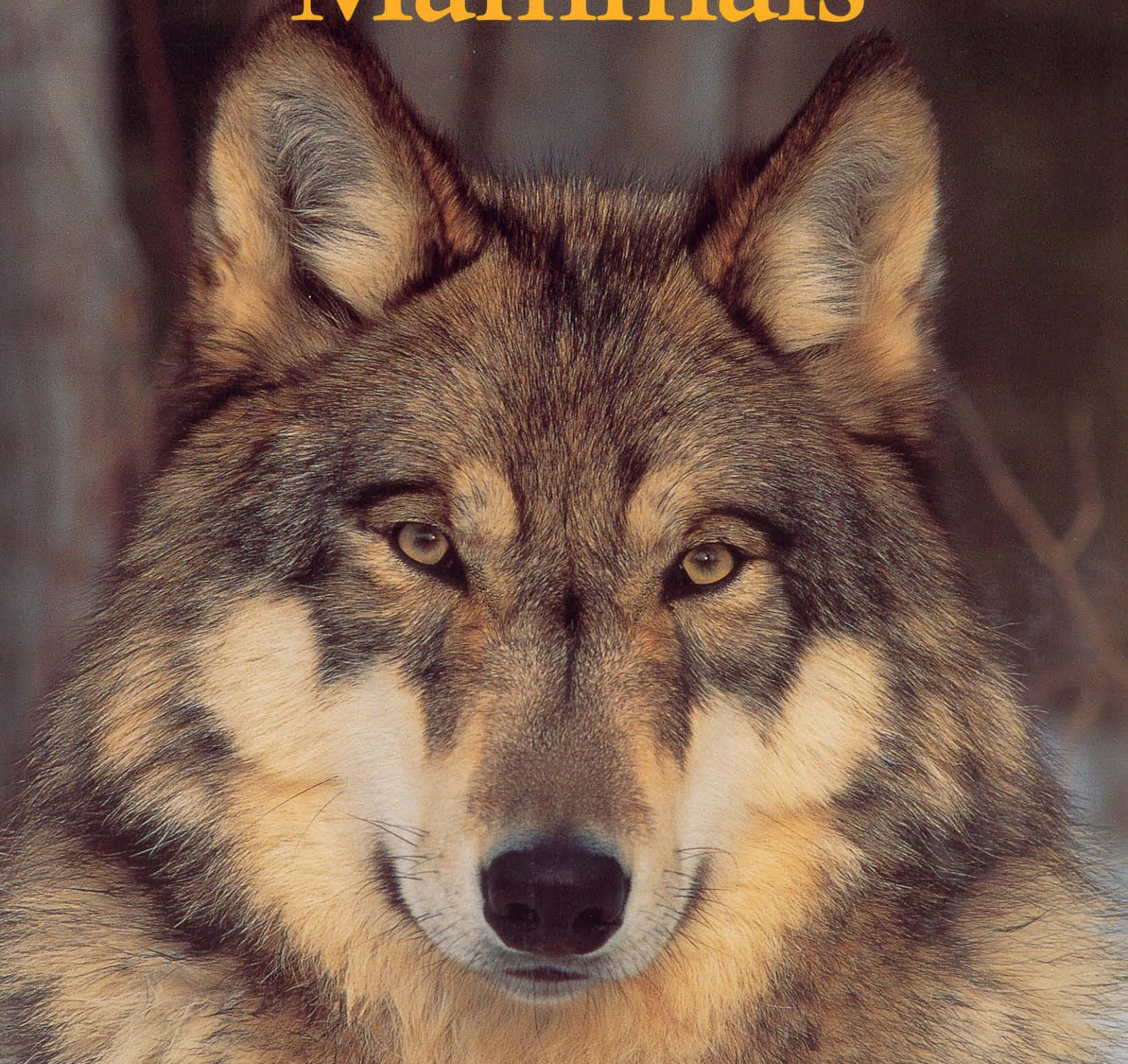


The Smithsonian Book of
**North American
Mammals**



EDITED BY DON E. WILSON AND SUE RUFF

Ord's kangaroo rat | *Dipodomys ordii*

Ord's kangaroo rat occurs from southern Alberta and Saskatchewan to southern Hidalgo, Mexico, and from central Oregon and eastern California to central Kansas and Oklahoma. Fossils have been recorded from Colorado, Idaho, Kansas, New Mexico, South Dakota, and Texas.

