50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Stephens' Kangaroo Rat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine endangered status for Stephens' kangaroo rat (*Dipodomys stephensi*), a small mammal found in southern California. The species has suffered widespread habitat loss and degradation, resulting in small isolated populations. This proposal, if made final, will implement the protection provided by the Endangered Species Act of 1973, as amended, for Stephens' kangaroo rat. The Service seeks data and comments from the public.

DATES: Comments from all interested parties must be received by January 19, 1988. Public hearing requests must be received by January 4, 1988.

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

Stephens' kangaroo rat (*Dipodomys stephensi*) is a small mammal of the rodent family Heteromyidae. Like other kangaroo rats, it has a large head, external cheek pouches, elongated rear legs used for jumping, and relatively small front legs. The front feet are frequently used to hold seeds that the animal eats. There are five toes on the hind foot and the tail is 1.45 times the length of the head and body. Stephens' kangaroo rat is distinguished from the sympatric agile kangaroo rat (*Dipodomys agilis*) by a lateral white tail band that is one half or less (rather than one half or more) times the width of the dorsal tail stripe, dusky (rather than dark) soles on the hind feet, a comparatively grizzled appearance to the dorsal tail stripe due to many white hairs, a darker tail tuft due to few white hairs, a smaller ear (averaging 0.5 inch (15 millimeters) in length), and a relatively broad head. The average adult Stephens' kangaroo rat is 11 to 12 inches (277 to 300 millimeters) in length and weighs 2.3 ounces (67 grams) (Bleich 1977).

Stephens' kangaroo rat was first described by Merriam (1907) as *Perodipus stephensi*. The type locality is the San Jacinto Valley, a little west of the town of Winchester. Grinnell (1921) placed the species in the genus *Dipodomys*. Huey (1962) described a kangaroo rat from the San Luis Rey River valley as *Dipodomys cascus*. Lackey (1967a) determined *D. cascus* to be a synonym of *D. stephensi*.

Stephens' kangaroo rat is endemic to an inverted-pear-shaped range encompassing the Perris and San Jacinto Valleys in western Riverside County, and extending into the San Luis Rey and Temecula Valleys in northern San Diego County (Grinnell 1922, Lackey 1967a, O'Farrell 1986, Thomas 1973). Occupied habitats are usually described as sparse slightly disturbed coastal sage scrub or annual grassland. The populations with the highest densities have been found in areas where the herbaceous layer still contains California native annuals, and where perennial cover is less than 30 percent (Hogan 1981). Stephens' kangaroo rat is most commonly associated with *Artemisia californica* and *Eriogonum fasciculatum*. Stephens' kangaroo rat occurs on level or low rolling terrain; it is not found on extremely hard or sandy soils (Lackey 1967a). Bleich (1977) noted that gravel is a common component of soils where the animal is found.

All of the occupied sites found by Thomas (1973) had been previously disturbed, usually by plowing. Remnant populations that survived at the natural edges had reinvaded after the fields had been left fallow. At that time most populations were considered isolated from one another and were found predominantly in the western portions of the range. Rapid urbanization has reinforced this pattern.

Like all kangaroo rats, *D. stephensi* is nocturnal, spending the day in underground burrows and foraging on the surface at night. Pregnant and lactating females have been caught in the spring and summer months (Lackey 1967b). To date, few population density studies have been completed, and none have covered an entire year. Relatively high densities (over 20 per acre or 50 per hectare) have been found during the summer months when the young are out of the nest (Thomas 1975). Hogan (1981) reported fall-winter densities of about 2.5 to 6 per acre (6 to 15 per hectare). According to Dr. Michael J. O'Farrell (WESTEC Services, Las Vegas, pers. comm., 1986), high density areas contain about 4 animals per acre (10 per hectare), and low density areas contain less than 2 per acre (5 per hectare). Most of the occupied range probably has low to moderate density populations.

In its original Review of Vertebrate Wildlife, published in the **Federal Register** of December 30, 1982 (47 FR 58454–58460), the Service included *D. stephensi* in category 2, meaning that information then available indicated that a proposal to determine endangered or threatened status was possibly appropriate, but was not yet sufficiently substantial to support such a proposal. Subsequently, many new data on the species became available, and in its revised Vertebrate Review of September 18, 1985 (50 FR 37958–37967), the Service included *D. stephensi* in category 1, meaning that substantial information is on hand to support the biological appropriateness of proposing to list as endangered or threatened.

