

Species		Historic range	Vertebrate population where endangered or threatened	When listed	Status	Critical habitat	Special rules
Common name	Scientific name						
REPTILES							
Lizard, black legless ....	<i>Anniella pulchra nigra</i>	U.S.A. (CA) .....	Entire	.....	E	NA	NA

3. Section 17.12(h) is amended by adding the following, in alphabetical order under FLOWERING PLANTS to

the List of Endangered and Threatened Plants to read as follows:

**§ 17.12 Endangered and threatened plants.**  
 \* \* \* \* \*  
 (h) \* \* \*

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
<i>Astragalus tener</i> var. <i>titi</i> .	Coastal dunes milk-vetch.	U.S.A. (CA) .....	Fabaceae .....	E	.....	NA	NA
<i>Cupressus goveniana</i> ssp. <i>goveniana</i> .	Gowen cypress .....	U.S.A. (CA) .....	Cupressaceae .....	T	.....	NA	NA
<i>Piperia yadonii</i> .....	Yadon's piperia .....	U.S.A. (CA) .....	Orchidaceae .....	E	.....	NA	NA
<i>Potentilla hickmanii</i> .	Hickman's potentilla	U.S.A. (CA) .....	Rosaceae .....	E	.....	NA	NA
<i>Trifolium trichocalyx</i>	Monterey clover .....	U.S.A. (CA) .....	Fabaceae .....	E	.....	NA	NA

Dated: December 30, 1994.

**Mollie H. Beattie,**

Director, U.S. Fish and Wildlife Service.

**Editorial note:** This document was received at the Office of the Federal Register on July 27, 1995.

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**50 CFR Part 17**

RIN 1018-AD34

**Endangered and Threatened Wildlife and Plants; Proposed Endangered or Threatened Status for Seven Plants From the Mountains of Southern California**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Fish and Wildlife Service (Service) proposes to list two plants as endangered under the Endangered Species Act of 1973, as amended (Act): *Poa atropurpurea* (San Bernardino bluegrass) and *Taraxacum californicum* (California dandelion). The Service also proposes to list five plants as threatened: *Arabis johnstonii* (Johnston's rock-cress), *Arenaria ursina* (Bear Valley sandwort), *Castilleja cinerea* (ash-grey Indian paintbrush), *Eriogonum kennedyi* var. *austromontanum* (southern mountain wild buckwheat), and *Trichostema austromontanum* ssp. *compactum* (Hidden Lake bluecurls).

These species are restricted to the Transverse and Peninsular Ranges of southern California, primarily the San

Bernardino and San Jacinto mountains. *Arenaria ursina*, *Castilleja cinerea*, and *Eriogonum kennedyi* var. *austromontanum* occur primarily on pebble plains that are relatively open areas with clay soils. *Poa atropurpurea* and *Taraxacum californicum* are found in mountain meadows. The only known population of *Trichostema austromontanum* ssp. *compactum* is associated with an ephemeral pond. *Arabis johnstonii* is found in forest and chaparral habitats. These seven taxa are threatened by one or more of the following: urbanization, habitat degradation by domestic animals, grazing, competition from introduced weeds, off-road vehicle (ORV) use, trampling, recreational development, alteration of the hydrologic regime, overcollection, and genetic absorption with exotic species. *Poa atropurpurea*,

*T. californicum*, and *T. austromontanum* ssp. *compactum* are also threatened by stochastic extinction due to their small population sizes and limited distributions. This proposed rule, if made final, would extend protection under the Act to these species.

**DATES:** Comments from all interested parties must be received by October 9, 1995. Public hearing requests must be received by September 25, 1995.

**ADDRESSES:** Comments and materials concerning this proposal should be submitted to the Field Supervisor, U.S. Fish and Wildlife Service, Carlsbad Field Office, 2730 Loker Avenue West, Carlsbad, California 92008. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Gail Kobetich, Field Supervisor, at the above address (619/431-9440).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Arabis johnstonii* (Johnston's rock-cress) is a herbaceous perennial in the mustard family (Brassicaceae), with leaves in a basal rosette from which the flowering stem arises. The leaves, which range from 1 to 2 centimeters (cm) (0.4 to 0.8 inches (in.)) long and 1.5 to 3.5 millimeters (mm) (0.06 to 0.14 in.) wide, are narrowly spatulate to oblanceolate, entire, and densely pubescent with fine dendritic (branched) hairs. This species blooms from February to June. It has purple flowers with four petals, 8 to 10 mm (0.32 to 0.4 in.) long. The fruit is a hairless, narrow silique (a linear, many-seeded pod), 3 to 5 cm (1.2 to 2 in.) long and 2 to 3 mm (0.08 to 0.12 in.) wide.

*Arabis johnstonii* was first collected in 1922 by Philip A. Munz and I. M. Johnston at Kenworthy, San Jacinto Mountains, Riverside County and described by Munz (1932). *A. johnstonii* is readily distinguishable from all other *Arabis* species in its range by the size and shape of its petals, siliques, and basal leaves (Berg and Krantz 1982).

*Arabis johnstonii* is found in chaparral and pine forest habitats from 1,400 to 2,150 meters (m) (4,500 to 7,050 feet (ft)) in the southern San Jacinto Mountains. Two distinct population centers are known; one in the vicinity of Garner Valley and the other approximately 6.5 kilometers (km) (4 miles (mi)) east of Garner Valley along the Desert Divide. This species occurs on U.S. Forest Service and private land. Beginning around the late 1800's, habitat loss and degradation began as a result of urbanization and cattle

trampling in the Garner Valley, and the construction of the Desert Divide trail. Urban and recreational pressures have substantially affected the species over the past 30 years.

*Arenaria ursina* (Bear Valley sandwort), *Castilleja cinerea* (ash-grey Indian paintbrush), and *Eriogonum kennedyi* var. *austromontanum* (southern mountain wild buckwheat) are perennial plants that occur predominantly on pebble plains in the San Bernardino Mountains of San Bernardino County. These plains are sparsely vegetated openings in the surrounding forest with clay soils supporting a uniquely adapted assemblage of plant species. Pebble plain habitat is found between 1,800 and 2,300 m (6,000 and 7,500 ft) in elevation, and occurs only within a 240 square km (92 square mile (sq mi)) area in the San Bernardino Mountains (Derby and Wilson 1978, Derby 1979, Krantz 1981a, Neel and Barrows 1990). Due to the unique combination of edaphic and climatic factors, pebble plains contain numerous plant species that are either endemic to the San Bernardino Mountains, or represent disjunct occurrences of species more common elsewhere.

*Arenaria ursina* is a low-lying perennial herb in the pink family (Caryophyllaceae) with many stems from 6 to 15 cm (2 to 6 in.) long. It has small, white, five-parted flowers with petals 4 to 5 mm (0.16 to 0.2 in.) long and nerveless sepals 3 to 4 mm (0.12 to 0.16 in.) in length with broad papery margins. This species blooms from May to August. *A. ursina* was first collected by S. B. Parish at Bear Valley in the San Bernardino Mountains in 1882, and described by B. L. Robinson (1894). It was subsequently reduced to a variety of *A. capillaris* by A. Gray (1897). B. Maguire (1951) returned the plant to species status. *A. ursina* is readily distinguished from other *Arenaria* species within its range by its sharp-pointed leaves, glandular-hairy stems, and sepals that are obtuse or rounded (Neel and Barrows 1990, Hickman 1993).