Dipodomys ordii is nocturnal and active all year. Males generally are more abundant and active than females. Activity increases under cloud cover, particularly in winter, decreases during inclement weather, on clear nights, or under moonlight, and ceases when temperatures are below -11°C or when snow cover is greater than 40 percent. In moonlight, there is a shift in use of microhabitat from more open areas to areas with greater cover. Occasionally, this species is active out of the burrow during the daylight hours. Intraspecific aggression is rare, but during confrontations, a tooth-chattering sound is emitted; the loser retreats making faint chuckling noises and squeaky snorts.

This is a medium-sized, relatively short-tailed, five-toed species with disproportionately long hind legs and feet, an adaptation for hopping. The front feet are used to manipulate food and for burrowing. The dorsal pelage is brownish, reddish, or blackish, depending on the subspecies, and the entire ventral surface is white. Grooming the pelage to remove excess body oil and parasites is accomplished by sliding and rolling in sand



and dust. The underparts and sides are dusted by sliding over the sand, propelled by strong thrusts of the hind legs. The feet and tail receive careful grooming. *D. ordii* drinks by scooping water into the mouth with the forefeet, and it is an excellent swimmer.

The timing of reproduction varies among populations, from one or two distinct breeding seasons to some reproductive activity throughout the year. Overall, the length of the breeding season is about 7 months of the year. Most males are capable of reproduction all year; the reproductive cycle, timing, and length of the breeding season is regulated by the female's cycle,

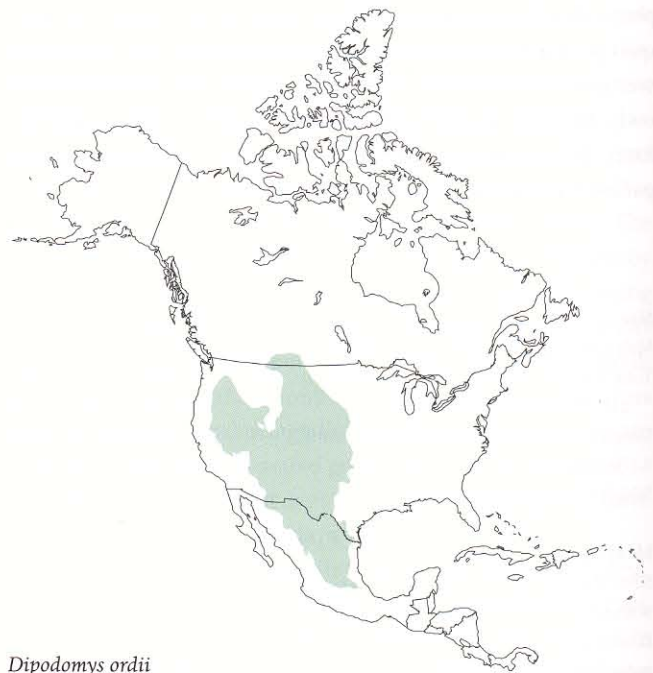
which is strongly affected by the environment. The onset of reproductive activity is correlated with rainfall and the appearance of green vegetation, and may be related to energetic costs of gestation and care of offspring. Gestation is 28–32 days, and litter size is one to six (average is 3.5). There may be two litters a year. In captivity, the maximum number of litters per year was five, the maximum number of young per year was 20, the maximum number of litters per lifetime was nine, and the maximum number of young per lifetime was 38. Sexual maturity is reached at about 83 days. The usual lifespan is about one year, but in captivity, this species can live more than 7 years.

Ord's kangaroo rat responds to vocalizations made by newborns that are in the frequency range corresponding to that used by adults in detection and avoidance of predators. Vocalizations by newborns become variable and infrequent at 14 days of age, which coincides with a marked increase in physical activity, thermoregulatory ability, and solid food intake. When born prematurely or ill, neonates cannot vocalize and are ignored or eaten by the mother.

Dipodomys ordii lives in a variety of vegetation types, but all habitats are associated with fine-textured, sandy soils. Major habitat types include semi-arid grasslands, mixed-grasslands, and scrublands (including pinon-juniper woodlands). Dominant plants of these habitats may include junipers, sage brush, saltbush, broomweed, grasses, yuccas, and mesquites. Ord's kangaroo rat is primarily a seed-eater. Throughout its range a wide variety of food is consumed; the most common are seeds of grasses and forbs, followed by green vegetation, other vegetative material, and occasionally animal material (e.g., beetles and other arthropods).

The size of a home range is generally 0.43–1.36 hectares. Depending upon locality and suitability of habitat, population density may be 10–50 kangaroo rats per hectare. Density is correlated with rainfall and primary plant productivity.

