

Shortgrass Prairie Poster

The Great Plains extend from Canada to Mexico and from the Rocky Mountains to western Missouri. It is the largest vegetative province on North America and is classified by



three major grassland types – shortgrass, tallgrass, and mixed prairies. Native prairies are home to a large number of endemic species, specifically adapted only to those habitats. Many of these species face uncertain futures. It is estimated that native prairies have declined as much as 99.9 percent since European settlement. Prairies have been lost to agriculture, overgrazing by domestic cattle, recreational overuse, removal of wild, free-ranging bison herds and the elimination of frequent, wide-spread fires.

The shortgrass prairie is the smallest and the most arid of the grassland ecosystems. Historically it covered about 150 million acres. It lies in the rain shadow of the Rocky Mountains and averages less than 12 inches of rain annually. Drought resistant buffalo grass and blue grama make up the majority of grass cover. These species have adapted to eons of grazing by developing massive root systems. Very few shrubs and even fewer trees are present but many forbs and cacti can be found. Animals that call the shortgrass prairie home are specifically adapted to this ecosystem.

Here are the ***Faces of the Great Plains - Wildlife of the Shortgrass Prairie.***

Species Profiles

1. **BLACK-TAILED PRAIRIE DOG:** Named for its warning bark which resembles that of a dog, this medium-sized rodent is truly a keystone species of the shortgrass prairie. Five billion animals once occupied 250 million acres. Shooting, poisoning, habitat destruction and diseases have reduced prairie dog towns to less than 1 percent of their historic range. Prairie dog towns or colonies consist of a group of mounds 10 to 50 feet apart connected by underground burrows which can be 20 feet deep. In the burrows are separate rooms used for sleeping, eating and nesting. A short distance below the surface is a listening room, used by the prairie dog to listen carefully before surfacing. Prairie dog burrows have several entrances, providing a chance to escape if pursued by a badger, black-footed ferret or snake. Above ground, prairie dogs are also food for coyotes, ferruginous hawks and golden eagles. The prairie dog burrows, both abandoned and inhabited, provide homes for many other animals. Healthy prairie dog burrows, both abandoned and inhabited, provide homes for many other animals. Healthy prairie dog towns also support burrowing owls, badgers, black-tailed jackrabbits and a variety of reptiles and amphibians. Prairie dogs give birth to only one litter per year and do not begin breeding until they are 2 years old. Litters of up to six young are usually first seen above ground in May and June.
2. **GOLDEN EAGLE:** This raptor is found world-wide on open grasslands and sparsely vegetated areas. Pairs of golden eagles may hunt together in low flight. On the Great Plains they usually hunt rabbits and prairie dogs but will occasionally take young

pronghorns and domestic livestock. The golden eagle builds a huge eyrie on top of mesas or large trees. Some pairs may build several nests and use them alternating years. One to three eggs are laid. Depending on the amount of available food and weather, fledglings may leave the nest after about 3 months but depend on their parents for food and protection even longer. Only 25 percent of the chicks reach maturity, which occurs at about 5 years when they get their golden colored head and body feathers. In the wild a mature bird may live 30 years. Loss of favorable habitat, starvation, collisions with fences, power lines, and cars, poisoning and poaching are their main problems. Even though the golden eagle has never been listed as a federally endangered or threatened species, it is still protected under several state and federal laws. The North American population is estimated to be 70,000 birds.

3. **BISON:** This “plains buffalo” was nearly extinct less than a century ago. In 1890, about 540 individuals remained of the estimated 60 million animals that once roamed the prairies. Today, there are no wild, free-ranging bison herds. Private ranches and wildlife reserves manage about 150,000 animals. Shaggy fur covers an animal which is surprisingly agile and fast, reaching speeds up to 35 mph for short distances. Although a female may weigh a hefty 1,000 pounds, males may weigh over a ton. Calves are born with a tan to reddish coat which turns a darker brown. Both males and females have horns. A distinctive hump is caused by vertical projections on several vertebrae, which can measure 20 inches or more. The bison were extremely valuable to Native Americans by providing food, hides, and other useful parts. Many tribes followed their seasonal movements. Bison were also important to European settlement. Railroads, cattlemen and soldiers led to the destruction of the bison herds. Today, fear of disease affecting domestic cattle, fencing problems and winter forage can create tension between bison managers and their neighbors.
4. **BLACK-BILLED MAGPIE:** This long-tailed, colorful bird is related to jays and crows. Magpies are opportunistic and forage on the ground in open areas. They eat carrion, small mammals, birds, eggs, insects and seeds. They sometimes cache food for a few days, often covering it with a leaf or a stone. It is believed sight and smell assist them in finding their caches. In some areas magpies have a symbolic relationship with large ungulates like bison, gleaning ticks and other parasites from their fur. The iridescent, long, central tail feathers are displayed by the male during courtship. Large, domed nests are built of sticks, mud and grass in trees. Predation of eggs and young by a variety of species is common. Disturbance of nesting and roosting areas will cause magpies to abandon the area. When threatened, several magpies will gather to “mob” hawks, owls, foxes and coyotes. Although only the female incubates, the male assists in building the nest and feeds the female and the young.
5. **FERRUGINOUS HAWK:** This large hawk lives only on the grasslands and semiarid portions of North America. Prairie dogs, gophers, other medium-sized rodents and rabbits are its basic diet. Ferruginous hawks build large stick nests in trees, on cliffs and utility poles. Three to four eggs are laid. Survival depends on the amount of food parents find and bring to the young. These birds are extremely sensitive to disturbance

by humans and may abandon the nest during egg laying and incubation. Habitat loss and manipulation have led to concerns for the future of this species.