Seven populations of *Arenaria ursina* are known from pebble plain habitat in the vicinity of Big Bear and Baldwin Lakes, including Holcomb Valley, Sugarloaf Mountain, and Onyx Ridge (Krantz 1981a, Neel and Barrows 1990). Some of these populations occur on land owned by the California Department of Fish and Game (CDFG) and by private landowners. Most of the extant populations occur on Forest Service land and range from 1,800 to 2,900 m (6,000 to 9,500 ft) in elevation (Griggs 1979, Krantz 1981a, Neel and

Barrows 1990). Habitat loss for this species began in the 1880's with the construction of the Big Bear Lake reservoir in the San Bernardino Mountains in an area that likely contained extensive meadows and pebble plains. Over the past 100 years, cattle trampling, mining, timber harvest, off-road vehicle use, fuelwood harvesting, campground and ski area development, and urbanization have affected the habitat of this species.

*Castilleja cinerea* is a semi-parasitic perennial plant in the snapdragon family (Scrophulariaceae), with few to many ascending to decumbent stems, 1 to 2 decimeters (dm) (4 to 8 in.) tall, sprouting from a woody root-crown. The short grayish leaves are from 1 to 2 cm (0.4 to 0.8 in.) long and are covered with whitish hairs. The inflorescence is a greenish yellow spike, tinged with red or purplish, and with distinctive yellowish hairs on the lower bracts. It flowers primarily in June and July. *C. cinerea* was described by Gray (1883) based on specimens collected by S. B. and W. F. Parish at Bear Valley in 1882. *C. cinerea* is easily distinguished from other species of *Castilleja* within its range by its yellow spike and calyx lobes of equal length (Neel and Barrows 1990).

*Castilleja cinerea* is known from fewer than 20 localities at the eastern end of the San Bernardino Mountains. The range of this taxon extends from Snow Valley and Fish Camp eastward to Onyx Peak, a distance of about 24 km (15 mi), and from South Fork Meadows northward to Holcomb Valley, a distance of about 19 km (12 mi) (Heckard 1980, Neel and Barrows 1990). Although most populations occur on pebble plains, *C. cinerea* is not strictly endemic to pebble plains. This species is also found near the Snow Valley Ski Area and along Sugarloaf Ridge in pine forest habitats. *C. cinerea* is known to occur on CDFG land, and Forest Service land, including land that is leased for vacation homes and a ski area. Habitat loss for this species began in the 1880's with the construction of the Big Bear Lake reservoir in the San Bernardino Mountains in an area that likely contained extensive meadows and pebble plains. Cattle trampling, mining, timber harvest, off-road vehicle use, fuelwood harvesting, campground and ski area development, and urbanization have affected habitat for this species.

*Eriogonum kennedyi* var. *austromontanum* is a low, branched perennial 8 to 15 dm (31 to 59 in.) high, in the buckwheat family (Polygonaceae). This species blooms from July through September, and forms loose leafy mats with oblanceolate leaves from 6 to 12

mm (0.2 to 0.5 in.) long. The type specimen, collected in 1920 by R. D. Harwood, is from Bear Valley in the San Bernardino Mountains. *E. k. var. austromontanum* was originally described by Munz and Johnston (1924). Though later treated as a subspecies by Stokes (1936), this designation is not generally accepted (Munz and Reveal 1968, Hickman 1993). This taxon is similar in appearance to *E. k. var. kennedyi* (Kennedy's buckwheat) (Munz and Reveal 1968). Although the two taxa are very similar in morphology and habitat characteristics, *E. k. var. kennedyi* can usually be distinguished by its smaller leaves, 2 to 4 mm (0.08 to 0.16 in.) long, and achenes, 2 mm (0.08 in.) long (Reveal 1979). Another species that could potentially be confused with *E. k. var. austromontanum* is *E. wrightii* ssp. *subscaposum*, which has a branched inflorescence and is found in yellow pine forest (Neel and Barrows 1990).

*Eriogonum kennedyi* var. *austromontanum* is known from six populations in the San Bernardino Mountains, primarily in the Bear Valley and Baldwin Lake areas (Krantz 1981a, Neel and Barrows 1990). *E. k. var. austromontanum* is known to occur on Forest Service, CDFG, and private land. The construction of the Big Bear Lake reservoir in the 1880's began habitat loss for this species. This area in the San Bernardino Mountains likely contained extensive meadows and pebble plains. Since then, cattle trampling, mining, timber harvest, off-road vehicle use, fuelwood harvesting, campground and ski area development, and urbanization have continued to affect habitat of this species.

*Poa atropurpurea* is a perennial in the grass family (Poaceae) with creeping rhizomes and erect stems from 3 to 4.5 dm (12 to 18 in.) high. The inflorescence is a dense spikelike panicle, with smooth, faintly nerved lemmas 2.5 to 3 mm (0.1 to 0.12 in.) long, and glumes 1.5 to 2 mm (0.06 to 0.08 in.) long. This species flowers from early May to June or July. *P. atropurpurea* was described by Scribner (1898) based on specimens collected by S. B. Parish in 1894 at Bear Valley. *P. atropurpurea* is known to occur in meadows of the Big Bear area in the San Bernardino Mountains and in the Laguna Mountains in San Diego County from about 1,800 to 2,300 m (6,000 to 7,500 ft) in elevation (Sproul 1979, Krantz 1981b, Curto 1992). Several other native and at least one exotic species of *Poa* can be found within the range of *P. atropurpurea*, including *P. fendleriana* (mutton grass), *P. incurva*, *P. nevadensis* (Nevada bluegrass), *P. pratensis* (Kentucky

bluegrass), and *P. secunda* (*scabrella*) (Malpais bluegrass). *P. atropurpurea* is distinguished from *P. pratensis* by its smaller stature, contracted panicle, and lemmas that lack a tuft of cobwebby hairs at the base (Pierce and Beauchamp 1979). *P. atropurpurea* and *P. pratensis* are distinguished from the other sympatric *Poa* species by creeping rhizomes (Munz 1974).

Habitat for *Poa atropurpurea* is known to exist on Forest Service, CDFG, municipal, and private land in the San Bernardino Mountains. Eleven known population centers of *P. atropurpurea* currently are known to exist. These populations are distributed within a 13 km (8 mi) radius of the town of Sugarloaf (Krantz 1981b). Of these, two localities are on Forest Service land (Holcomb Valley and Wildhorse Meadows), one is administered by CDFG (North Baldwin), one is cooperatively owned by the Forest Service and a private youth camp (Hitchcock Ranch), and seven are privately owned. Eight of the 11 known sites are less than 2.5 hectares (ha) (6 acres (ac)) in size. Fewer than 40 ha (100 ac) of habitat for this species are known to remain in the San Bernardino Mountains: about 9 ha (23 ac) are administered by the Forest Service, 2 ha (5 ac) by the CDFG, and 28 ha (69 ac) are privately owned (Krantz 1981b). In 1979, four known populations of *P. atropurpurea* occurred in the Laguna Mountains. Sproul (1979) reported this taxon to be "one of the rarest and most threatened plants in the Laguna-Morena area." From 1981 until 1993, *P. atropurpurea* was considered to be extirpated from the Laguna Mountains because no individuals could be found despite repeated surveys for this taxon (Curto 1992; Kirsten Winter, U.S. Forest Service, pers. comm. 1993). In spring of 1993, two sites that currently support *P. atropurpurea* were located in the Laguna Mountains within the Cleveland National Forest (Raymond Vizgirdas, U.S. Fish and Wildlife Service biologist, pers. comm. 1993). Each of the 2 populations consists of about 50 individuals (Winter, pers. comm. 1993).

