

## Wildlife Migrants

In addition to the wildlife species that are permanent residents on the Great Plains, there are also some very interesting temporary guests during the year. These temporary guests are the wildlife migrants. They may spend just the summer or winter here, or travel through in spring and fall. Good habitat is essential to them just as it is for permanent residents, but they must find it here and there over a large geographic area. Their habitat needs vary depending on where they are.

Migration may be defined as any cyclical movement of animals over the course of a year. When you think of animals that migrate, the first ones that may come to mind are birds. Some species of birds fly hundreds or even thousands of miles between their summer and winter homes. Bats and insects also migrate by flying. But whales, sea turtles and fish migrate by swimming and other animals walk in order to migrate, such as the great herds of caribou in Canada and Alaska. All of the animals that migrate through the central Great Plains do so by flying, and some of them are illustrated on this poster.

Birds such as the Harris' sparrow live in Canada during the summer and make the Great Plains their home in the winter. These species are called **winter residents**. While winters here can be cold and miserable, they are not nearly as challenging as winters further north! Winter residents need appropriate shelter and adequate food for themselves as adults.

The list of Great Plains winter residents is short in comparison to the list of **summer residents**. Birds like the Swainson's hawk, mammals like the hoary bat and insects like the monarch butterfly are examples. They make the trek here seeking ideal situations for raising their young, with appropriate nesting habitat and food for themselves as well as their offspring.

Animals that travel through in spring and fall are called **transients**. They are not concerned with finding a place to nest and have less need for protection from winter storms. But they still need food, water and a place to rest – the animal version of a good restaurant and motel! It may seem like the transient species would need the least from the Great Plains, since they are only “passing through.” Actually, though, they are on a marathon journey across the continent and are in critical need of food and rest when they are here. If they don't find these requirements when they need them, they may die. Because very little habitat on the Great Plains remains in its original form, transients have become increasingly dependent on just a few locations. As one example, nearly half of all shorebirds in North America use either Cheyenne Bottoms or Quivira National Wildlife Refuge, near Great Bend, Kansas, as a stopover point in their spring migration.

A good steward of the land must consider the needs of wildlife migrants in addition to those of the permanent resident species. The goal of this poster is to broaden that understanding.

Meet the ***Faces of the Great Plains –Wildlife Migrants.***

# Species Profiles

**1. PAINTED BUNTING** (*Passerina ciris*) – Painted buntings are summer residents in Kansas. The breeding range of this stunningly beautiful bird includes the southeastern quarter of the state. They nest in low shrubbery in open woodlands, suggesting that finding forest habitat in an early successional stage is important to their breeding success. Their greatest density is in the Red Hills and the scrub oak and sumac thickets in the southern Flint Hills. The male painted bunting, with its combination of scarlet, blue and greenish-yellow feathers, may be the most attractive bird in North America. Unfortunately, this has led to them being trapped for the pet trade in their winter range in Mexico and Central America.

**2. PEREGRINE FALCON** (*Falco peregrinus*) – The word “peregrine” means traveling or migratory. This species may indeed travel far and wide in the course of a year, perhaps breeding in the Arctic and going as far as South America in the winter. It was formerly on the U.S. Threatened and Endangered Species List, but recovered enough to be de-listed in 1999. Like the bald eagle, their population declined because of the usage of DDT insecticide, which became concentrated in the food chains that led to them. Although the dose of DDT they received was non-toxic, it caused their eggshells to become too thin to make it through incubation. Peregrine falcons are transients and uncommon winter residents in Kansas. The only recent nesting record in Kansas was on a building in downtown Topeka. Their taste for waterfowl as prey led to them being nicknamed the “duck hawk.” They are most often seen around large winter concentrations of waterfowl, such as at refuges and large reservoirs.

**3. SANDHILL CRANE** (*Grus canadensis*) – This magnificent bird is a transient species in Kansas. They nest in the Arctic and winter from the salt marshes of the Gulf coast of Texas west to inland water bodies in New Mexico and southeastern Arizona. The central Kansas wetlands at Cheyenne Bottoms and Quivira National Wildlife Refuge are important staging areas for them during migration, with peak concentrations in March and late October. The Platte River in central Nebraska is another vital staging area, with up to 500,000 gathering there in late March. This is one of the top wildlife spectacles in North America. Their distinctive, chortling call is often given during flight, and on calm days can easily be heard from the ground despite the great height at which they fly. When thousands of them are gathered together at a staging area, the combined sound of their calls is impressive and unforgettable.