- 6. BURROWING OWL:** Ranging throughout the grasslands of North America, This small owl is found in association with burrowing mammals. In the Great Plains region they are often found in association with prairie dog colonies. Numbers are often limited by the availability of underground mammal burrows. Burrowing owls eat a variety of food including small rodents, insects, frogs, salamanders and snakes. The female is responsible for incubation and brooding of the young chicks with the male providing the food. Burrowing owl families are entertaining to watch with as many as 11 chicks lounging around the burrow and scampering out of sight at the first hint of danger. As they become less dependent and fledge, young burrowing owls join their parents on evening hunting flights. Loss of suitable habitat through removal of prairie dogs, intensive cultivation of native shortgrass prairies and limiting their food supply by spraying for insects has led to local decreases in populations. Protection of burrowing mammals will help conserve this species.
- 7. PRAIRIE VOLES:** These grizzled-looking rodents are found only where there is suitable habitat to create runways. The runways are well defined areas both above and below ground which allow them to pass relatively unseen by predators. The number of runways in an area is often used by scientists to estimate population size. Prairie voles are prolific. They reproduce throughout the year and average four young each litter. A female is capable of having 17 litters each year beginning when she is six weeks old. The life span for a vole is relatively short, usually less than one year. Predators such as hawks, snakes, foxes, and owls keep the population of voles in check. A wide variety of prairie plants provides the seeds, stems and leaves which make up a vole's diet. Insects are also eaten. During high population cycles they may resort to eating the bark off trees.
- 8. HORNED LARK:** This common bird is found over much of the North American and Eurasian continents on short, sparsely vegetated prairies, deserts and agricultural lands. Adults eat seeds but feed their young insects. Color variation of their backs has been linked to the color of the soil. Larks' horned feather tufts can be raised or lowered. Deforestation, mowing around airstrips and creation of agricultural areas has led to increased numbers towards the Atlantic coast. Succession of grasslands into forests has decreased populations elsewhere. Since their numbers are greater in areas of bare ground, prairie dog colonies are an ideal place to find these ground nesters. Horned larks are one of the most common birds throughout the Great Plains during winter months.
- 9. LESSER PRAIRIE CHICKEN:** Present in only a few scattered locations, they inhabit less than 10 percent of their historical range. Small populations of these grouse annually gather on traditional dancing grounds calls "leks" in April and May. Males compete among themselves for the opportunity to mate by "dancing" and "booming". The reddish throat sacs of the males are inflated with air, they erect their pinnae ("ear" feathers), and show off their bright yellow "eyebrow" feathers. Females visit the lek to

select a male then move to the surrounding grasslands, sometimes more than a mile away, to lay eggs and raise chicks. The encroachment of agriculture into shortgrass prairie, insect spraying, overgrazing, and the invasion of woody plant species are responsible for declining numbers.

- 10. LONG-BILLED CURLEW:** Classified as a shorebird, this species spends the breeding season on dry grassland and is often seen nesting in association with prairie dog towns. It winters along saltwater marshes, ocean beaches and tidal mudflats. Curlews feed on a variety of different invertebrates, including insects, crabs and mollusks. A large and rather noisy bird, curlews are often seen and heard displaying over shortgrass prairies. Four eggs are laid in a shallow depression on the ground. Unlike many species of birds, if the clutch is destroyed, the adults will not re-nest. Destruction of the habitat is their main enemy.
- 11. PLAINS SPADEFOOT:** This amphibian is found in grasslands and open floodplains. They don't require permanent bodies of water and only enter water to breed. Breeding, egg laying, hatching and metamorphosis all happen quickly, an advantage in areas where water is intermittent. Adults feed on small insects such as grasshoppers and beetles. Reaching about 2 inches in length, these frogs are characterized by a pupil which is vertical in bright light, a hard lump between their eyes and a hard, black spur (spade) at the base of each hind foot. They burrow into loose soil or sand rear-end first using these spades, or use rodent burrows. Predators include hawks and snakes. Listen for their loud snore-like calls from May to August.
- 12. WESTERN RATTLESNAKE:** Depending on temperature, season and time of day, these reptiles may be active throughout the day. They commonly use prairie dog burrows as dens, but are usually above ground between April and October. Rattlesnakes can be quickly identified by the presence of a rattle on the end on their tail. Rattlesnakes get a new button for their rattle each time they shed and may shed up to four times a year. They lose the tips of their rattles through normal activity so it is impossible to age an individual by counting the number of buttons. Sometimes, the rattle is not present so one must also look for a combination of triangular-shaped head, heat sensitive pits, moveable fangs and vertical pupils. Female rattlesnakes begin breeding in their second spring and give birth to four to 18 live young every other year in late summer or early fall. The plains spadefoot, nestling songbirds, prairie voles and prairie dogs may be eaten by rattlesnakes. Humans have the most impact on their populations. Many snakes are killed out of misunderstanding.
- 13. SWIFT FOX:** This small member of the dog family usually weighs less than a house cat. It is threatened by habitat destruction, vehicle collisions, predator control, predation by coyotes and reduced food sources. Mated pairs live together year round and will rotate between a cluster of several dens between years. The underground tunnels of the dens serve as habitat for several other species including rodents, insects and reptiles. Primarily nocturnal in their hunting habits, this fox will eat rabbits, rodents, insects, birds and lizards. Litters of up to six pups are born each spring. They begin hunting with the parents at about three months, and young disperse into the surrounding prairie during