Habitat loss for this species began in the 1880's with the construction of the Big Bear Lake reservoir in the San Bernardino Mountains in an area that likely contained extensive meadows and pebble plains. Since then, grazing, cattle trampling, mining, timber harvest, off-road vehicle use, fuelwood harvesting, campground and ski area development, and urbanization have continued to affect habitat for this species.

*Taraxacum californicum* is a thick-rooted perennial in the sunflower family (Asteraceae), 0.5 to 2 dm (0.2 to 0.7 ft)

high, with light green, oblanceolate, subentire to sinuate-dentate leaves from 5 to 12 cm (2 to 5 in.) long and 1 to 3 cm (0.4 to 1.2 in.) wide. The numerous light yellow flowers are borne on leafless stalks, and bloom from May to August. The outer phyllaries (outer bracts beneath the inflorescence) are erect, lance-ovate, 5 to 7 mm (0.2 to 0.3 in.) long; the inner phyllaries are lance-linear, 12 to 15 mm (0.5 to 0.6 in.) long. This species has been previously treated as *T. officinale* var. *lividum* by Koch (*in* Hall 1907), as *T. lapponicum* by Handel-Mazzetti (1907), as *T. ceratophorum* var. *bernardinum* by Jepson (1925). *T. californicum* was described by Munz and Johnston (1925) based on specimens collected by S.B. and W.F. Parish at Bear Valley in 1882. Munz and Johnston (1924) emphasized the morphological distinctiveness of *T. californicum*, in addition to its extremely disjunct distribution. They elevated this taxon to species status primarily on the basis of its small achenes and erect appressed phyllaries. *T. californicum* is readily distinguished from other members of this genus within its range by its lighter green foliage, subentire leaves, erect phyllaries, and paler yellow flowers (Krantz 1980).

*Taraxacum californicum* occurs in moist meadow habitats in the San Bernardino Mountains from 2,000 to 2,800 m (6,700 to 9,000 ft) in elevation, often in association with *Poa atropurpurea* and other rare species. This species is known to occur on Forest Service, CDFG, municipal, and private land. Fewer than 15 occurrences of *T. californicum* currently are known, with population sizes ranging from 2 to 300 individuals. About half of these occurrences are located within or adjacent to developed areas such as Big Bear City, Big Bear Lake Village, and Sugarloaf in San Bernardino County. Habitat loss for this species began in the 1880's with the construction of the Big Bear Lake reservoir in the San Bernardino Mountains in an area that likely contained extensive meadows and pebble plains. Since then grazing, cattle trampling, mining, timber harvest, off-road vehicle use, fuelwood harvesting, campground and ski area development, and urbanization continue to affect habitat for this species.

Both *Poa atropurpurea* and *Taraxacum californicum* are found in wet meadow habitats, primarily in the northeastern San Bernardino Mountains. These taxa are further restricted to the relatively open edges or ecotonal (border) areas that offer less competition from more mesic species such as *P. pratensis*, *Carex* spp. or

*Juncus* spp. (Krantz 1981b). The perimeter of such meadows often intergrades with sagebrush scrub dominated by *Artemisia tridentata* or montane forest dominated by *Pinus jeffreyi*.

*Trichostema austromontanum* ssp. *compactum* is a compact, soft-villous (with long, shaggy hairs) annual in the mint family (Lamiaceae), approximately 10 cm (4 in.) tall. This species flowers in July and August. Its tiny blue, five-lobed flowers are less than 2 mm (0.1 in.) long, with two blue stamens. The fruit is a smooth, four-lobed nutlet. *T. austromontanum* ssp. *compactum* was described by Lewis (1945) based on specimens collected by M.L. Hilend at Hidden Lake (San Jacinto Mountains, Riverside County).

*Trichostema austromontanum* ssp. *compactum* has historically been restricted to a single vernal pool known as Hidden Lake at an elevation of about 2,400 m (8,000 ft) in the San Jacinto State Wilderness Area. Hidden Lake is the only naturally occurring body of water in the San Jacinto Mountains. The entire known range for this species encompasses less than 0.8 ha (2 ac) (Michael Hamilton, James Reserve Manager, pers. comm. 1993). The population size of *T. austromontanum* ssp. *compactum* declines during periods of either above or below normal precipitation because of its position along the perimeter of the vernal pool habitat (Hamilton 1991). Between 1979 and 1991, the population sizes of this species fluctuated from 11 to 10,000 individuals (Hamilton 1991). Since the creation of the Palm Springs tramway in 1964, Hidden Lake has incurred a greater intensity of trampling damage.

#### Previous Federal Action

Federal government actions on the seven taxa under consideration in this rule began as a result of section 12 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be threatened, endangered, or extinct in the United States. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. The Service published a notice in the July 1, 1975, **Federal Register** (40 FR 27823) of its acceptance of the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act,

and its intention to review the status of the plant taxa named therein. *Arenaria ursina*, *Poa atropurpurea*, and *Trichostema austromontanum* ssp. *compactum* were included in that notice as endangered species, and *Arabis johnstonii*, *Castilleja cinerea*, and *Taraxacum californicum* were listed as threatened. On June 16, 1976, the Service published a proposal in the **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. The list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the **Federal Register** notice dated July 1, 1975. *A. ursina*, *P. atropurpurea*, and *T. a. ssp. compactum* were included in the proposed rule.

General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. In a December 10, 1979, notice (44 FR 70796), the Service withdrew the outstanding portion of the June 16, 1976, proposal, along with four other proposals that had expired.

On December 15, 1980, the Service published a revised Notice of Review of plants in the **Federal Register** (45 FR 82480). *Arabis johnstonii*, *Poa atropurpurea*, *Taraxacum californicum*, and *Trichostema austromontanum* ssp. *compactum* were included in that notice as category 1 candidate species for Federal listing. Category 1 taxa are those for which the Service has on file substantial information on biological vulnerability and threats to support preparation of listing proposals. *Arenaria ursina*, *Castilleja cinerea*, and *Eriogonum kennedyi* var. *austromontanum* were included in the notice as category 2 candidate species. Category 2 taxa are those for which data in the Service's possession indicate listing is possibly appropriate, but for which substantial data on biological vulnerability and threats are not currently known or on file to support proposed rules. The status of these seven taxa remained unchanged in the Notice of Review published on September 27, 1985 (50 FR 39526). In

the February 21, 1990, Notice of Review (55 FR 6184), *Arenaria ursina* was changed to a category 1 candidate species. The status of the other six taxa remained unchanged. In the revision of the plant notice published on September 30, 1993, (58 FR 51144), these categories remained unchanged.

