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# BLACK-TAILED PRAIRIE DOG (*Cynomys ludovicianus*)

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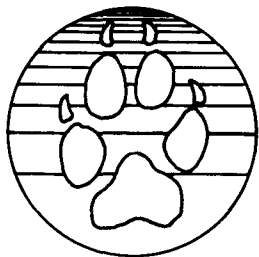


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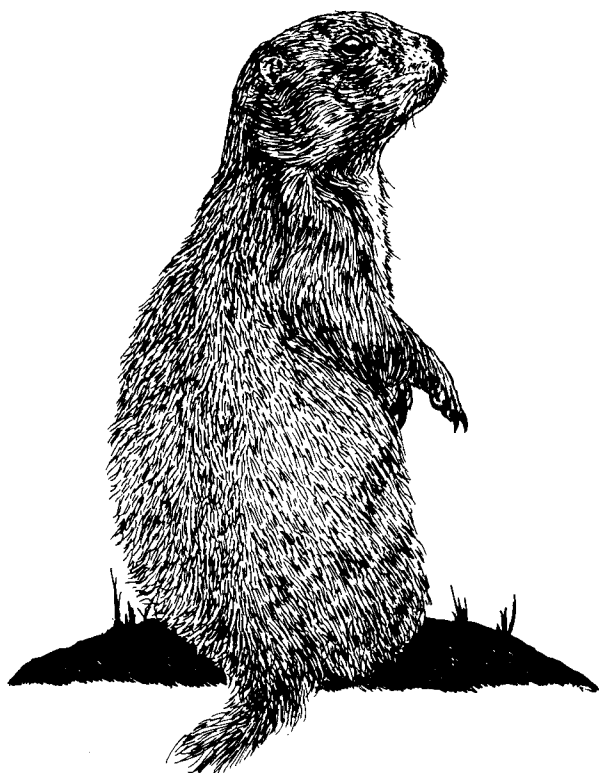


# NEBRASKA WILDLIFE

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NEBRASKA GAME AND PARKS COMMISSION

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## **BLACK-TAILED PRAIRIE DOG**

*(Cynomys ludovicianus)*

**DESCRIPTION:** The scientific name for the black-tailed prairie dog "ludovicianus," is the Latin form of Ludwig or Louis, relating back to the Lewis and Clark expedition of 1804-1806, when prairie dogs were first collected for science.

The prairie dog is a burrowing member of the order Rodentia, the largest group of mammals in the world. An adult black-tailed prairie dog is between 12 and 16 inches long and generally weighs between 1.5 and 2.5 pounds. Its tail is covered with hair and is about one-fourth of the animal's total length. Its body is tan to pale brown in color, its underparts are white to buffy white, and its tail is tipped with black. The prairie dog's legs are short, but its feet are large and have well-developed claws, especially on the forefeet. Its head is broad and rounded, and its eyes are fairly large.

**DISTRIBUTION AND ABUNDANCE:** The black-tailed prairie dog is one of five species of prairie dogs found in North

America. It is the most abundant and widely distributed species and is the only prairie dog found in Nebraska. It is found throughout the Great Plains from southern Canada to just inside Mexico. The western edge of its range is along the Rocky Mountains, and the eastern edge follows the natural boundary between tall and mid-grass prairie. In Nebraska, prairie dogs are found roughly in the western two-thirds of the state.

Black-tailed prairie dogs live in colonies or "towns" that range in size from as small as one acre to several thousand acres. The largest prairie dog colony on record was in Texas, and was about 100 miles wide, 250 miles long and contained an estimated 400 million animals. It is estimated that in the late 1800s, some 700 million acres of North American rangeland were inhabited by prairie dogs. Habitat changes and extensive eradication efforts have reduced the acreage by about 90 to 95 percent from historic levels.

**HABITAT AND HOME:** Areas of short and mid-grass rangeland overgrazed by livestock are the prairie dog's preferred habitat.

Prairie dog colonies are most recognizable by the mounds and holes at their burrow entrances. A colony will typically have 30 to 50 burrow entrances per acre.

The animal's burrow system can be quite complex and extensive. Mounds of excavated soil around the burrow entrance are generally cone-shaped and vary from one to three feet in height and from three to 10 feet in diameter. These mounds serve as lookout points and serve to prevent water from entering the burrow system. Tunnels are generally three to six feet below the surface and about 15 feet long, although burrows have been reported to reach depths of 15 feet. Burrow systems typically include several chambers, including one near the entrance where the prairie dog can sit and listen for activity above ground, and one or more nest chambers where they sleep and care for their young.

**HABITS:** The fact that prairie dogs live in colonies indicates they are highly social animals. The largest social unit is the colony or town. Towns are often divided into "wards" by topographical barriers such as roads, ridges or trees, and are generally five to 10 acres in size. Although prairie dogs in one ward may be able to see and hear animals of an adjacent ward, movement among wards is unusual. Wards are divided into several smaller prairie dog social units, called "coteries." Each coterie generally consists of one adult male, one to four adult females, and any offspring less than two years old. Members of one coterie defend their territory from invasion by members of other coteries.

