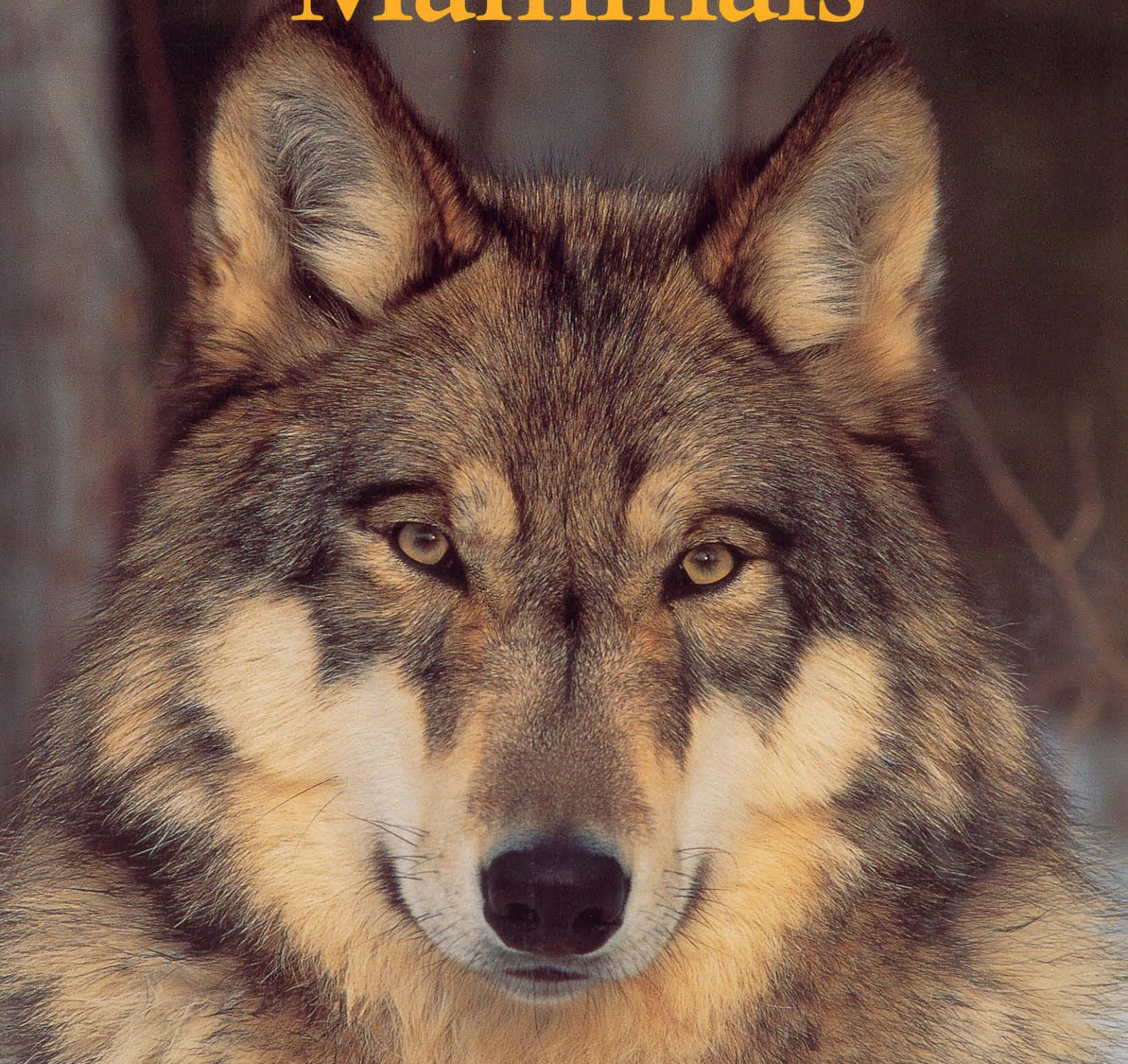


The Smithsonian Book of  
**North American  
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## San Joaquin pocket mouse | *Perognathus inornatus*

The San Joaquin pocket mouse inhabits west-central California from the upper Sacramento Valley in Tehama County southward through the San Joaquin and Salinas valleys and contiguous areas to the Mojave Desert in Los Angeles, Kern, and extreme western San Bernardino counties. It is also found in the Tehachapi Mountains and in the foothills of the western Sierra Nevadas below about 600 meters. The only fossils that may be of *P. inornatus* are from a Pleistocene deposit at McKittrick, Kern County, California.