Section 4(b)(3)(B) of the Act requires the Secretary to make findings on petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for the seven taxa covered by this rule, because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of these species was warranted, but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act; notification of this finding was published on January 20, 1984 (49 FR 2485). Such a finding requires the petition to be recycled annually, pursuant to section 4(b)(3)(C)(i) of the Act. The finding was reviewed in October of 1983 through 1994. Publication of this proposed rule constitutes the final 1-year petition finding for the seven taxa.

#### Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (Act) 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 list. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act. These factors and their application to *Arabis johnstonii* Munz (Johnston's rock-cress), *Arenaria ursina* Robinson (Bear Valley sandwort), *Castilleja cinerea* Gray (ash-grey Indian paintbrush), *Eriogonum kennedyi* Porter ex Watson var. *austromontanum* Munz & Johnston (southern mountain wild buckwheat), *Poa atropurpurea* Scribner (San Bernardino bluegrass), *Taraxacum californicum* Munz & Johnston (California dandelion), and *Trichostema austromontanum* Lewis ssp. *compactum* Lewis (Hidden Lake bluecurls) are as follows (see Table 1):

TABLE 1.—SUMMARY OF THREATS

Species	Threats					
	Trampling	Exotic plants	ORV activity	Development activity	Grazing	Limited numbers
<i>Arabis johnstonii</i> .....	X	.....	X	X	X	
<i>Arenaria ursina</i> .....	X	X	X	X		
<i>Castilleja cinerea</i> .....	X	X	X	X	X	
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i> .....	X	X	X	X		
<i>Poa atropurpurea</i> .....	X	X	X	X	X	X
<i>Taraxacum californicum</i> .....	X	X	X	X	X	X
<i>Trichostema austromontanum</i> ssp. <i>compactum</i> .....	X	.....	.....	.....	.....	X

A. *The present or threatened destruction, modification, or curtailment of their habitat or range.* The seven taxa considered herein currently are threatened by a variety of activities that result in habitat modification, destruction, degradation, and fragmentation. These activities include urbanization, vehicular activity, hydrologic alterations, and habitat degradation by livestock.

Five of the seven taxa proposed in this rule (*Poa atropurpurea*, *Taraxacum californicum*, *Arenaria ursina*, *Castilleja cinerea*, and *Eriogonum kennedyi* var. *austromontanum*) are predominantly found in pebble plains or meadow habitats in the vicinity of Big Bear Lake in the eastern San Bernardino Mountains. Pebble plains soils contain significant amounts of clay, and are subject to extreme diurnal and seasonal variation in soil temperature and moisture conditions. These soils have an extremely slow infiltration rate and, thus, have a high runoff potential.

Prior to European settlement, pebble plain and meadow habitats were much more abundant in the Big Bear Valley. Krantz (1987) estimated that over 1,000 ha (2,500 ac) of pebble plains and natural meadowlands were lost due to the construction of a dam and the resultant creation of Big Bear Lake in 1883. Subsequent urbanization of the valley, land disturbance from livestock, and off-road vehicle use, destroyed or damaged much of the remaining pebble plain and meadow habitat (Krantz 1987, Neel and Barrows 1990). These factors contributed to the decline of two meadow endemic species found only in the Big Bear Valley area, *Sidalcea pedata* (pedate checker-mallow) and *Thelypodium stenopetalum* (slender-petaled mustard), which were federally listed as endangered in 1984 (49 FR 34497). Nine existing pebble plain complexes have been identified (Neel and Barrows 1990). Less than 220 ha (550 ac) of this highly restricted community remain; about 208 ha (514 ac) is administered by the Forest Service

and approximately 12 ha (32 ac) occurs on private land (Neel and Barrows 1990).

Recreational activities have affected and continue to affect the habitat of *Arabis johnstonii*, *Arenaria ursina*, *Castilleja cinerea*, *Eriogonum kennedyi* var. *austromontanum*, *Trichostema austromontanum* ssp. *compactum*, *Poa atropurpurea*, and *Taraxacum californicum*. These activities include heavy, widespread hiking; off-road vehicle use; and development of campgrounds, trails, and ski areas. The San Bernardino National Forest (SBNF) has the highest recreational use of any national forest (SBNF Draft Wildlife, Fisheries, Botany, and Threatened and Endangered Species Program 5-year plan, 1992). The Forest Service has implemented a number of measures (including fencing and signing) to protect pebble plains from illegal off-road vehicle activity. Despite this action, over 40 percent of the pebble plains habitat within Forest Service jurisdiction remains unprotected (Neel and Barrows 1990). Because of the heavy recreational pressures on the SBNF, unauthorized off-road vehicle use remains a threat to these species. The Forest Service has limited resources available for preventing recreational impacts to these habitats. Most of the privately owned pebble plains habitat receive no formal protection. A few, however, have voluntary non-binding landowner agreements to protect this habitat. See Factor D for additional information.

Vehicles cause considerable damage to pebble plains habitat, and all pebble plains habitat have some road development. The pebble plains are extremely susceptible to damage during spring thaw (Krantz 1981a). During the wet season, vehicles both directly destroy plants and create deep ruts that change the water flow patterns over the pebble plains, potentially indirectly affecting greater numbers of plants (Neel and Barrows 1990). All known *Arenaria ursina* and *Eriogonum kennedyi* var.

*austromontanum* populations have been affected by vehicle use to some extent (Krantz 1981a). Vehicular activity directly impacts plants by crushing the plants and compacting and eroding the soil. Although the erosion potential of the soil is not considered high, due to the moderate slopes and rainfall, vehicle use can lead to a breakdown in soil structure (Neel and Barrows 1990). Vehicular activity also favors the establishment of species more tolerant of such disturbance, thereby altering the composition of the plant community over time.

Extensive damage to the pebble plains near North Baldwin Lake occurred in March 1992. A construction vehicle (front-end loader) from the adjacent San Bernardino County landfill was driven over this plant site while the soils were saturated and highly vulnerable to disturbance (Neel and Chaney 1992). Although the site was completely fenced and posted as a rare plant site, the driver trespassed onto the site, drove over the identifying signs and fences, and caused extensive damage to the habitat in an apparently intentional act of vandalism (Tim Krantz, consultant, *in litt.* 1993). Over 1,200 sq m (13,000 sq ft) of pebble plain habitat was moderately to severely damaged from this event. Although restoration was required by the Forest Service, it was not entirely successful since the indirect effects, including alteration of surface hydrology and the subsequent invasion of exotic species, can have significant, long-term effects on this delicate ecosystem (Neel and Chaney 1992, Krantz, *in litt.* 1993). These impacts are not easily reversed because soil compaction could impede germination and the exotic species could compete for nutrients for extensive periods of time.

Incidents involving destruction or degradation of pebble plains habitat by off-road vehicles and vehicular trespass have occurred in the past, and continue to present a significant threat to all pebble plain sites (Maile Neel, SBNF,

pers. comm. 1993, Krantz, *in litt.* 1993). For example, unpermitted grading destroyed a portion of the Castle Glen pebble plain in 1991 (Krantz, *in litt.* 1993). Generally, when such an event occurs, restoration is not undertaken since the persons responsible for the habitat destruction usually cannot be identified, and the Forest Service has insufficient staffing and funding to adequately restore all such disturbed areas. The cumulative effects of unauthorized off-road vehicle use resulted in the almost complete devegetation of a pebble plains site in the SBNF near Sugarloaf (Neel and Barrows 1990). Privately owned pebble plains habitat is unprotected at several locations, including the Big Bear Lake and Sawmill population complexes. In addition, unregulated off-road vehicle activity degraded part of the Horseshoe pebble plain (Sawmill complex) under both Forest Service and private ownership (Krantz, *in litt.* 1993). See Factor D for additional information.

