

# Black-tailed prairie dog

## *Cynomys ludovicianus*

BY JIM HAMILTON

**Y**ears ago, while earning my graduate zoology degree at the University of Montana, I studied black-tailed prairie dogs to determine if they hibernated in winter. While watching several colonies in the wild near Helena, I noticed that the prairie dogs disappeared only during severe cold, then reappeared when temperatures moderated. Were they hibernating when underground?

My colleagues and I conducted controlled lab experiments in winter and found that the grassland rodents could lower their body temperature to just a few degrees above freezing. When in this torpid state, the animals felt like furry ice cubes, rigid and cold to the touch. Amazingly, after we removed the prairie dogs from the refrigerator and warmed them, the animals were alive and well. We attempted the same experiments in late spring and summer under the same artificial conditions. The prairie dogs did not go into temporary hibernation as they did in winter.

This phenomenon is just one of the black-tailed prairie dog's many interesting traits.

### BEHAVIOR

Black-tailed prairie dogs hibernate, but not exactly like the yellow-bellied marmot, Columbian ground squirrel, white-tailed prairie dog (found in extreme south-central Montana), and other "obligate hibernators." These species enter a state of torpor at the same time each year, usually near summer's end, regardless of the outside temperature.

Black-tailed prairie dogs are "facultative hypotherms," which means they hibernate only under extreme conditions of reduced temperature in winter. It is amazing how healthy and well-fed they appear in midwinter,

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despite the lack of food. They are extremely efficient at metabolizing their stored body fat, even when scurrying around their towns. That activity is also why blacktails spend more time "bulking up" on various grasses and forbs before winter than other prairie dog species.

### COMMUNITIES AND RANGE

Prairie dog towns, or colonies, contain a series of earthen mounds housing one or more burrows per family. The colonies can cover up to several hundred acres and house 1,000 or more prairie dogs. Prairie dogs are considered a "keystone species" because burrowing owls and dozens of other grassland species depend on the rodents and their burrows for food and shelter. Black-tailed prairie dog colonies are scattered throughout the plains of central and eastern Montana. FWP recently began a statewide prairie dog survey to get a better sense of their abundance.

### REPRODUCTION

Prairie dogs begin breeding in spring as soon as they emerge from hibernation. Gestation lasts for 24 days, after which a female gives birth to two, three, or four young. The pups

start running around by late May. Females produce a single litter each year.

### PREY

Prairie dogs are an important food source for coyotes, badgers, eagles, ferruginous hawks, and the rodents' most famous predator, the endangered black-footed ferret. Despite re-introduction attempts, ferrets are now rare in Montana, making their effect on prairie dog populations negligible.

### MANAGEMENT

In Montana, black-tailed prairie dogs are confusingly classified. They are considered a "vertebrate pest" by the Department of Agriculture when injuring agriculture (the rodents can compete with cattle for forage, especially during drought) and at all other times as "nongame wildlife" by FWP under the state Nongame Act. FWP considers the black-tailed prairie dog one of 15 Montana mammals "in greatest conservation need." A working group of conservationists, biologists, ranchers, shooters, and other stakeholders meets regularly to discuss prairie dog management and find ways to ensure the species's long-term survival in Montana. Though far less numerous than before European settlement, prairie dogs are still abundant in many parts of eastern and central Montana. 🐾

