



## MAMMALS

Status: Common, Native Resident

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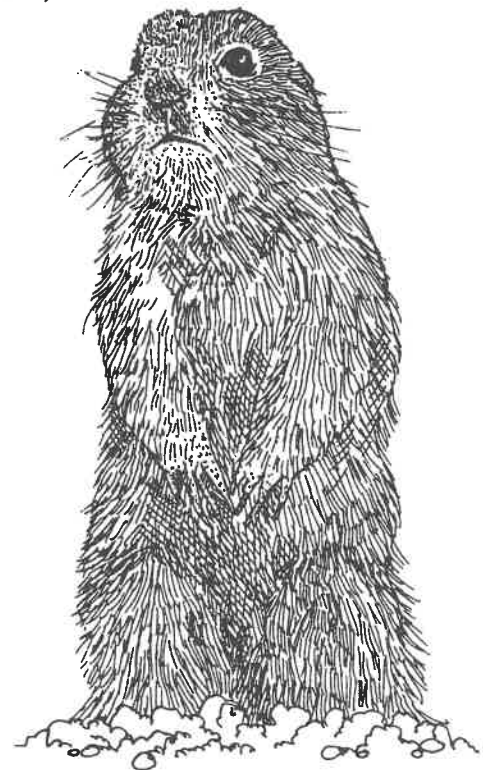
# BLACK-TAILED PRAIRIE DOG

(*Cynomys ludovicianus*)

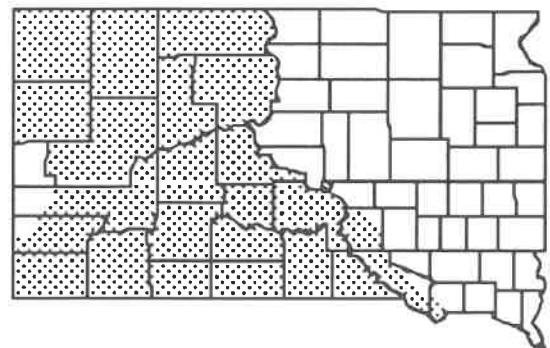
## Description

Prairie dogs are found only in North America, where there are five different species: the black-tailed (*Cynomys ludovicianus*), Mexican (*C. mexicanus*), white-tailed (*C. leucurus*), Gunnison's (*C. gunnisoni*), and Utah (*C. parvidens*). Of these five species, only the black-tailed prairie dog occurs in South Dakota. This animal is a stocky, burrowing ground squirrel. It probably has the common name of dog due to its bark-like alarm call. Its genus name, *Cynomys*, is from the Greek words, *kynos*, for dog and *mys* for mouse. The species name is a form of the Latin for Lewis. It was chosen in honor of Merriweather Lewis, of the Lewis and Clark expedition in the early 1800's, when the species was first collected for scientific study.

Measuring 14 to 17 inches long (31-41 cm), and weighing from 1 to 3 pounds (0.6-1.2 kg), a black-tailed prairie dog has yellowish-brown fur and a pale underside. It also has very short ears and a black-tipped tail, which equals one quarter of its total length. Both sexes are similar in color and appearance, though the female is slightly smaller. A young prairie dog can be distinguished from an adult by the yellowish-red color on its upper parts and by fewer black and white hairs. Black-tailed prairie dogs have short legs and five-toed feet with long claws.



## Distribution



The black-tailed is not only the most abundant prairie dog, but also the most widely distributed. It ranges throughout the Great Plains, from southern Saskatchewan to northern Mexico. It is common in the western part of South Dakota, excluding the Black Hills, and becomes uncommon east of the Missouri River.

## Natural History

Prairie dogs live in semi-arid grasslands and avoid areas of tall grass. They dig burrows that are approximately 15 feet (4.6 m) long and 3 to 6 feet (0.9 - 1.8 m) deep. The burrows are marked by mounds of excavated earth, which serve as look-out posts and help prevent water from entering the hole. Prairie dogs are most active during the day. They retreat into their burrows to escape from the sun, to sleep, or to seek protection from danger. Unlike the white-tailed prairie dogs, the black-tailed species does not hibernate in winter, though they store fat, become sluggish, and may spend days at a time underground.