Chaparral and forest habitats in the Garner Valley and Lake Hemet areas containing *Arabis johnstonii* continue to be destroyed or degraded by livestock trampling, and residential and recreational developments, including groundwater drawdown by numerous wells (Hamilton, pers. comm. 1993). These activities contributed to the decline of *A. johnstonii* in the region. The Garner and Wellman grazing allotments may affect several populations of *A. johnstonii* in Garner Valley. The clay substrate is especially vulnerable to trampling and disruption by cattle during the saturated period in winter and early spring. Berg and Krantz (1982) noted evidence of cattle-induced impacts to the substrate in the vicinity of Quinn Flat, located in central Garner Valley, which contains a dense population of *A. johnstonii*.

The decline of *Poa atropurpurea* and *Taraxacum californicum* can be attributed to a number of activities that destroyed and degraded their habitat, including urbanization, livestock, off-road vehicles, and hydrologic alteration. For example, the creation of Big Bear Lake inundated hundreds of acres of meadows that provided habitat for several sensitive taxa (Krantz 1981b). Subsequent urbanization and recreational developments at the lake eliminated or fragmented many populations of *P. atropurpurea* and *T. californicum* (Krantz 1980; California Natural Diversity Data Base 1992).

At least 70 percent of the remaining *Poa atropurpurea* habitat is unprotected. In several areas of the San Bernardino Mountains, *P. atropurpurea* is sympatric with two State and

federally listed endangered species, *Sidalcea pedata* (pedate checker-mallow) and *Thelypodium stenopetalum* (slender-petaled mustard), and was similarly impacted by urbanization and development of meadow habitat. For example, development of the Big Bear airport facilities and the expansion of Bear Mountain Ski Area destroyed two populations of *P. atropurpurea*. A portion of another site was intentionally graded by the landowner in 1991, which also destroyed *S. pedata* habitat (CDFG 1991, Krantz, *in litt.* 1993). Since most of the remaining populations of *P. atropurpurea* are very small, their long-term survival is questionable (Krantz, *in litt.* 1993) (See Factor E). By 1979, half of the four known *Poa atropurpurea* populations in Laguna Meadow (San Diego County) were damaged by cattle trails, telephone line trenching, and soil removal for the construction of an earthen dam at Big Laguna Lake (Sproul 1979). The long-term alteration of surface and subsurface hydrology in Laguna Meadow through dam construction and livestock presence resulted in soil disturbance. In addition, several prolonged drought events in the early 1950's, middle 1970's, and late 1980's may have contributed to the decline of *P. atropurpurea* in this area (Curto 1992).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Overutilization is not known to be a threat for any of the taxa under consideration in this proposed rule. All of the taxa proposed herein could potentially suffer vandalism either directly, or indirectly due to habitat destruction. An example of vandalism to pebble plains habitat is the incident at North Baldwin Lake (see Factor A), where a construction vehicle was driven over the plant site even though the site was completely fenced and posted as rare plant habitat. The plant habitat was extensively damaged (Tim Krantz, consultant, *in litt.* 1993).

C. *Disease or predation.* Disease is not known to be a factor affecting any of the taxa under consideration in this rule. However, consumption by livestock is a threat to *Arenaria ursina*, *Castilleja cinerea*, *Eriogonum kennedyi* var. *austromontanum*, *Poa atropurpurea*, and *Taraxacum californicum* (Krantz 1981a, Krantz, *in litt.* 1993). Krantz (1981b) noted that since animals grazed during the flowering period of *P. atropurpurea*, seed set and sexual reproduction are reduced. *T. californicum* is vulnerable to consumption as its flower heads and leaves are erect and readily removed by grazers (Krantz *in litt.* 1993). In the Big

Bear Basin, wild burros forage in and around pebble plain and wet meadow habitats. Feral burros have been observed at North Baldwin and on the pebble plains of Gold Mountain and Sawmill Complex. Though levels of use and degrees of impact from burro grazing and trampling have not been systematically recorded, browsed plants and hoof prints in wet clay soils were noted (Neel and Barrows 1990).

D. *The inadequacy of existing regulatory mechanisms.* Existing regulatory mechanisms that could provide some protection for these species include: (1) Listing under the California Endangered Species Act, (2) provisions under the California Native Plant Protection Act, (3) consideration under the California Environmental Quality Act (CEQA), (4) Forest Service management policies, (5) land acquisition and management by Federal, State, or local agencies, or by private groups and organizations, (6) State wilderness area management policies, (7) conservation provisions under the Federal Clean Water Act, and (8) local laws and regulations.

The Native Plant Protection Act (Chapter 10, Sec. 1908 *et seq.*) and the California Endangered Species Act (Chapter 1.5, Sec. 2080 *et seq.*) prohibit the "take" of State-listed plants. State law does not, however, protect the plants from taking via habitat modification or land use change by the landowner. After the CDFG notifies a landowner that a State-listed plant grows on his or her property, State law requires only that the landowner notify the agency "at least 10 days in advance of changing the land use to allow salvage of such plant" (Chapter 10, Sec. 1913).

Although State laws could provide a measure of protection to the species, these laws are not adequate to protect the species in all cases. Numerous activities do not fall under the purview of the laws, such as certain projects proposed by the Federal government and projects falling under State statutory exemptions. Where overriding social and economic considerations can be demonstrated, these laws allow project proposals to go forward, even in cases where the continued existence of the species may be jeopardized, or where adverse impacts are not mitigated to the point of insignificance.

The taxa in this rule are included in the California Native Plant Society inventory, but none have been listed by the State. Hence, the California Endangered Species Act currently provides no protection for these species. Since the Native Plant Protection Act only applies to plant species listed by

the State, this act also provides no protection to the seven species in this rule. Although these seven taxa are not listed by the State, the CEQA specifies that a species not included on the State list shall be considered to be endangered if the species can be shown to meet the criteria for State listing.

The CDFG recognizes that plants on Lists 1A, 1B, and 2 of the "Inventory of Rare and Endangered Vascular Plants of California" (Smith and Berg 1988) would normally qualify for State listing. All seven plant taxa in this rule are included on California Native Plant Society List 1B, i.e. plants rare, threatened, or endangered in California and elsewhere (Smith and Berg 1988). CDFG generally requests the inclusion of such species in Environmental Impact Reports. However, several projects resulted in the loss of habitat for these taxa, including the expansion of the Big Bear Airport, ski areas, and the development of the Moonridge Golf Course in sensitive meadow habitat (California Natural Diversity Data Base 1992). In addition, projects such as the Eagle Point development have already been approved but do not provide adequate mitigation for the sensitive meadow plants (Neel, pers. comm. 1993). Recently, the City of Big Bear graded habitat containing the federally listed endangered plant species *Sidalcea pedata* without providing appropriate mitigation measures (Mary Meyer, CDFG, pers. comm. 1993). Furthermore, these taxa face threats that are not easily controlled by existing regulations, particularly unauthorized off-road vehicle activity.

