

Constitution Avenue, NW., Washington, DC 20423.

FOR FURTHER INFORMATION CONTACT: Beryl Gordon, (202) 927-5610. [TDD for the hearing impaired: (202) 927-5721.]

SUPPLEMENTARY INFORMATION: For a more detailed discussion of the current statutes and regulations, the issues raised by the petition, and the information that is needed to go forward, see the Commission's separate decision in this proceeding issued today. To obtain a copy of the full decision, write to, call, or pick up in person from: Office of the Secretary, Room 2215, Interstate Commerce Commission, 1201 Constitution Avenue, NW., Washington, DC 20423. Telephone: (202) 927-7428. [Assistance for the hearing impaired is available through TDD services: (202) 927-5721.]

Regulatory Flexibility

Because this is not a notice of proposed rulemaking within the meaning of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), we need not conduct at this point an examination of impacts on small business. However, we welcome any comments regarding small entity considerations embodied in that Act.

Environmental and Energy Considerations

Issuing this notice will not significantly affect either the quality of the human environment or the conservation of energy resources because the notice merely seeks information and is not proposing any change in current rules or policy. We preliminarily conclude that, even if we subsequently decide to grant the relief sought by petitioner, an environmental assessment would not be necessary under our regulations because the proposed action would not result in changes in carrier operations that exceed the threshold established in our regulations. See 49 CFR 1105.6(c)(2). We invite comments on the environmental and energy impacts of the proposal.

List of Subjects

49 CFR Part 1051

Buses, Freight, Motor carriers, Reporting and Recordkeeping requirements.

49 CFR Part 1220

Motor carriers, Railroads, Reporting and recordkeeping requirements.

Authority: 49 U.S.C. 10321 and 11144, and 5 U.S.C. 553.

Decided: July 25, 1995.

By the Commission, Chairman Morgan, Vice Chairman Owen, Commissioners Simmons and McDonald.

Vernon A. Williams,
Secretary.

[FR Doc. 95-19512 Filed 8-8-95; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AD 38

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Four Plants From Southwestern California and Baja California, Mexico

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list *Acanthomintha ilicifolia* (San Diego thornmint), *Dudleya stolonifera* (Laguna Beach dudleya), *Hemizonia conjugens* (Otay tarweed), and *Monardella linoides* ssp. *viminea* (willow monardella) as endangered throughout their respective ranges in southwestern California and northern Baja California, Mexico, pursuant to the Endangered Species Act of 1973, as amended (Act). These species occur in coastal sage scrub, chaparral, and grassland habitats. The four taxa are threatened by a variety of factors including urban and agricultural development, competition from non-native plant species, off-road vehicle use, mining, grazing, and trampling by hikers. This proposed rule, if made final, would implement the Federal protection and recovery provisions afforded by the Act for these four plant 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 sent 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 at the above address (telephone 619/431-9440).

SUPPLEMENTARY INFORMATION:

Background

Acanthomintha ilicifolia (San Diego thornmint), *Dudleya stolonifera* (Laguna Beach liveforever), *Monardella linoides* ssp. *viminea* (willow monardella), and *Hemizonia conjugens* (Otay tarweed) occur in San Diego and Orange Counties in southwestern California. In addition, populations of three of these taxa (*A. ilicifolia*, *H. conjugens*, and *M. linoides* ssp. *viminea*) extend into extreme northern Baja California, Mexico. These species occur in coastal sage scrub or in a mosaic of sage scrub, chaparral, riparian scrub, and grassland habitats.

Coastal sage scrub is a community typically dominated by a variety of drought-deciduous and evergreen sclerophyllous shrubs, including *Artemisia californica* (California sagebrush), *Eriogonum fasciculatum* (California buckwheat), *Encelia californica* (California encelia), *E. farinosa* (brittle bush), *Malosma laurina* (laurel sumac), *Opuntia* spp. (prickly pear, cholla), *Salvia* spp. (black sage, white sage), *Rhus integrifolia* (lemonadeberry), and *R. ovata* (sugarbush). Coastal sage scrub was historically distributed throughout cismontane (coastal) California south of San Francisco to Ensenada in Baja California, Mexico (Westman 1983). It ranges in elevation from sea level to about 600 meters (m) (2,000 feet (ft)) in inland sites in the southerly portion of its distribution (O'Leary 1990).

Acanthomintha ilicifolia grows in heavy clay soils in open areas of coastal sage-scrub, chaparral, and native grassland in San Diego County and northern Baja California, Mexico. *Dudleya stolonifera* is primarily restricted to weathered bluffs and rock outcrops in microhabitats within coastal sage scrub or chaparral. *D. stolonifera* is found only in the vicinity of Laguna Beach (Orange County). *Hemizonia conjugens* occurs in southern coastal San Diego County and northern Baja California, Mexico, and is typically found in clay soils on slopes and mesas within coastal sage scrub or grassland habitats. *Monardella linoides* ssp. *viminea* primarily inhabits washes in coastal sage scrub or riparian scrub habitats. Populations of *M. linoides* ssp. *viminea*, concentrated in the Miramar area of San Diego County, extend south into Baja California, Mexico.

Typically, areas with Mediterranean climates such as southern California have numerous rare, locally endemic species (Stebbins and Major 1965, Cody 1986). Southern California has the highest concentration of locally endemic plant species in the United

States (Gentry 1986) and currently experiences one of the highest human population growth rates in the country. Habitat destruction or modification adversely affects taxa native to this area by reducing population densities and contributing to habitat fragmentation. Rapid urbanization and agricultural conversion in Orange and San Diego Counties has already eliminated or reduced populations of the four plant taxa addressed in this proposed rule. These species have also been adversely affected by the invasion of non-native plants, off-road vehicle use, increased erosion, grazing, and trampling by humans.

