

50 CFR Part 17**Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Giant Kangaroo Rat****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

SUMMARY: The Service proposes to determine endangered status for the giant kangaroo rat, a mammal of south-central California. Mainly because of habitat loss, this species now occupies only about 6 percent of its original range. It is jeopardized by the usurpation of native grasslands for agricultural and other purposes, and by the indiscriminate use of rodenticides. This proposal, if made final, would implement the protection of the Endangered Species Act of 1973, as amended, for the giant kangaroo rat. The Service seeks relevant data and comments from the public.

DATES: Comments from the public and the State of California must be received by October 15, 1985. Public hearing requests must be received by September 27, 1985.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 NE Multnomah Street, Portland, Oregon 97232. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:**Background**

Kangaroo rats (genus *Dipodomys*) are mammals specialized for rapid travel by hopping on their elongated hind legs, and for transportation of food in their external cheek pouches. They are found mainly in fairly dry, open country of western North America, where they construct burrows for shelter and often for storage of food. The giant kangaroo rat (species *Dipodomys ingens*), found only in south-central California, was described by Merriam (1904) from specimens collected southeast of

Simmler, San Luis Obispo County. With a weight of 4.6 to 6.4 ounces (131 to 180 grams), it is the heaviest of all kangaroo rats. Total length is 12.2 to 13.7 inches (311 to 348 millimeters), tail length is 6.2 to 7.8 inches (157 to 198 millimeters), and hind foot length is 1.8 to 2.2 inches (46 to 55 millimeters). The general coloration is brown above and white below. Other distinguishing features include the presence of five toes on each hind foot (some other kangaroo rats have only four), short ears and tail in relation to head and body length, and a broad width across the maxillary processes of the zygomatic arches of the skull (Hall, 1981).

The preferred habitat of the giant kangaroo rat is native annual grassland with sparse vegetation, good drainage, fine sandy-loam soils, and a slope of less than 10 percent (Grinnell, 1932; Williams, 1980). The annual precipitation is 5 inches (127 millimeters) or less. As an adaptation to the sparse rainfall and vegetation, the species makes extensive caches of plant seeds just below the surface of the soil during the spring (Shaw, 1934). The seeds and their sprouts are harvested during the summer and stored in burrows dug by the animals. The burrows are shallow, being approximately 1 foot (300 millimeters) deep, but are still at a depth normally greater than that reached by the sparse rainfall (Grinnell, 1932). If rains did penetrate into the burrows, winter food supplies would spoil.

The original distribution of the giant kangaroo rat is known to have extended from southern Merced County, through the San Joaquin Valley, to southwestern Kern County and northern Santa Barbara County (Hall, 1981). Recent status surveys (see below) indicate that barely 6 percent of this range is still occupied, that substantial populations survive only in a few areas at the southern edge of the original range, and that even the status of those populations is precarious. The main factor in the decline was conversion of native grassland habitat to agricultural production. This problem along with the loss of habitat to urbanization and energy development, and indiscriminate use of rodenticides, is now jeopardizing the survival of the remaining populations. In the *Federal Register* of December 30, 1982 (47 FR 58454-58460), the giant kangaroo rat was included in category 1 of the Service's Review of Vertebrate Wildlife, meaning that there was substantial information on hand to support the biological appropriateness of a proposal for addition to the List of Endangered and Threatened Wildlife.