With the exception of *Trichostema austromontanum* ssp. *compactum*, which only occurs on State land, all of the taxa under consideration in this rule are found on the SBNF and are recognized by the Forest Service as "sensitive species" (SBNF 1989). The Forest Service has policies to protect sensitive plant taxa, including attempting to establish these species in suitable or historic habitat, encouraging land acquisitions to protect sensitive plant habitat, establishing refugia for pebble plains species, and not permitting activities that may alter the hydrology or meadow habitat for sensitive plants (SBNF 1989). These guidelines, however, have not been entirely effective. Bluff Lake, which is privately owned and contains populations of *Poa atropurpurea* and *Taraxacum californicum*, was identified as a potentially suitable mitigation bank of wetland and wet meadow habitat for developments in the region. It was identified as a high priority for the Forest Service's Land Ownership

Adjustment Program (Bruce Daniels, City of Big Bear Lake, *in litt.* 1992). Unfortunately, plans to acquire Bluff Lake are no longer being pursued because the parcel is not available for sale (Neel, pers. comm. 1993).

Although the Forest Service does not permit activities that alter the hydrology of pebble plains or meadows, unauthorized off-road vehicle use continues to be a problem in many areas and contributes to hydrologic modifications of these sensitive habitats. Even if most of the remaining pebble plains and meadow habitats on the SBNF could be adequately protected from human disturbance, the amount of habitat presently occupied by five of the seven taxa under consideration in this rule may not be sufficient to maintain their long-term viability.

The Holcomb Valley/North Baldwin Lake region, which contains known populations of five of the plant taxa in this proposed rule and significant examples of pebble plains habitat, was designated as a Special Interest Area by the Forest Service in 1989 due to its combination of unique botanical, zoological, and historical resources (Lardner, pers. comm. 1993). This designation means that certain activities, such as plant collecting, are restricted. At present, no specific management plan has been developed for the area due to resources being directed toward higher priority activities (Neel, pers. comm. 1993). The "Barstow-to-Vegas" motorcycle race was authorized by the Forest Service to pass through this area in 1992 and 1993 (Loe, pers. comm. 1992, 1994). Although the race is confined to existing dirt roads and no direct impacts to sensitive plants were incurred (Neel, pers. comm. 1993), this officially sanctioned large scale off-road vehicle event took place in one of the highly significant and vulnerable plant habitat areas of the forest (Krantz 1981a). The potential exists for indirect impacts such as foot trampling to occur within the area of these plants. Since the race is likely to become an annual event, it is a potential threat to sensitive plant habitat.

Two of the species in this proposal, *Poa atropurpurea* and *Taraxacum californicum* could potentially be affected by projects requiring a permit under section 404 of the Clean Water Act. Under section 404, the U.S. Army Corps of Engineers (Corps) regulates the discharge of fill material into waters of the United States, which include navigable and other waters, their headwaters (streams with an average annual flow of less than 5 cubic feet per second), and wetlands (either isolated or adjacent to other waters). Section 404

regulations require that applicants obtain a permit for projects that involve the discharge of fill into waters of the U.S. Projects that qualify for authorization under Nationwide Permit 26 (NWP 26) and will adversely impact 0.41 ha to 4.0 ha (1 to 10 ac) of waters above the headwater point or in isolated waters (including wetlands) can be permitted with minimal environmental review by the Corps (33 CFR Part 330). Projects that qualify for authorization under NWP 26 that affect less than 0.41 ha (1 ac) of isolated waters including wetlands may proceed without notifying the Corps if the project meets the terms and conditions of the Nationwide Permit. Formal evaluation of the impacts of such a project is thus precluded under the section 404 permit process. An individual permit may be required by the Corps if a project otherwise qualifying under NWP 26 would have greater than minimal adverse environmental impacts. The Corps is generally reluctant to withhold authorization under NWP 26 unless the existence of a federally proposed or listed threatened or endangered species would be affected. Candidate species receive no special consideration under section 404, regardless of the type of permit deemed necessary. Thus, these two taxa currently receive insufficient protection under section 404.

Representatives from various Federal, State, and local agencies, and individuals from the private sector are developing a Coordinated Resource Management Plan (CRMP) for the Big Bear Valley region. The CRMP process is essentially a planning tool that operates on the local level to minimize conflicts among various user groups, landowners, and governmental agencies (CRMP Handbook 1990). The goal of this process is to identify sensitive biological resources and to integrate conservation efforts with those of public and private entities. Although the Service supports these efforts, no protection for any of the species described herein can be guaranteed. This process is ongoing, and is not legally binding for participants (John Hanlon, U.S. Fish and Wildlife Service, pers. comm. 1993).

E. *Other natural or manmade factors affecting their continued existence.* The seven taxa considered in this rule currently are threatened by a variety of other factors including: trampling by humans and livestock, competition with other plant species, genetic absorption, drought, and stochastic events.

Activities related to fuelwood harvesting affect *Arenaria ursina*, *Castilleja cinerea*, *Eriogonum kennedyi* var. *austromontanum*, *Poa*

*atropurpurea*, and *Taraxacum californicum* due to human trampling of habitat and individual plants.

Trampling by recreational users adversely affects populations of at least three of the species (*Castilleja cinerea*, *Taraxacum californicum*, and *Trichostema austromontanum* ssp. *compactum*). Individuals of *Trichostema* showed reduced vigor under conditions of moderate to heavy trampling by recreational users (Hamilton 1991). Trampling by recreational users and livestock adversely affects *T. californicum* and favors the establishment of *Taraxacum officinale*, since the latter species responds to disturbance by producing flower heads close to the soil surface (Krantz, *in litt.* 1993). At least one population of *C. cinerea* was affected by trampling by recreational users. This site, located across from Snow Valley Ski Area within a Forest Service lease tract, was fragmented by the construction of several large cabins, a parking lot, and trails. In addition, increased trampling and excessive amounts of dust generated during the Barstow-to-Vegas motorcycle race in Holcomb Valley may impact populations of five of the species in this proposed rule: *Arenaria ursina*, *C. cinerea*, *Eriogonum kennedyi* var. *austromontanum*, *Poa atropurpurea*, and *T. californicum* (Neel, pers. comm. 1993).

Due to its accessibility, the *Trichostema austromontanum* ssp. *compactum* population at Hidden Lake is particularly vulnerable to trampling by recreational users. This site, managed by the California Department of Parks and Recreation, has been extremely popular with recreational users since the development of the Palm Springs tramway in 1964. Several measures were initiated by the State during the past decade to protect the vernal pool ecosystem and the *Trichostema* population, including removing references to the site from park interpretive materials. These measures, however, have not prevented impacts from trampling by hikers and horses. Fencing is not permitted because the site is located within a State wilderness area (Hamilton, pers. comm. 1992).

The presence of livestock typically changes the composition of native plant communities by reducing or eliminating those species that cannot withstand trampling, and enabling more resistant (usually exotic) species to increase in abundance. Livestock trampling and competition from exotic species could adversely affect all seven of these plant taxa. Taxa that were not previously part of the native flora may be introduced

and flourish under a grazing regime. They may reduce or eliminate native plant species through competition for resources. Introduced species are used as forage in San Bernardino and Cleveland National Forest grazing allotments. The native grass *Poa atropurpurea* cannot successfully compete with these populations of non-native grass species (Winter 1991). Evidence of cattle-induced impacts in the vicinity of Quinn Flat, in central Garner Valley, was observed where a population of *Arabis johnstonii* exists (Berg and Krantz 1982).