**4. SWAINSON’S HAWK** (*Buteo swainsoni*) – Swainson’s hawks are summer residents in the western half of Kansas. They migrate all the way to the pampas of South America for winter, a round-trip distance of over 10,000 miles. They nest in tall, solitary trees and soar over the prairie looking for food, or sometimes hunt on the ground. Breeding pairs mainly pursue small mammals, birds and reptiles to feed themselves and their young. Nonbreeding birds concentrate on insects such as crickets and grasshoppers. Insects make up the diet of all the birds in their winter range. Careless use of pesticides against insects in Argentina was responsible for the death of thousands of these hawks in the mid-1990s.

**5. CHESTNUT- COLLARED LONGSPUR** (*Calcarius ornatus*) – This bird is found almost exclusively in native shortgrass and mixed prairies. They avoid lush vegetation, preferring grassland that has been pastured or even mowed, such as the areas around airports. Chestnut-collared longspurs were an abundant nesting species in Kansas in the 1870s, using sites recently grazed by bison herds or cleared of vegetation by fire. Today they are considered only transients and uncommon winter residents here. Habitat alteration has apparently forced the chestnut-collared longspur to find other breeding grounds further north. The nearest nesting sites for these birds are in South Dakota. During summer, their diet consists mostly of insects such as crickets, grasshoppers and beetles. In winter, they are exclusively seed eaters.

**6. HOARY BAT** (*Lasiurus cinereus*) – This is the largest bat native to the Great Plains, with a maximum body length of 6 inches and wingspan of 16 inches! It is also the most widely-distributed bat in North America, found in the 48 states and southern Canada. The name derives from their white-tipped fur, which gives them a frosted or “hoary” appearance. They are transients in Kansas and breed north of here. The spring migration passes through Kansas in April and May. Interestingly, almost all records for the state are of females. Males follow a migratory path west of here. They are a solitary, tree-roosting species. Hoary bats migrate south in September and travel as far as central Mexico.

**7. RED ADMIRAL** (*Vanessa atalanta*) – The red admiral is a common member of the family Nymphalidae, which includes most of the larger, showy butterfly species. In Kansas, it is typically a spring transient or summer resident. However, it is one of a handful of butterfly species that sometimes overwinters here as an adult, hiding in bark crevices, hollow trees or brush piles. Red admirals exhibit a strong northward spring migration but do not have a noticeable fall migration. In some years, large numbers of them may be seen arriving from the south in May if breeding conditions for the parent generation are good in their winter habitat along the Gulf coast, in southern Texas and northern Mexico. Their caterpillars feed on the leaves of nettles.

**8. HARRIS’ SPARROW** (*Zonotrichia querula*) – This is the largest North American sparrow. They are locally common winter residents in the southern Great Plains. South-central Kansas is the heart of their winter range. Hearing their characteristic *plink* or *chewy, chewy* calls and the thin, high-pitched whistle of their song coming from brushy habitat is a sure sign winter has arrived. Their pink bill plus the black mask and bib of the adult male makes them easy to distinguish from other sparrows. The Harris’ sparrow is the only bird that breeds in Canada and no other country in the world.

**9. GREATER WHITE-FRONTED GOOSE** (*Anser albifrons*) – This is a transient species in Kansas. They breed in the far northern Arctic region of Canada and Alaska. The eastern part of this population winters from the lower Mississippi River valley west to central Mexico. “Speckle-bellies,” as they are known by hunters, have a distinctive high-pitched “laughing” call during flight. Quivira National Wildlife Refuge is a popular staging area for them during migration, when flocks numbering well over 100,000 may be seen. It is a circumpolar species, found also in Europe and Asia.

**10. SHORT-EARED OWL** (*Asio flammeus*) – Unlike most owls, short-eared owls are often active during daytime. They nest on the ground and feed on small rodents. They are transients, irregular winter residents and rare summer residents in Kansas. In flight, they flit only a few feet above the grass in a light, moth-like manner. On the breeding territory, males perform an amazing aerial display for their mate involving complex aerobatics, a variety of vocalizations and wing clapping. In winter, they prefer tall native prairies where they may form flocks numbering up to 50 individuals if food conditions are ideal.