The giant kangaroo rat is only one part of a unique San Joaquin Valley fauna that has become jeopardized by destruction of grassland habitat. Other species that have been eliminated from this area, or greatly reduced in range, include the blunt-nosed leopard lizard (*Gambelia silus*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), San Joaquin kit fox (*Vulpes macrotis mutica*), pronghorn (*Antilocapra americana*), and tule elk (*Cervus elaphus nannodes*). The lizard, fox, and Fresno kangaroo rat are classified as endangered by the Service, and the antelope squirrel and Tipton kangaroo rat were included in category 2 of the Service's Review of Vertebrate Wildlife, meaning that available information indicates that a proposal for listing as endangered or threatened is possibly appropriate. Some of the main colonies of the giant kangaroo rat are also found within the foraging range of the California condor (*Gymnogyps californianus*), one of the world's most critically endangered birds.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered species or a threatened species due to one or more of the five factors described in section 4(a)(1) of the Act. These factors and their application to the giant kangaroo rat (*Dipodomys ingens*) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Recent status surveys, especially by Dr. Daniel F. Williams of California State College, Stanislaus (1980 and pers. comm.), and Dr. Thomas P. O'Farrell of EG & G Energy Measurements Group, Santa Barbara operations, Goleta, California (pers. comm.) indicate that habitat loss has been the main factor in the decline of the giant kangaroo rat, and continues to jeopardize the survival of the species. The known original range of this mammal covered an area of approximately 2,000 square miles (527,600 hectares) in southern Merced, eastern San Benito, western Fresno, southwestern Kings, eastern San Luis Obispo, western Kern, and northern Santa Barbara Counties. The best

habitats in this area supported population densities of nearly 21 kangaroo rats per acre (52 per hectare).

During the 20th century, conversion of native grassland habitat to crop production resulted in a precipitous drop in the numbers and distribution of the giant kangaroo rat. The species is evidently unable to survive where the processes of cultivation destroy its burrows and food caches. As late as the 1950's, population densities remained relatively high over substantial areas, but agricultural conversion of these areas was stimulated by major water diversion projects in the 1960's and 1970's. Some habitat also has been lost to urbanization and to the development of oil and natural gas fields.

At present, the giant kangaroo rat is known to occupy not more than about 120 square miles (31,000 hectares) or about 6 percent of the historical range. Moreover, nearly all of the original optimum habitat has been converted to crop production, and much of the area still occupied is only marginal for the species. The kangaroo rat apparently has been completely exterminated in Merced County, and only a few small, isolated colonies survive in San Benito, Fresno, and Kings Counties. The last relatively large blocks of suitable habitat are at the southern edge of the historical range of the species, in the upper Buena Vista Valley of western Kern County, the Elkhorn and Carrizo Plains of eastern San Luis Obispo County, and the Cuyama Valley of northern Santa Barbara County. The best habitat in these areas supports an average population density of about 9 individuals per acre (22 per hectare) after the annual reproductive season. In a small portion of the Buena Vista Valley, density is known to approximate the known historical maximum level.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Not now known to be applicable.

C. Disease or predation. Not now known to be applicable.

D. The inadequacy of existing regulatory mechanisms. The California State Fish and Game Commission lists the giant kangaroo rat as endangered and, therefore, regulations are in effect that prohibit taking. It may be difficult to enforce such regulations, however, with respect to private rodent control operations or to the general application of rodenticides. In any case, State regulations do not protect the habitat of the giant kangaroo rat.

E. Other natural or manmade factors affecting its continued existence. Rodent control programs and the indiscriminate use of rodenticides have eliminated or

reduced some colonies of the giant kangaroo rat. In some instances, this species was the target of the control program, but in other cases it was inadvertently destroyed. The use of rodenticides is typically initiated by complaints of rodent burrows on rangeland or, occasionally, in dikes. Williams (1980) found ranchers to generally dislike the kangaroo rat, the burrows of which are considered a menace to livestock, and to desire its extermination. He stated that the application of rodenticides poses an imminent threat to the survival of some of the remnant populations of the species. Williams (pers. comm.) also points out that there is some evidence that the kangaroo rat actually may benefit the livestock industry, by working the soil and thus increasing forage production.