Sites supporting *Arabis johnstonii*, *Arenaria ursina*, *Castilleja cinerea*, *Eriogonum kennedyi*, *Poa atropurpurea*, and *Taraxacum californicum* were moderately to heavily degraded by cattle trampling in the past (e.g., Big Meadow, Wildhorse Meadow, Holcomb Valley, Hitchcock Ranch, Bluff Lake, Garner Valley, and Laguna Meadow). Some areas continue to be grazed by cattle, horses, or burros. The Santa Ana grazing allotment includes a population of *C. cinerea* on Sugarloaf Ridge (Melody Lardner, SBNF, pers. comm. 1993). In the Cleveland National Forest, the major threat to *P. atropurpurea* is grazing, as all the Laguna Meadow populations are located within grazing allotments.

Introduced species of grasses and forbs have invaded many of California's native plant communities. Such weedy species can displace the native flora by competing for nutrients, water, light, and space. Weedy plant invasions are facilitated by disturbances such as grazing, urban and residential developments, and various recreational activities. Introduced weeds became established in many portions of the San Bernardino, San Jacinto, and Laguna mountains reducing the amount of suitable habitat for *Taraxacum californicum*, *Poa atropurpurea*, and other native plant species. For example, the invasion of the exotic cheatgrass (*Bromus tectorum*) is considered to be a threat to the Sawmill pebble plain habitat, which supports populations of *Arenaria ursina*, *Castilleja cinerea*, and *Eriogonum kennedyi* var. *austromontanum* (Neel and Barrows 1990). In most localities, *T. californicum* was out-competed by the widespread, non-native *T. officinale*, especially in areas that were disturbed by grazing or human activities. Exotic grass and weed species could displace populations of both *P. atropurpurea* and *T. californicum* through competition if activities such as grazing, trampling, and off-road vehicles that favor aggressive introduced species continue.

Two species are threatened with the loss of their genetic distinctiveness due

to genetic exchange with species of the same genera. *Poa atropurpurea* has potentially been affected by genetic absorption by the widespread non-native *P. pratensis* (Pierce and Beauchamp 1979, Sproul 1979, Curto 1992). Genetic absorption of *P. atropurpurea* by the exotic *P. pratensis* is a threat to the long-term viability of this species. *Taraxacum californicum* may also be threatened with genetic absorption by the introduced *T. officinale* (Krantz, *in litt.* 1993). Apparent hybrids between these two taxa were observed in areas where they overlap in distribution (Krantz, pers. comm. 1993; Krantz 1980). Since *T. californicum* rarely occurs in the absence of *T. officinale*, the potential for loss of genetic distinctiveness of the restricted species exists. Although both *T. californicum* populations are protected, in part, by fencing of habitat at North Baldwin Lake (owned by CDFG) and Holcomb Valley (Forest Service), this species is likely threatened at all sites by genetic absorption and competition with *T. officinale*.

Drought conditions can also negatively affect pebble plains species. The severe drought in 1989 dramatically reduced the number of flowering individuals of pebble plains taxa and their associated insect pollinators (Freas and Murphy 1990). Since both *Arenaria ursina* and *Eriogonum kennedyi* var. *austromontanum* are dependent on insects for seed set, such environmental conditions can adversely affect their reproductive success (O'Brien 1980, Freas and Murphy 1990). Therefore, if numbers of these species continue to decline and reproductive success is low, a series of drought events may pose a threat to the species because of now limited distribution.

Stochastic extinction threatens the plants discussed herein, particularly *Poa atropurpurea*, *Taraxacum californicum*, and *Trichostema austromontanum* ssp. *compactum*, by virtue of their small population size and limited distribution. Genetic viability is reduced in small populations, making them vulnerable to extinction by manmade or natural events. The potential for local extirpation precipitated by small population size can be exacerbated by environmental conditions such as the recent drought. For example, the few numbers of *P. atropurpurea* individuals at the two remaining sites in the Laguna Mountains could be eliminated by grazing (i.e., consumption, trampling, soil disturbance), competition from alien plants, alteration of the hydrologic regime, or other forms of disturbance,

resulting in the extirpation of the species (Curto 1992). Most known populations of *T. californicum*, including Hitchcock Ranch, Big Meadow (Forest Service), and Pan Hot Springs (City of Big Bear), are so limited in numbers (R. Vizgirdas, U.S. Fish and Wildlife Service, pers. comm. 1992) that they may not survive in the future without recovery actions such as reducing competition from exotic plants and restoring degraded habitat areas.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in determining to propose this rule. Based on this evaluation, the Service finds that *Poa atropurpurea* and *Taraxacum californicum* are in imminent danger of extinction throughout all or a significant portion of their ranges due to habitat destruction and alteration resulting from urban and recreational development; grazing; trampling by livestock and humans; inadequacy of existing regulatory mechanisms; genetic absorption; stochastic extinction; and competition from exotic plant species. Therefore, the preferred action is to list *P. atropurpurea* and *T. californicum* as endangered. Other alternatives to this action were considered but not preferred because not listing these species at all, or listing them as threatened would not provide adequate protection or would not be in keeping with the purposes of the Act.

For the reasons discussed above, the Service finds that *Arabis johnstonii*, *Arenaria ursina*, *Castilleja cinerea*, *Eriogonum kennedyi* var. *austromontanum*, and *Trichostema austromontanum* ssp. *compactum* are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges if identified threats are not reduced or eliminated. Threats to these five taxa include habitat destruction and alteration from urban development and off-road vehicle activity; habitat degradation and predation by livestock and feral burros; trampling; and stochastic events. The Service has determined that threatened rather than endangered status is appropriate for *A. johnstonii*, *A. ursina*, *C. cinerea*, *E. kennedyi* var. *austromontanum*, and *T. a. ssp. compactum* primarily because the Forest Service has initiated some measures to protect these species. Management activities conducted by the Forest Service (such as fencing, signing, and monitoring various sensitive habitat areas) have reduced the potential for habitat destruction by human activities to the degree that the danger of

extinction for these taxa is not imminent. However, the signs and fences are often destroyed or removed, hence most localities containing these taxa remain vulnerable to trespass by off-road vehicles and other recreational users (Neel, pers. comm. 1993). Other alternatives to this action were considered but not preferred because not listing these species at all would not provide adequate protection and would not be in keeping with the purposes of the Act. Listing them as endangered would not be appropriate as the Forest Service has decreased the danger of extinction at the present time. Critical habitat is not being proposed for these species at this time, as discussed below.

#### Critical Habitat

Critical habitat is defined by section 3 of the Act as: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.21) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for these taxa at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

As discussed in Factors A and B, vandalism, primarily by through unauthorized trespassing in motorized vehicles, is a threat to these species. One documented example of intentional habitat destruction has been cited above in an area containing several of the species proposed herein for listing. Acts of vandalism and habitat destruction

against other Federally listed endangered species in the region discussed in this rule have occurred when the location of plant populations were divulged (Mary Meyer, CDFG, pers. comm. 1995). The publication of the required maps and descriptions for a critical habitat proposal would increase the degree of threat to these taxa from possible take or vandalism. The listing of species as endangered or threatened publicizes their rarity, and can make them more susceptible to collection by researchers or curiosity seekers. Designation of critical habitat could further contribute to their decline and increase enforcement problems.