late summer and early fall. Scientists often classify the kit fox as a subspecies of swift fox.

- 14. BLACK-FOOTED FERRET:** This small mammal is closely related to skunks and badgers. These nocturnal mammals are totally dependent on prairie dogs for food and burrows. Black-footed ferrets were thought to be extinct until a small population was discovered in Wyoming in 1981. A captive breeding program started in the late 1980s has increased the number of ferrets. This program has allowed the black-footed ferret to be reintroduced into the wild in Arizona, Colorado, Montana, South Dakota, New Mexico and Kansas. The continued existence of this rare, shortgrass prairie mammal depends on the continued availability of large and healthy prairie dog towns.
- 15. THIRTEEN-LINED GROUND SQUIRREL:** Named for the thirteen stripes on its back, this small rodent is found in open sandy areas in shortgrass prairies. It has also adapted well to mowed roadsides, lawns, golf courses and cemeteries. Thirteen-lined ground squirrels have a soft, trilled whistle used as a warning call. They are less social than other ground squirrel species but will “greet” other known squirrels by touching noses and lips. Older individuals construct burrows up to 12 inches deeps and 20 feet long with a nest of plant material in a side chamber. Each night they plug their burrows from the inside. Several shorter escape burrows are scattered throughout the home range of the squirrel. They are diurnal and spend their days eating seeds, insects, birds eggs and even snakes and lizards. Seeds are cached in their burrow for periods of bad weather. Doubling their spring weight by fall, these animals hibernate through the winter.
- 16. MOUNTAIN PLOVER:** This secretive shorebird is sometimes called the “prairie ghost” because of its ability to disappear into its shortgrass habitat. The birds are often found around prairie dog towns. This plover is one of the most recent shortgrass prairie animals to be added to the Endangered Species List. Much of their habitat has been lost with the conversion of shortgrass prairie to agricultural fields. The loss of extensive, large herds of bison, pronghorn and prairie dogs, which kept grass and forbs short, has also led to the loss of breeding habitat. Coordination among landowners to ensure well-timed controlled burns, grazing and tilling could result in an overall increase of suitable nesting habitat.
- 17. PRONGHORN:** This “antelope-like goat” is the only member of its family and is unique to North America. Fossil evidence points to at least 12 other species of this family having roamed the continent during the Pleistocene. Both males and females have horns, but only males have forward projecting prongs. The horn sheaths are made from specialized skin cells and embedded hair, and are shed annually. Pronghorn have an exceptionally wide field of view due to the placement of their large eyes on the side of their heads. These animals remain in the open and rely on their eyesight to warn them of predators and use their speed to outrun them. Young pronghorns can run faster than a human by the time they are several days old. Their white rump patches and manes can be erected to signal nearby animals. They readily investigate anything unusual in their habitat. Pronghorns graze and browse on a wide variety of prairie plants. Vast, open areas of shortgrass prairie are the preferred habitat for this unique animal.

Glossary

Cache – to store food; place where an animal stores food and other objects

Carrion – dead decaying animals

Deforestation – removal of stands of trees

Diurnal – active during the day

Ecosystem – the living community and its nonliving environment

Endangered – a species in imminent danger of extinction

Endemic – a species which is only found in one geographic location

Extinct – all individuals are gone from the wild

Extirpated – all individuals are gone from an area in which they previously occurred but are not extinct

Eyrie – eagle's nest

Fledglings – young birds which are capable of flight

Forage – to look for food; the food itself

Forbs – broad-leaved flowering plants

Habitat – the area where a plant or animal naturally lives

Hibernate – to pass the winter in a dormant or inactive condition

Keystone species – a species which several other species depend on for their existence

Lek – traditional sites used for displaying and breeding

Metamorphosis – transformation through stages from an immature into an adult

Nocturnal – active at night

Opportunistic – takes advantage of whatever opportunities may present themselves

Pinnae – relating to external ears or location of ears

Predation – one animal eating another

Prey – any creature hunted or caught for food

Prolific – produces lots of young

Province – a geographic area which has similar characteristics

Raptor – a meat-eating bird which catches its prey with its feet; includes hawks, eagles and owls

Subspecies – a genetically distinctive geographic subunit of a species

Symbiotic – interrelationship

Threatened – a species which is likely to become endangered in the future

Ungulates – animals which have hooves