, dove, squirrel, rabbit, or pheasant
1 can cream of mushroom soup
8 oz. sour cream
1 bag frozen mixed vegetables, thawed
3 medium potatoes
1 tube croissant rolls, or 1 piecrust
1 small onion
1 small can of mushrooms
Salt and pepper to taste

Peel and cube potatoes. Boil until done. In a bowl, mix together all of the ingredients except the croissant rolls or piecrust. In order to make cleanup easier, you can line your Dutch oven with aluminum foil. Pour mixture into Dutch oven. Place croissant dough or piecrust over top of the mixture. Cut slits in crust for steam to escape. Place lid on Dutch oven. Place oven over 10 briquettes and place 18 briquettes on the lid. Bake for 20-30 minutes or until crust is golden and mixture is bubbling. If baking in home oven, set oven to recommended temperature for the crust.

Partnerships Help Small Fish Overcome Big Challenges in Oklahoma

By Daniel Fenner, fish and wildlife biologist, U.S. Fish and Wildlife Service Oklahoma Ecological Services Field Office

Rivers of the southern Great Plains are among the most dynamic and harsh river environments in the world. Stream temperatures may reach over 100 degrees Fahrenheit during summer, while river flows range from overtopping their banks to long dry sections of river where only small isolated pools exist. This environment may not sound like suitable habitat for aquatic life, but many organisms including the Arkansas River shiner (*Notropis girardi*) are well equipped to handle these conditions.

Although the Arkansas River shiner is uniquely adapted to persist in this harsh environment, changes to Great Plains rivers over the past 40 to 60 years have caused the species to decline. The Arkansas River shiner was once widespread throughout the southern Great Plains, inhabiting over 3,200 miles of large sand-bed rivers, such as the Arkansas River in Kansas, Oklahoma and Arkansas; the Cimarron River, running through Kansas and Oklahoma; and the North Canadian and Salt Fork of the Arkansas River in Oklahoma. Today, the shiner is known to inhabit just 20 percent of its historic range: the South Canadian River from extreme eastern New Mexico through the Texas panhandle and downstream into Oklahoma.

In 1998, the [Arkansas River shiner](#) was listed as a federally threatened species, due to reductions of its range and numbers primarily attributed to habitat loss and modification through channelization, construction of impoundments, stream dewatering, diversion of surface water, groundwater pumping, and water quality degradation.

One significant challenge to Arkansas River shiner recovery

is the species' complex life cycle, which has been impacted by the continued degradation of river flows. The fish, which is approximately the size of a pen cap and equal in weight to an aspirin tablet, moves upstream roughly 130 miles in the course of its 18-month life. After moving upstream and during the summer months, females release their semi-buoyant eggs into the water to be fertilized by sperm released by males. Once fertilized, eggs develop and drift downstream with the current for a couple of days before hatching, with an additional one to two days of downstream drift before the fish, considered prolarva at this point, is able to swim out of the current. If spawning occurs less than 130 miles upstream of an impoundment, eggs and prolarva will likely drop to the bottom of the impoundment, where they are likely to be covered in sediment and die.



Arkansas river shiner, approximately the size of a pen cap and equal in weight to an aspirin tablet, moves upstream roughly 130 miles in the course of its 18-month life. Photo by USFWS.

While the development of impoundments has led to a significant decline of the species, new threats such as decreases in river flows may further hinder the species' ability to successfully reproduce. As an example, over the past 73 years, the South Canadian River near Amarillo, Texas, has run dry a total of 362 days, with all but one of those dry days occurring within the past 30 years. Increases in water demands from municipalities, agriculture, and oil and gas operations, may further affect river flows into the future.

Conservation partnerships focused on conserving the quantity and quality of water within the Arkansas River shiner's range are essential to the species' recovery. The [U.S. Fish and Wildlife Service](#) is working with other federal and state agencies, landowners, and other organizations to conserve water, maintain

essential flows, and maintain riparian buffers to promote natural stream morphology and filter pollutants from entering the rivers in which the species depends. The Canadian River Municipal Water Authority, in cooperation with the Service, is working to control invasive salt cedar (*Tamarix ramosissima*), a thirsty plant known to affect water quantity and stream morphology, throughout the South Canadian River and its tributaries. Since 2004, over 26,000 acres of invasive salt cedar have been removed.

Fish surveys conducted by the Service in partnership with multiple state agencies including the [Oklahoma Department of Wildlife Conservation](#) and [Oklahoma Department of Environmental Quality](#) will help monitor the effectiveness of these on-the-ground efforts and provide information allowing the species recovery team to set goals for recovery. These partnerships and recovery efforts must continue moving forward to successfully conserve streams and rivers of the Southern Great Plains and aquatic life, that depends on free-flowing streams for survival.



Biologists, Curtis Tackett with ODWC and Brent Bristow with USFWS, sift through the seine for Arkansas River shiners. Photo by Daniel Fenner.

The *WildSide* e-newsletter is a project of the Oklahoma Department of Wildlife Conservation's Wildlife Diversity Program. The Wildlife Diversity Program is dedicated to all species in Oklahoma that are not hunted or fished. It is primarily funded by the sales of Wildlife Department license plates, publication sales and private donors.

Visit wildlifedepartment.com for more wildlife diversity information and events. For questions or comments, please email info@odwc.state.ok.us.

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