*Perognathus inornatus* is a medium-sized pocket mouse with a tail that averages longer than the length of its head and body. The ears are small. The posterior third of the sole of the hind foot is haired, the pelage is soft, and the vibrissae are rather short. The upperparts are yellowish to pinkish overlaid with blackish hairs; the extent of overlay determines the overall tone in the various subspecies. The lateral line is moderately well marked, the underparts are white, and the tail is faintly bicolored. The pelage of young-of-the-year is grayish and soft. Subspecies differ in the number of chromosomes, in color and body size, in the relative length of the tail, and in characters of the skull.

This small pocket mouse is nocturnal. It spends the day underground in a simple burrow, foraging at night on the surface of the ground. It is not skilled at climbing in vegetation. It hibernates in autumn, winter, and spring.

Sandbathing serves as a means of grooming the pelage. When sandbathing, the San Joaquin pocket mouse digs rapidly in the substrate with its forepaws, then lowers its cheek to the sand, extends its body, and slides forward on its side. It may then rub the same side again or rub the opposite side or belly. This pocket mouse tends to concentrate its sandbathing at one location, and the sandbathing spots of one animal affect the behavior of others. Sandbathing may have originated from a movement pattern for spreading scent; scent-marking consists of depressing the anal-genital area against the substrate and walking forward.

The San Joaquin pocket mouse breeds from March to July. At least two litters of four to six young are produced each year. The estrous cycle is 5–6 days long. During estrus, females are involved in chasing, fighting, sandbathing, scent-marking, digging, naso-anal contact, and grooming.

Vocalizations include growls, squeals, and low grunts. Tooth-chattering and foot-drumming are used in communication, but drumming is rare and the sound is barely audible to the human ear. Tooth-chattering, done by rapidly bringing the incisors together, usually occurs in conjunction with aggressive behavior.

This species inhabits arid annual grassland, savanna, and desert scrub associations, with sandy washes, fine-textured



soils, and grassy or weedy ground, and sites with sage, filaree, oats, and brome grass. At the northern extreme of its range it occurs on a rocky slope in chamise and buck brush chaparral at an elevation of 420 meters. Green vegetation is available for only a few weeks in winter and early spring; dry brome grass is present for the remainder of the year. *P. inornatus* is a granivore and subsists mainly on minute seeds of grasses, shrubs, and forbs. Insects do not form a large part of its diet, but it will eat soft-bodied insects such as cutworms.

The burrows are conspicuous in the short grass. Like other pocket mice, it digs small burrows (2–3 centimeters in diameter), usually in sandy soil near the bases of bushes. Occupied burrows are plugged with earth during the daytime. It routinely builds a nest within the burrow and will inhabit burrows of Heermann's kangaroo rats.



*Perognathus inornatus*

Density is quite variable among localities and from year to year. The number of *P. inornatus* may be lower on areas grazed by cattle, but in an alkali-sink community in Fresno County, California, density was 7.3 per hectare on a grazed site and 5.0 per hectare on ungrazed sites. Its average home range was 148 square meters on sites grazed by cattle and 258 square meters on ungrazed sites. The sex ratio varied from 2.5 males to 1 female on sites grazed by cattle to 3:1 on ungrazed sites.

Mammals occurring in the same habitat include black-tailed

jackrabbits, desert cottontails, California ground squirrels, San Joaquin, Heermann's, and giant kangaroo rats, San Joaquin antelope squirrels, grasshopper mice, badgers, coyotes, and kit foxes. Predators include barn owls, coyotes, badgers, and kit foxes. The only ectoparasite known is the mite *Ischyropoda armatus*.

Much of the San Joaquin Valley has undergone extensive agricultural development. Most of the habitat originally occupied by this species has been destroyed. *T. L. Best*

#### Size

Males are slightly larger than females.

Total length: 149 mm (males); 147 mm (females)

Length of tail: 76 mm (males); 75 mm (females)

Weight: 7–12 g

#### Identification

*Perognathus inornatus* may be sympatric with *P. alticolus* and *P. parvus*. It differs from both in

some characters of the skull and is, on average, smaller than both (length of hind foot usually is less than 21 mm compared with more than 21 mm).

#### Status

Uncommon

#### Subspecies

*Perognathus inornatus inornatus*, eastern San Joaquin and adjacent valleys, California

*Perognathus inornatus neglectus*, western and southern San Joaquin and adjacent valleys, California

*Perognathus inornatus psammophilus*, west-central California

#### References

*Mammalian Species* 450; Eisenberg, 1963