In addition, designation of critical habitat would not be beneficial for these species. All Federal agencies and local planning agencies involved were notified of the location and importance of protecting habitat for these species. For the populations under Federal jurisdiction, protection of the habitat of these species will be addressed through the Act's section 4 recovery process and section 7 consultation process. Those populations extant on privately owned lands would receive no benefit from critical habitat designation. For the reasons discussed above, the Service finds that designation of critical habitat for these taxa is not prudent at this time.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under 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 that recovery plans be developed for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants 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 with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing 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 the species or 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 formal consultation with the Service.

Federal agencies expected to have involvement with section 7 regarding these species include the Forest Service through its management activities, and the U.S. Army Corps of Engineers and the Environmental Protection Agency, through their permit authority under section 404 of the Clean Water Act. The Federal Housing Administration may be affected through funding of housing loans where these species or their habitat occurs. The Federal Highway Administration may be affected through potential funding of future highway construction that could affect these species. The Federal Energy Regulatory Commission may be involved through its permitting authority for utility projects that might potentially affect these taxa.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered or threatened plants. All prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR parts 17.61 or 17.71 apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale any such species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for plants listed as endangered, the Act prohibits the malicious damage or destruction on areas under Federal jurisdiction and the removal, cutting, digging up, or damaging or destroying of such plants in knowing violation of any State law or regulation, including State criminal trespass law. Section 4(d) of the Act allows for the provision of such protection to threatened species through regulation. This protection may apply to these species in the future if regulations are promulgated. Seeds from cultivated specimens of threatened plants are exempt from these prohibitions provided that their containers are marked "Of Cultivated Origin." Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.62 and 17.63 for endangered plants and Part 17.72 for threatened plants also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered and threatened plants under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. For threatened plants, permits are also available for botanical or horticultural exhibition, educational purposes, or special purposes consistent with the purposes of the Act. It is anticipated that few permits would ever be sought or issued because these species are not in cultivation or common in the wild.

It is the policy of the Service, published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the species' range. Six of the seven species in this rule are known to occur on lands managed by the Forest Service. Collection, damage or destruction of these species on Forest Service lands is prohibited although in appropriate cases a Federal endangered species permit may be issued to allow collection. Removal, cutting, digging up, damaging or destroying endangered plants on non-Federal lands would constitute a violation of section 9 of the Act if conducted in knowing violation of California State law, including State criminal trespass law. The Service is not aware of any otherwise lawful activities being conducted or proposed by the public that will be affected by this listing and result in a violation of section 9.

Questions regarding activities that may constitute violations of section 9 should be directed to the Field Supervisor of the Service's Carlsbad Field Office (see **ADDRESSES** section). Requests for copies of the regulations concerning listed plants and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon, 97232-4181 (telephone 503/231-2063; Facsimile 503/231-6243)

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other

concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial, or other relevant data concerning any threat (or lack thereof) to these taxa;

(2) The location of any additional populations of these taxa 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, distribution, and population size of these taxa; and

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

The Service specifically solicits opinion from independent specialists regarding pertinent scientific or commercial data and assumptions relating to taxonomy, population models, and supportive biological and ecological information.

The final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to final regulations that differ from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal in the **Federal Register**. Such requests must be made in writing and addressed to the Field Supervisor of the Carlsbad Field Office (see **ADDRESSES** section).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental Assessments or Environmental Impact Statements, 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 Act. 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

A complete list of all references cited herein is available upon request from the Carlsbad Field Office (see **ADDRESSES** section).

#### Author

The primary author of this proposed rule is Edna Rey Vizgirdas, Carlsbad

Field Office (see ADDRESSES section) or telephone 619-431-9440.

**List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

**Proposed Regulation Promulgation**

Accordingly, the Service hereby proposes 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:** 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Section 17.12(h) is amended by adding the following, in alphabetical

order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants, to read as follows:

**§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Arabis johnstonii</i> .....	* Johnston's rock-cress.	* U.S.A. (CA) .....	* Brassicaceae .....	* T	* .....	* NA	* NA
* <i>Arenaria ursina</i> .....	* Bear Valley sandwort	* U.S.A. (CA) .....	* Caryophyllaceae .....	* T	* .....	* NA	* NA
* <i>Castilleja cinerea</i> .....	* Ash-grey Indian paintbrush.	* U.S.A. (CA) .....	* Scrophulariaceae .....	* T	* .....	* NA	* NA
* <i>Eriogonum kennedyi</i> var. <i>austromontanum</i> .	* southern mountain wild buckwheat.	* U.S.A. (CA) .....	* Polygonaceae .....	* T	* .....	* NA	* NA
* <i>Poa atropurpurea</i> .....	* San Bernardino bluegrass.	* U.S.A. (CA) .....	* Poaceae .....	* E	* .....	* NA	* NA
* <i>Taraxacum californicum</i> .	* California dandelion	* U.S.A. (CA) .....	* Asteraceae .....	* E	* .....	* NA	* NA
* <i>Trichostema austromontanum</i> ssp. <i>compactum</i> .	* Hidden Lake bluecurls.	* U.S.A. (CA) .....	* Lamiaceae .....	* T	* .....	* NA	* NA
* .....	* .....	* .....	* .....	* .....	* .....	* .....	* .....

Dated: July 5, 1995.  
**Mollie H. Beattie,**  
 Director, Fish and Wildlife Service.  
 [FR Doc. 95-18975 Filed 8-1-95; 8:45 am]  
 BILLING CODE 4310-55-P

**50 CFR Part 23**  
**RIN 1018-AC70**  
**Export of River Otters Taken in Tennessee in the 1995-96 and Subsequent Seasons**  
**AGENCY:** Fish and Wildlife Service, Interior.  
**ACTION:** Proposed rule.  
**SUMMARY:** The Convention on International Trade in Endangered Species of Wild Fauna and Flora

(CITES) regulates international trade in certain animal and plant species. Exports of animals and plants listed on Appendix II of CITES require an export permit from the country of origin. As a general rule, export permits are only issued after two conditions are met. First, the exporting country's CITES Scientific Authority must advise the permit-issuing CITES Management Authority that such exports will not be detrimental to the survival of the species. This advice is known as a "no-detriment" finding. Second, the Management Authority must make a determination that the animals or plants were not obtained in violation of laws for their protection. If live specimens are being exported, the Management Authority must also determine that the specimens are being shipped in a

humane manner with minimal risk of injury or damage to health. The purpose of this proposed rulemaking is to announce proposed findings by the Scientific and Management Authorities of the United States on the proposed export of river otters harvested in the State of Tennessee, and to propose the addition of Tennessee to the list of States and Indian Nations for which the export of river otters is approved. The Service intends to apply these findings to harvests in Tennessee during the 1995-96 season and subsequent seasons, subject to the conditions applying to approved States. **DATES:** The Service will consider comments received on or before October 2, 1995 in making its final determination on this proposal.