Summary of Factors Affecting the Species

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

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The habitat and range of Stephens' kangaroo rat have been greatly reduced. The species probably once occurred throughout the coastal sage scrub community of the Perris and San Jacinto Valleys, and up adjoining sandy washes of Southern California. As the flatter plains were developed by people, however, the kangaroo rat became confined to isolated bases of low rolling hills and level ridge tops. Its range may once have encompassed around 717,000 acres (287,000 hectares). This is an approximate figure, based on planimetry of total range, excluding mountain tops. Visual inspection of this former range indicates that about 95 percent of the original habitat is gone.

A considerable portion of the original habitat of *D. stephensi* already had been developed by the time systematic studies began earlier in the century. There are, however, eight general areas where sites, from which the species has been recorded, are concentrated. From north to south, these areas are: (1) March Air Force Base to the Moreno Valley, (2) Lake Perris to the eastern side of the San Jacinto Valley, (3) Lake Mathews to Estelle Mountain, (4) the Lakeview Mountains, (5) the vicinity of Lake Elsinore, (6) Lake Skinner to Temecula, (7) Fallbrook Naval Weapons Annex to the San Luis Rey River, and (8) the vicinity of Lake Henshaw. The first six areas are in Riverside County and the last two in San Diego County.

Only three of these areas still contain substantial habitat for *D. stephensi*. O'Farrell (1986) indicated that approximately 12,600 acres (5,100 hectares) of suitable habitat remain at Lake Henshaw, and that another 4,940 acres (2,000 hectares) appear suitable on the Fallbrook Naval Weapons Annex. The species, however, has probably been extirpated between the latter facility and the San Luis Rey River. Another area of about 17,000 acres (6,800 hectares), between Lake Mathews and Estelle Mountain, still contains some suitable habitat, though much of this acreage has been lost to agriculture and urban development, and some of it has too great a vegetation cover to support the kangaroo rat. The species is likely to be extirpated from this entire area because of several planned housing and agricultural developments, except for 2,500 acres of habitat within a State ecological reserve.

Of the remaining five areas, two, March Air Force Base to Moreno Valley and Lake Skinner to Temecula, evidently no longer support viable populations of *D. stephensi*. The species also has not been recorded at Lake Perris since 1973, and, on the east side of the San Jacinto Valley, it is now restricted mainly to insular patches at the edges of plowed fields. It is similarly restricted in the Lakeview Mountains, where only a few thousand acres are now thought to contain adequate habitat. The last area, in the vicinity of Lake Elsinore, contains some U.S. Bureau of Land Management parcels, but survival of the kangaroo rat there is tenuous because of rapid surrounding urbanization and an expected increase in casual human use (off-road-vehicles already have been noted). Outside of these parcels, the species will be unlikely to survive extensive housing developments. The Devers-Serrano Power line right-of-way passes through this area, but is probably not wide enough to accommodate a viable kangaroo rat population.

Further compounding the fragmented nature of the current distribution is the fact that Stephens' kangaroo rat does not occupy all apparently suitable habitat (Friesen 1985a). Grazing, off-road-vehicle activity (common in southern California), and rodent control programs all reduce habitat suitability.

These habitat losses are likely to continue. An examination of Riverside County's general plan guidelines revealed that 78 percent of the sites where the kangaroo rat has been trapped are zoned for use incompatible with preservation of the species. Only 3 percent of the sites were zoned for vegetation or wildlife protection, and much of this land is not suitable for the kangaroo rat. Within the overall range of Stephens' kangaroo rat, only 6 percent of the land is zoned for uses compatible with the preservation of the species. Because not all of the habitat in the 6 percent is suitable, much less is really protected for the kangaroo rat. Although biological consultants have sometimes located the species and informed appropriate land owners or project proponents, the sites have nonetheless been disked or plowed.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not now known to be a threat to the species.

C. *Disease or Predation.* Not now known to be applicable. However, many areas of occurrence are adjacent to urban neighborhoods and increased predation from domestic and feral cats can be expected (Friesen 1985b).

D. *The inadequacy of existing regulatory mechanisms.* The California State Fish and Game Commission has listed Stephens' kangaroo rat as

endangered. The California Endangered Species Act of 1985 provides protection from take. This Act also contains provisions which call for a consultation process, similar to Section 7 of the Federal Act, when a State lead agency's project may affect a State-listed species. The regulations implementing the consultation process under the California Endangered Species Act were not completed until June of 1986 and it is unclear as to how effective the Act will be. Few State agencies are expected to propose projects as defined under the State Act. The suggested "mitigation" measures presented in most specific plans consist of preserving habitat in another location. There is thus a constant, ongoing habitat loss.