Prairie dogs are active during the day, usually from about

sunrise to sunset, and during summer they spend about one-third to one-half of the daylight hours feeding. Another third is involved in social interactions with other colony members as well as working on burrows and mounds and responding to alarm calls. The remainder of daylight is spent underground, especially during mid-day when temperatures above ground are high.

The black-tailed prairie dog is active all year. In winter, it remains underground for several days when weather is severe, but comes out on sunny afternoons to look for food and bask in the sun.

Black-tailed prairie dogs exhibit an elaborate communication system. At least 11 separate calls have been identified, and a variety of postures and displays are utilized. Calls range from signals of alarm to "all-clear." Physical contact is another method of prairie dog communication. Mouth-to-mouth contact is used to identify coterie members from strangers, and grooming among coterie members is common.

**FOOD:** Grasses are the preferred food of the prairie dog, and generally makes up about three quarters of its diet. In the fall, broadleaf forbs become more important as green grass is less available. In winter, any available green vegetation is consumed. In the spring and summer, each prairie dog consumes up to two pounds of vegetation per week.

In addition to the vegetation it eats, the prairie dog also clips, but does not eat, much vegetation within its colony. This is probably done to keep the vegetation clipped short to provide an unobstructed view of approaching predators. Over a period of time, clipping, foraging and digging activities can alter the composition of the vegetation in a prairie dog town. Short native grasses like buffalograss and the grama grasses are favored when an area is used by prairie dogs for a long period of time.

**REPRODUCTION:** A prairie dog reaches sexual maturity after its first winter and has one litter per year. Breeding takes place in March and early April, and a litter of usually four to six young is born 30 to 35 days later. Young prairie dogs are born hairless, helpless, and with their eyes closed. They remain underground for about six weeks and first emerge from the den in May or June. They are weaned at this time and begin feeding on green vegetation. They reach adult size by fall.

**MORTALITY:** Although the prairie dog has been known to live for at least eight years in captivity, its average life span in the wild is usually three to four years. In addition to actions of man, the prairie dog faces many natural predators. Badgers are probably the main predator, but coyotes, weasels, golden eagles, hawks, swift fox, and other predators take prairie dogs. Bullsnares and rattlesnakes take young prairie dogs but generally not adults. The black-footed ferret was once a primary prairie dog predator, but it is now considered an endangered species and no wild ferrets have been verified in Nebraska since the 1940s.

A prairie dog is susceptible to a number of diseases, the most notable being plague. Plague is an infectious disease transmitted by the bite of an infected flea. Plague can be devastating to prairie dog populations, wiping out entire colonies in some areas. This disease was known as "black death" in the 1300s when about one-third of Europe's human population was lost. Although it can be transmitted to humans through the bite of an infected flea, plague has not been found in prairie dogs in Nebraska and is now treatable in humans.

Human activities are undoubtedly the most significant mortality factors that the prairie dog faces. The conversion of rangeland to cropland across the Great Plains since early settlers arrived has resulted in much less available prairie habitat. Efforts

to control prairie dogs in Nebraska and across the Great Plains since about the turn of the century have had a tremendous effect on prairie dog numbers.

**IMPORTANCE:** In many ways, a prairie dog town can be considered a biological oasis. Many wildlife species associate with prairie dogs. Some species feed on prairie dogs, but others utilize the burrow systems or the unique habitat to fulfill their needs. Vacant burrows are used by cottontail rabbits, several species of small rodents and by burrowing owls. Meadowlarks, grasshopper sparrows, and other birds are found in greater numbers in prairie dog towns than in the surrounding rangeland because they are attracted to the open spaces, where seeds and insects are more accessible.

But, the prairie dog is not always compatible with agricultural interests. By eating and clipping vegetation, the prairie dog does compete with livestock. The economic impact of the prairie dog on rangeland is difficult to assess and depends on a number of factors including the density of prairie dogs, the amount of rainfall, the presence of livestock, and the condition of rangeland in the surrounding area.

However, the prairie dog and large grazing animals can benefit from each other's presence. In areas where there is taller vegetation, domestic livestock keep vegetation cropped low, which allows the prairie dog to occur in areas where it wouldn't otherwise be found. On the other hand, when bison roamed the plains in massive numbers, they spent considerable time foraging in prairie dog towns, as does livestock today. The prairie dog's feeding and clipping activities stimulate new plant growth that is of higher quality and more desirable to livestock. Consequently, the loss of some rangeland to prairie dogs can easily be overestimated if livestock are also using the area.

Most landowners are tolerant of small numbers of prairie dogs but are concerned about large colonies or expanding populations. Effective control measures safe for humans and the environment are available and are used by landowners and governmental agencies. Some recent research is showing promise for non-lethal measures to control prairie dog numbers, including the installation of barrier fences in the colonies, and fencing to exclude livestock.

In addition to their importance to landowners and other wildlife species, prairie dogs are also important to wildlife observers, photographers, and recreational shooters.

**MANAGEMENT:** Although prairie dog numbers fluctuate considerably in many areas primarily due to extensive control measures, the numbers in Nebraska in recent years appear to be healthy and increasing where they are not controlled. The Nebraska Game and Parks Commission has maps that show the distribution and abundance of prairie dog colonies in various parts of the state.

