U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
TIPTON KANGAROO RAT
Dipodomys nitratoides nitratoides

CLASSIFICATION: Endangered
Federal Register 53:25608; July 8, 1988
http://ecos.fws.gov/docs/federal_register/fr1436.pdf

CRITICAL HABITAT: None designated

RECOVERY PLAN: Final
Recovery plan for the upland species of the San Joaquin Valley, California, September 30. 1998
http://ecos.fws.gov/docs/recovery_plan/980930a.pdf

5-YEAR REVIEW: Completed February 2010. No change recommended.
www.fws.gov/ecos/ajax/docs/five_year_review/doc3228.pdf (1.4 MB)

Tipton Kangaroo Rat
Susan P. Jones, USFWS

DESCRIPTION
The Tipton kangaroo rat is one of three subspecies of the San Joaquin kangaroo rat, morphologically distinguished by being larger than the Fresno kangaroo rat (*D.n. exilis*) and smaller than the short-nosed kangaroo rat (*D.n. brevinasus*).

Adults weigh 35 to 38 grams (1.2 to 1.3 ounces). Head and body length is 100 to 110 millimeters (3.9 to 4.3 inches). Tail length is 125 to 130 millimeters (4.8 to 5.1 inches).

San Joaquin kangaroo rats can be distinguished from other kangaroo rats within their range by the presence of four toes on the hind foot; other species have five toes. Kangaroo rats are in the family Heteromyidae. They are *not* really rats at all. At least, they are not like common nonnative household rats, which are in the Muridae family.

Kangaroo rat adaptations for two-footed hopping include elongated hind limbs, a long, tufted tail for balance, a shortened neck and a large, flattened head. Other characteristics include large, dorsally placed eyes and small, rounded ears. Fore-limbs are comparatively short with stout claws that facilitate digging burrows. The fur is dark yellowish-buff dorsally and white ventrally. A white stripe extends across the hips, continuing for the length of the tufted tail. The base of the tail is circumscribed by white. The top and bottom of the tail are blackish. Dark whisker patches on each side of the nose are connected by a black band of fur.

Tipton kangaroo rats eat mostly seeds, with small amounts of green, herbaceous vegetation and insects supplementing their diet when available. Burrow systems are usually in open areas but may occur in areas of thick scrub. They are typically simple, but may include interconnecting

tunnels. Most are less than 10 inches deep. They are commonly in slightly elevated mounds, the berms of roads, canal embankments, railroad beds, and bases of shrubs and fences where wind-blown soils accumulate above the level of surrounding terrain. Terrain not subject to flooding is essential for permanent occupancy by Tipton kangaroo rats.
Little is known about San Joaquin kangaroo rat reproduction in the wild. Mating appears to begin in the winter. Most females seem to have one litter per year, although some have two or more. Young are born in burrows.

DISTRIBUTION

The historical geographic range of Tipton kangaroo rats was over 1.7 million acres. Distribution was limited to arid-land communities occupying the valley floor of the Tulare Basin in level or nearly level terrain. By 1985, the inhabited area had been reduced, primarily by cultivation and urbanization, to about 60 thousand acres, only about 4 percent of the historical acreage. Current occurrences are limited to scattered, isolated areas. In the southern San Joaquin Valley this includes the Kern National Wildlife Refuge, Delano, and other scattered areas within Kern County.

In Kings County, two populations of San Joaquin kangaroo rats have been found on about 371 acres in 1994 and 1995. One site, Lemoore Naval Air Station, is 97 acres. Whether these populations belong to the Fresno or Tipton subspecies is uncertain but historically their ranges were contiguous.

Density estimates range from 2.8 to 3.6 animals per acre. Habitat type and climatic conditions appear to play a role in density. For example, at the end of a 5 year drought in April 1991, populations erupted, peaking in January 1993. In April 1995, following a higher than average rainfall year, the populations declined.

THREATS

The construction of dams and canals that made a dependable supply of water available and allowed the cultivation of the alkaline soils of the saltbush and valley sink scrub and relictual dune communities, was principally responsible for the decline and endangerment of the Tipton kangaroo rat.

Widespread, unrestricted use of rodenticides to control California ground squirrels probably contributed to the decline or extirpation of small populations. Urban and industrial development and petroleum extraction all have contributed to habitat destruction. Except for small, isolated populations, predation is unlikely to threaten Tipton kangaroo rats.

The increasing fragmentation of the range of Tipton kangaroo rats, however, increases the vulnerability of small populations to predation. Current threats of habitat destruction or modifications come primarily from industrial and agriculturally-related developments, cultivation and urbanization, and secondarily from flooding.

REFERENCES FOR ADDITIONAL INFORMATION

Best, T.L. 1991. Dipodomys nitratoides. Mammal. Species 381:1-7.

Brown, N.L. and D.F. Williams. Endangered Species Recovery Program. Species account.

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 78-79.

U.S. Fish and Wildlife Service. 1998. *Recovery plan for the upland species of the San Joaquin Valley, California, September 30. 1998.* Portland, Oregon.

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