In New Mexico, Ord's kangaroo rat is sympatric with Merriam's kangaroo rat and the silky pocket mouse. Ord's kangaroo rats occur in the grass habitat, Merriam's kangaroo rats occupy stands of creosotebush, and silky pocket mice are found



Dipodomys ordii

in both habitats. In Nevada, spatial overlap between Ord's and chisel-toothed kangaroo rats occurs only in summer, between Ord's and Panamint kangaroo rats in winter, spring, and summer, and between Ord's and Merriam's kangaroo rats in all seasons.

Depending upon locality, species associated with Ord's kangaroo rat may include cottontails, jackrabbits, chipmunks, ground squirrels, antelope squirrels, pocket gophers, kangaroo rats, kangaroo mice, pocket mice, grasshopper mice, deer mice, white-footed mice, pinyon mice, cactus mice, pygmy mice, woodrats, harvest mice, cotton rats, voles, deer, and pronghorns. Predators include barn, great-horned, long-eared, and burrowing owls, badgers, long-tailed weasels, kit and red foxes, and coyotes. Endoparasites include protozoans, cestodes, and nematodes. Ectoparasites include chiggers, mites, ticks, lice, and fleas. *T. L. Best*

Size

Males are slightly larger than females.
Total length: 210–365 (243) mm (males);
208–360 (242) mm (females)
Length of tail: 129 mm (males); 127 mm
(females)
Weight: 52 g

Identification

The range of *D. ordii* overlaps with that of several other species of kangaroo rats. Compared with *D. microps*, *D. ordii* has lower incisors that are awl-shaped instead of chisel-shaped. Where

sympatric with *D. panamintinus*, the length of the hind foot of *D. ordii* is more than 44 millimeters; the foot of *D. panamintinus* is shorter. *D. ordii* has a longer, bushier, and slightly more crested tail than *D. compactus*, and its pelage is longer, silkier, and has a brownish hue, rather than the orange cast of *D. compactus*. All additional *Dipodomys* that are sympatric with *D. ordii* have four toes on each hind foot instead of five.

Status
Common

Subspecies

Dipodomys ordii attenuatus, western Texas
Dipodomys ordii celeripes, northwestern Utah and northeastern Nevada
Dipodomys ordii chapmani, west-central Arizona
Dipodomys ordii cinderensis, southwestern Utah and east-central Nevada
Dipodomys ordii cineraceus, northern Utah
Dipodomys ordii columbianus, southern Washington, western Oregon, southern Idaho, northeastern California, and northern Nevada
Dipodomys ordii cupidineus, southwestern Utah and northwestern Arizona

Dipodomys ordii durranti, southern Texas and northeastern Mexico

Dipodomys ordii evexus, central Colorado

Dipodomys ordii extractus, northern Chihuahua, Mexico

Dipodomys ordii fetusus, east-central Nevada and west-central Utah

Dipodomys ordii fremonti, south-central Utah

Dipodomys ordii idoneus, north-central Mexico

Dipodomys ordii inaquosus, north-central Nevada

Dipodomys ordii longipes, southeastern Utah, southwestern Colorado, northeastern Arizona, and northwestern New Mexico

Dipodomys ordii luteolus, central Great Plains

Dipodomys ordii marshalli, north-central Utah

Dipodomys ordii medius, eastern New Mexico and western Texas

Dipodomys ordii monoensis, western Nevada and eastern California

Dipodomys ordii montanus, south-central Colorado and north-central New Mexico

Dipodomys ordii nexilis, east-central Utah and west-central Colorado

Dipodomys ordii obscurus, southern Chihuahua, northwestern Coahuila, and northern Durango, Mexico

Dipodomys ordii oklahomae, central Oklahoma

Dipodomys ordii ordii, southeastern Arizona, southern New Mexico, western Texas, and north-central Mexico

Dipodomys ordii pallidus, west-central Utah

Dipodomys ordii palmeri, southern Mexico

Dipodomys ordii panguitchensis, south-central Utah

Dipodomys ordii parvabullatus, Tamaulipas, Mexico

Dipodomys ordii priscus, southwestern Wyoming, northeastern Utah, and northwestern Colorado

Dipodomys ordii pullus, central Chihuahua, Mexico

Dipodomys ordii richardsoni, southeastern Colorado, western Kansas, northeastern New Mexico, northern Texas, and western Oklahoma

Dipodomys ordii sanrafaeli, east-central Utah, west-central Colorado

Dipodomys ordii terrosus, northern Great Plains, south-central Canada

Dipodomys ordii uintensis, northeastern Utah

Dipodomys ordii utahensis, north-central Utah

References

Mammalian Species 353; Garner, 1974