**11. LEAST TERN** (*Sterna antillarum*) – Least terns are very rare summer residents in Kansas. They nest on bare, sandy ground near water, such as the broad sandbars found along the larger rivers in the Great Plains. De-watering of the rivers for irrigation and changes to flow patterns due to construction of reservoirs eliminated much of this habitat. This caused the least tern population to fall so low it was put on the U.S. Endangered Species List in 1985, where it remains to this day. There are only a few known nesting sites currently in Kansas, with the Big Salt Marsh area at Quivira National Wildlife Refuge being the largest. They have also nested along the Cimarron River in southwestern Kansas, along the Kansas river in northeastern Kansas and on the bare ground around a former sandpit on the west edge of Wichita. Least terns migrate to tropical waters in southern Mexico in winter and may travel as far south as Brazil.

**12. AMERICAN WHITE PELICAN** (*Pelicanus erythrorhynchos*) – Most people associate pelicans with the ocean, but the American white pelican has a more continental lifestyle. They are transients and rare winter residents in Kansas. Despite their large size, they can be easy to miss since they migrate at fairly high altitudes. But a flight of pelicans gliding overhead at treetop level is a sight you will never forget! They use remotely-located lakes and rivers for overnight stays when in Kansas. There are breeding colonies of these birds in Colorado, Wyoming, South Dakota and North Dakota. They winter along the Gulf coast.

**13. MONARCH** (*Danaus plexippus*) – The monarch is the most widely recognized butterfly in North America and has a fascinating life history. It is the only butterfly species in the world to undergo a bird-like annual migration to a particular site to spend the winter. Their overwintering site is in the Transvolcanic Mountains of central Mexico. The overwintering monarchs fly north again in March but seldom make it as far as Kansas. As they migrate north, the females search for milkweeds on which to lay their eggs. They die after their eggs are all laid. When their caterpillars transform into adults, they continue migrating north as the season progresses until they reach southern Canada, which is the northerly limit of milkweeds. It takes 4 - 5 generations of monarchs to complete an annual cycle. Monarchs are transients and summer residents in Kansas and typically arrive in the spring by the second week of April. They are found statewide, but are more common in the eastern half of the state. They begin migrating back south in late summer. In some years, large numbers are seen here in mid-September as they go south to Mexico.

**14. BRAZILIAN FREE-TAILED BAT** (*Tadarida brasiliensis*) – This is the most numerous bat in North America. In fact, the summer maternity colony at Bracken Cave near San Antonio, Texas is the largest known in the world and contains an estimated 20 million adults! Brazilian free-tailed bats are summer residents in Kansas, which is the northern limit of their range. They use caves in the Gyp Hills near Medicine Lodge for maternity colonies. These same caves are used for winter hibernation by other species of bats. Brazilian free-tailed bats are also known to have maternity colonies in buildings. All Kansas bats eat flying insects. Since that food is not available here in winter, bats must either hibernate or migrate south. Brazilian free-tailed bats migrate to Mexico in winter.

**15. LARK BUNTING** (*Calamospiza melanocorys*) – The lark bunting is one of only six passerine birds endemic to the grasslands of North America. In Kansas, they are locally common summer residents in the western quarter of the state. The male looks somewhat like the female most of the year, but during breeding season has a bold black-and-white plumage. They prefer areas of sparse vegetation for nesting and have adapted well to habitats disturbed by agriculture and ranching, although their numbers seem to be declining overall. From their breeding grounds on the western Great Plains, they migrate to south Texas, New Mexico, Arizona and Mexico for the winter.

**16. GREEN-WINGED TEAL** (*Anas crecca*) – This bird is a common transient, winter resident and rare summer resident in Kansas. In North America, green-winged teal are the smallest dabbling ducks and second only to mallards in abundance. Despite being so common, their nesting habits are not well known because their nests are well hidden in isolated areas. They typically nest in sedge meadows a short distance from water. Their main breeding range includes most of Canada and Alaska as well as the northern tier of states, but a few nesting records are known from Kansas.