County zoning restrictions do not now provide adequate protection for the kangaroo rat and its habitat. Although "open space" designations are sometimes made, these can be altered to allow subdivision and development. Only a small fraction of the involved land is currently zoned for uses compatible with the preservation of the kangaroo rat (see "A" above).

Federal lands form only a small part of the range of the species. Although a significant population of *D. stephensi* does occur on the Fallbrook Naval Weapons Annex, the Navy has no established policy regarding the protection of sensitive species. The involved BLM-administered lands are very small and also lack specific protective policies. Restrictions and consultation requirements, such as would be established through coverage of the kangaroo rat by the Endangered Species Act, do not now exist.

E. *Other natural or manmade factors affecting its continued existence.* Coastal sage scrub plant communities may become less sparse through time. As plant density and ground cover increases, patches of habitat would become unsuitable for Stephens' kangaroo rat. The State recreation areas have rodent control programs that probably adversely affect Stephens' kangaroo rat populations. Consultants also have noted the disappearance of kangaroo rat sign due to unknown causes. A hypothesis concerning such unexplained disappearances is that rodenticides have been used.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based upon this evaluation, the preferred action is to list Stephens' kangaroo rat as endangered. Threatened, as opposed to endangered, status would not adequately reflect the drastic decline that already has occurred and the continued rapid habitat loss that is likely to occur in association with human activity. Although certain sites supporting the species receive some protection, these areas have management problems that could adversely affect the kangaroo rat. For the reasons given below, a critical habitat designation is not included in the 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," at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent or determinable for *D. stephensi* at this time. For example, as discussed under factor "A" in the "Summary of Factors Affecting the Species," some landowners or project developers have disked or plowed their lands upon the discovery of this species. Populations in other areas have mysteriously disappeared following discovery, possibly due to rodenticide use. Prevention of take, as described in Section 9 of the Endangered Species Act, would be difficult to enforce under these circumstances. Publication of critical habitat descriptions and maps would likely make the species more vulnerable and increase enforcement problems. Affected parties and landowners will be notified of the location and importance of protecting this species' habitat. Protection of the species' habitat will be addressed through the recovery process and through the Section 7 jeopardy clause as described below.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species 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, County, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. Some actions may be initiated prior to listing, conditions permitting. 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. 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 destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, 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 proposed Federal action may affect a listed species, the responsible Federal agency must enter into formal consultation with the Service.

There are several possible Federal involvements with respect to *D. stephensi*. Within the U.S. Bureau of Land Management Metropolitan Project area there are isolated parcels supporting the species (Hicks and Coperrider 1975). Eventually the Bureau may wish to dispose of its holdings within this area. The status of the kangaroo rat could be affected by these land transfers. The Veterans Administration or Federal Housing Administration may finance housing loans in areas where the species now occurs. The U.S. Army Corps of Engineers may permit or carry out flood control projects in sandy washes where the species has been found. In order to facilitate survival of the kangaroo rat on public lands, it would be necessary to carry out conducive management activities, such as preserving natural habitat where it now exists, conducting controlled burns to keep vegetation at the low densities favored by the species, and restoring native bunch grasses.

Section 9 of 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 a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver,

carry, transport, or ship any such wildlife that has been taken illegally. 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 species under certain circumstances. Regulations governing permits are at 50 CFR 17.22. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

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

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

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

(4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this 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. Such requests must be made in writing (see **ADDRESSES** above).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of 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** on October 25, 1983 (48 FR 49244).

References Cited

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Author

The primary author of this proposed rule is Karla Kramer, U.S. Fish and Wildlife Service, 24000 Avila Road, Laguna Niguel, California 92656 (714/643–4270 or FTS 796–4270).

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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:

PART 17—[AMENDED]

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. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99–625, 100 Stat. 3500 (1986), unless otherwise noted.

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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(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
MAMMALS							
Rat, Stephens' kangaroo	*Dipodomys stephensi*	U.S.A. (CA)	Entire	E		NA	NA

Dated: October 22, 1987.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 87–26712 Filed 11–18–87; 8:45 am]

BILLING CODE 4310-55-M