The decision to propose endangered status for the giant kangaroo rat was based on an assessment of the best available scientific information and of past, present, and probable future threats to the species. A decision to take no action would constitute failure to properly classify the giant kangaroo rat pursuant to the Endangered Species Act and would exclude the species from protection provided by the Act. A decision to propose only threatened status would not adequately reflect the drastic decline and multiplicity of problems of the species. For the reasons given below, a critical habitat designated is not included in this proposal.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that "critical habitat" be designated "to the maximum extent prudent and determinable," concurrent with the determination that a species is endangered or threatened. The Service finds that designation of critical habitat for the giant kangaroo rat is not prudent at this time. As noted in factors "D" and "E" of the above "Summary of Factors Affecting the Species," the giant kangaroo rat is jeopardized by taking, an activity difficult to enforce. Publication of precise critical habitat descriptions and maps could make this species and its habitat even more vulnerable, and, therefore, place its survival in further jeopardy.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened pursuant to the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices.

Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires recovery actions. Such actions are initiated by the Service following listing. The protection required of Federal agencies, and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened, and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposal in the *Federal Register* of June 29, 1983, 48 FR 29990). Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

The only known Federal activities that may affect the giant kangaroo rat are rodent control operations, the issuance of leases for grazing and other agricultural purposes on Bureau of Land Management (BLM) holdings, and the issuance of leases for oil or natural gas exploration and development on both BLM and Department of Energy (DOE) lands. Portions of the range of the giant kangaroo rat in the Buena Vista Valley are within the Elk Hills Naval Petroleum Reserve (NPR-1) and the Buena Vista Naval Petroleum Reserve (NPR-2) where possible exploration and development may occur. Actions that may affect the giant kangaroo rat in these areas may also affect the San Joaquin kit fox and blunt-nosed leopard lizard, which are currently classified as endangered pursuant to the Act. No major conflicts are known or expected at this time; the Service will work with BLM and DOE to attempt to accommodate both the listed species and the oil and gas exploration and development. The involved Federal

agencies are already consulting with the Service, and additional impacts due to this listing are expected to be minimal.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered wildlife. It is also illegal to possess, sell, deliver, transport, or ship any such wildlife that has been taken unlawfully. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance propagation or survival, or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

Public Comments Solicited

The Service intends that any final rule adopted will be accurate and as effective as possible in the conservation of endangered or threatened species. Therefore, comments and suggestions concerning any aspect of this proposed rule are hereby solicited from the public, concerned governmental agencies, the scientific community, industry, private interests, and other parties. Comments are particularly sought concerning the following:

(1) Biological, commercial, or other relevant data concerning any threat (or lack thereof) to the subject species;

(2) The location of any additional populations of the subject species, and the reasons why any of its habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the distribution of this species; and

(4) Current or planned activities in the involved area, and their possible effect on the subject species.

Final promulgation of the regulation on the subject species will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal, should be in writing, and should be directed to the party named in the above "ADDRESSES" section.

National Environmental Policy Act

The U.S. Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register of October 25, 1983 (48 FR 49244).

References

Grinnell, J. 1922. A geographical study of the kangaroo rats of California. Univ. California Publ. Zool. 24:1-124.
 Grinnell, J. 1932. Habitat relations of the giant kangaroo rat. J. Mamm. 13:305-320.

Hall, E.R. 1981. The mammals of North America. John Wiley and Sons, Inc., New York, 2 vols.
 Merriam, C.H. 1904. New and little known kangaroo rats of the genus *Perodipus*. Proc. Biol. Soc. Washington 17:139-145.
 Shaw, W.T. 1934. The ability of the giant kangaroo rat as a harvester and storer of seeds. J. Mamm. 15:275-286.
 Williams, D.F. 1980. Distribution and population status of the San Joaquin antelope squirrel and giant kangaroo rat. California Dept. of Fish and Game, Nongame Wildl. Investig. Rept., EW4, 46 pp.

Authors

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter, I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 95-150, 93 Stat. 1225; Pub. L. 95-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under "MAMMALS," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

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Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
Rat, giant kangaroo	<i>Dipodomys ingens</i>	U.S.A. (CA)	Entire	E		NA	NA

Dated: July 19, 1985.
 Susan Recce,
 Acting Assistant Secretary for Fish and Wildlife and Parks.
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