Black-tailed prairie dogs live in "towns" that are subdivided into "wards," which, in turn, may be divided into *coterie*s. A *coterie* is usually made up of one adult male, up to four adult females, and any of their offspring less than two years of age. A *coterie*'s territory is hotly defended from invasion by non-members. Much play, nuzzling, and grooming occur within a *coterie*, and members greet each other by touching their teeth together in a kind of kiss. Communication is constant. Black-tailed prairie dogs have at least 11 calls, used for everything from a danger alert to an "all clear" signal.

Females are sexually mature after their second winter and breed once a year after that. Mating takes place in March and April, followed by a *gestation* period of approximately 34 days. Deep below the ground, female prairie dogs make grass-lined nest chambers to prepare for a litter of 1 to 6 young. Pups are born blind and hairless and are protected from various

dangers, including other *coterie* members, until they are 5 to 6 weeks old. At that age, they come above the ground and are weaned soon afterwards. The pups are nearly full grown by fall and live an average of 3 to 4 years.

Black-tailed prairie dogs eat grasses, *forbs*, seeds, and at times, insects. In turn, they are fed upon by badgers, weasels, coyotes, foxes, bobcats, hawks, eagles, and the endangered black-footed ferret. Other threats to prairie dogs are human beings, parasites, starvation, and diseases such as plague.

## Significance

By continuously burrowing and clipping the plants around them (sometimes for food, other times to remove visual obstacles), prairie dogs create areas of unique *habitat*. The towns become sites of great wildlife diversity. Animals such as pronghorn antelope, bison, and mule deer frequent the towns, attracted by the constant, nutritious new growth. Other animals, including many small rodents, burrowing owls, and rattlesnakes make their homes in prairie dog burrows. The ready abundance and variety of prey draw coyotes, foxes, golden eagles, bobcats and other predators. As many as 140 different animal species have been identified on the towns, with varying degrees of dependency. At least one species, the endangered black-footed ferret, is largely dependent on the prairie dog for both its food and shelter.

## Management Considerations

It has been estimated that there were once five billion prairie dogs and that they lived in approximately 20% of the short grass prairies in the United States. By the late 1880's, homesteaders viewed this animal as a nuisance because it ate grass that could have been eaten by livestock and fed on planted crops. Thus began an ongoing conflict between land-use interests and prairie dogs. Through prairie dog control programs and cultivation of the

grasslands, the number of prairie dogs has lessened considerably, a 98% reduction by some estimates. Indeed, two of the five prairie dog species - Mexican and Utah - are now endangered or threatened. Black-tailed prairie dog communities are smaller and more fragmented, leaving them more susceptible to disease and other catastrophes. This impacts not only the prairie dogs themselves, but also dependent plants and animals.

In South Dakota, the black-tailed prairie dog is legally designated as a pest due to its impact on livestock production. Through their persistent feeding and clipping, prairie dogs can reduce present and future forage yields for livestock. This may be partially compensated for as prairie dogs improve nutritional quality of forage and remove toxic plants. The extent to which prairie dogs and livestock compete depends on a variety of factors and is still under investigation.

Many ranchers tolerate some prairie dogs, but are concerned about large or expanding towns. Private landowners and government agencies practice prairie dog

control under South Dakota Codified Law 38-22, which requires landowners to control prairie dogs that are a threat to neighboring property. Lethal control options available today include shooting, trapping, poisoning with zinc phosphide grain bait, and fumigating burrows with aluminum phosphide. Use of these two toxicants is restricted to certified applicators and, when used properly, they are not hazardous to other wildlife or the environment. Possible non-lethal control methods include improved range management and erection of barrier fences to restrict town expansion.

While they may not be compatible with some human interests, prairie dogs play an important role in the grassland *ecosystem*. They also provide recreational opportunities for naturalists, photographers, and sportsmen. The primary management consideration must be to balance South Dakota's ranching economy with the regional concern of preserving healthy prairie dog *ecosystems*.

### Glossary

**Coterie** - a division in a prairie dog town, usually made up of a family group: one adult male, up to four females and any young offspring.

**Ecosystem** - a complex of plant and animal communities and their environments which function as a unit in nature

**Forbs** - herbaceous flowering plants other than grasses.

**Gestation** - pregnancy.

**Habitat** - the place where an animal lives, eats and thrives.

**Range** - the region in which a plant or animal lives or naturally occurs; or land where livestock graze.

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## Selected Resources for Teachers

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