**17. COMMON YELLOWTHROAT** (*Geothlypis trichas*) – This warbler is a common summer resident in Kansas. They make their nests in areas of dense vegetation with a well-developed layer of ground litter, preferably located near water. The nests are typically 2 feet above the ground in cattails or sedges. This species becomes less common as you travel west across the state and vegetation becomes more sparse, although they may still be found in sites that stay wet through the summer. The loud *witchity, witchity, witchity* call of the male is easily noticed, even though the bird can be surprisingly hard to see, considering its bright colors. The common yellowthroat winters in wet coastal marshes in the southern U.S. and Mexico.

**18. COMMON POORWILL** (*Phalaenoptilus nuttallii*) – These cousins to the whip-poor-will and the nighthawk are uncommon summer residents in Kansas. They prefer open, rocky prairies for nesting habitat. Pastures in the Flint Hills are good places to look for these birds in summer, particularly along rocky outcrops. They become active at dusk, catching their food on the wing using their large mouths. Moths, beetles and other large flying insects are favorite prey items. Their name comes from the *poor-will* call they give repeatedly, beginning at dusk and then on into the night. The winter range of common poorwills extends from southern Arizona into Mexico. It is the only known bird species to exhibit torpor for extended periods (longer than overnight) and may even hibernate on occasion. The body temperature of torpid poorwills has been measured as low as 40°F and individual birds have been observed in a torpid condition for as long as a month.

**19. COMMON GREEN DARNER** (*Anax junius*) – The green darner is the largest dragonfly found in the Great Plains, with a body length of 3 inches and a wingspan of 4 inches. They have a distinctive “bull’s-eye” mark on their forehead not found on any other North American dragonfly. In Kansas, green darners may be transients, summer residents or permanent residents. They disperse north from the Gulf coast in spring, reaching Kansas as early as late March. They lay their eggs in shallow marshes or temporary pools. Their larvae eat small aquatic invertebrates and get big enough to take small minnows. At the end of the season green darners will either overwinter in the aquatic larval stage or the adults will go south. They gather into large groups in the fall migration, usually in association with cold fronts. Swarms of fall migrant green darners along the east coast of the U.S may be so massive they show up on airport radar screens!

#### **GLOSSARY:**

- Circumpolar – describes animals or plants whose distribution includes North America, Europe and Asia.
- Dabbling ducks – ducks that eat from the water surface and by tipping head-down in shallow water. They do not dive underwater for food.
- DDT – (Dichlorodiphenyltrichloroethane) An organochlorine insecticide that degrades very slowly in the environment. It was widely used worldwide from 1940-1970, but only a few nations allow its use currently. Its use has been banned in the United States since 1972.
- Endemic – having a distribution limited to only a certain geographic area.
- Food chain – an energy path in an environmental community.  
A simple version would be: Grass → Rabbit → Coyote
- Pampas – a grassland habitat in South America. It is similar to the North American prairie.
- Passerines – a group of birds that includes sparrows, crows, blackbirds, finches and warblers, among others.
- Staging area – a place where a migrating species gathers into large groups before proceeding on. Usually associated with a food supply and shelter for that species.
- Torpor – an inactive state in animals where the body temperature drops below normal.

## **For more information:**

For more information on the migratory habits and life histories of the animals discussed on this poster, try these resources:

### **Web Sites:**

#### **All About Birds, by Cornell University**

<http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide>

#### **Monarch Watch Program, at the University of Kansas**

<http://www.monarchwatch.org>

#### **Red Admiral Butterflies, by Royce Bitzer at Iowa State University**

<http://www.public.iastate.edu/~mariposa/homepage.html>

#### **Bat Conservation International**

<http://www.batcon.org>

#### **North American Dragonflies, by John C. Abbott of the University of Texas**

<http://odonatacentral.bfl.utexas.edu/>

### **BOOKS:**

#### ***The Sibley Guide to Birds***

by David Allen Sibley, Knopf, 2000

#### ***Kansas Breeding Bird Atlas***

by William Busby & John Zimmerman, University Press of Kansas, 2001

#### ***America's Neighborhood Bats***

by Merlin D. Tuttle, University of Texas Press, 2005

#### ***Dragonflies and Damselflies of Texas and the South Central United States***

by John C. Abbott, Princeton University Press, 2005

#### ***Butterflies of Oklahoma, Kansas and North Texas***

By John Dole, Walter Gerard & John Nelson, University of Oklahoma Press, 2004

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