By the 1980's, nearly 90 percent of the entire coastal sage scrub ecosystem in California had been lost (Westman 1981a, 1981b). In San Diego County, 95 percent of the native perennial grasslands and nearly 60 percent of the coastal sage scrub had been eliminated as a result of urban and agricultural development (Oberbauer and Vanderweir 1991, San Diego Association of Governments 1995). From 1950 to 1990, the human population of San Diego County increased by 349 percent and the population of Orange County increased by 1,015 percent (California Department of Finance 1993). Most of these increases occurred within or near sites historically occupied, in part, by coastal sage scrub. About 125,000 acres of coastal sage scrub remain in San Diego County (Service 1991). Between 1990 and 2015, the number of occupied housing units in San Diego County is expected to increase by 69 percent (San Diego Association of Governments 1991). The trend of habitat loss and fragmentation is expected to continue as the population of southern California expands.

Populations of the proposed taxa in Baja California are also threatened by land use practices. For example, Bowler (1990) and Oberbauer (1994) reported that coastal scrub vegetation in northern Baja California is being grazed, burned to increase grass production, and rapidly converted to row-crop agriculture or condominiums, campgrounds, and resort housing. Rea and Weaver (as cited in Atwood 1990) also noted that coastal sage scrub in Baja California “. . . has been seriously degraded by burning, grazing, and conversion to vineyards during the past two decades.”

Discussion of the Four Species Proposed for Listing

Acanthomintha ilicifolia (San Diego thornmint) was first described by Asa Gray as *Calamintha ilicifolia*, based on

a type specimen collected from “lower California,” (Gray 1872). Gray (1878) subsequently renamed the species *A. ilicifolia*. *A. ilicifolia* is an annual aromatic herb of the mint family (Lamiaceae). Members of the genus have whorled flowers subtended by a pair of leaves and several sharply-spined bracts. *A. ilicifolia* can be distinguished from other members of the genus by its hairless anthers and style. The tubular, two-lipped corollas are white with rose markings on the lower lip.

Acanthomintha ilicifolia usually occurs on clay soils in open patches of coastal sage scrub and chaparral of coastal San Diego County and south to San Telmo in northern Baja California, Mexico. This taxon is considered to be “. . . one of the most restricted clay soil endemics” (Oberbauer 1993). It is frequently associated with gabbro soils derived from igneous rock, and also occurs in calcareous marine sediments. About 40 percent of the known 35 historic populations of *A. ilicifolia* in the United States have been extirpated. Currently, about 40,000 individuals are distributed over 20 sites in the United States ranging from San Marcos east to Alpine and south to Otay Mesa (San Diego County) (California Native Natural Diversity Data Base (CNDDB) 1994, Reiser 1994). At least nine sites are known to have recently supported *A. ilicifolia* in Baja California, Mexico. The status of this species in Mexico is uncertain.

Dudleya stolonifera (Laguna Beach liveforever) was first described by Reid Moran (1949), based on a specimen collected in 1948 from Aliso Canyon (Orange County). This succulent perennial member of the stonecrop family (Crassulaceae) has basal rosettes of flat, oblong, bright green leaves that arise from a woody base. Its flowers have bright yellow-green petals that are fused near their base. *D. stolonifera* is distinguished by its branching stolons, with lateral vegetative branches that arise from the basal rosette (Moran 1977). *D. stolonifera* occurs on steep cliffs in canyons near Laguna Beach. This species is known from only six populations, comprising a total of 8,000 to 10,000 individuals (Fred Roberts, Service botanist, pers. comm. 1994).

Hemizonia conjugens (Otay tarweed) was first described by David D. Keck (1958) based on a specimen collected by L.R. Abrams from river bottom land in the Otay area of San Diego. *H. conjugens*, a glandular, aromatic annual of the sunflower family (Asteraceae), has a branching stem from 5 to 25 centimeters (2 to 9.8 inches) in height, and deep green or gray-green leaves with soft, shaggy hairs. The yellow

flower heads are composed of 8 to 10 ray flowers and 13 to 21 disk flowers with hairless or sparingly downy corollas. The phyllaries are keeled with short-stalked glands and large, unstalked, flat glands near the margins. *H. conjugens* occurs within the range of *H. fasciculata* and *H. paniculata*. Certain morphological characteristics of *H. conjugens* are intermediate between those of the closely related species, *H. fasciculata* and *H. paniculata* (Tanowitz 1982). *H. conjugens* can be distinguished from other members of the genus by its keeled phyllaries, black anthers, and its number of disk and ray flowers.

Hemizonia conjugens has a very limited distribution, consisting of 15 populations near Spring Valley in southern San Diego County and one population in Baja California, Mexico (Rieser 1994; Sandy Morey, Endangered Plants Program Coordinator, California Department of Fish and Game, *in litt.* 1994). Three of the 18 historic localities of *H. conjugens* in the United States are considered to be extirpated (Hogan 1990, S. Morey *in litt.* 1994). This taxon is restricted to clay soils in coastal sage scrub and grassland habitats. *H. conjugens* appears to tolerate mild levels of disturbance such as light grazing (Dr. Barry Tanowitz, University of California, Santa Barbara, *in litt.* 1977; Hogan 1990). Such mild disturbances may create sites necessary for germination (Tanowitz 1977), but the species is threatened by activities such as development and intensive agriculture. Until its rediscovery in Baja California in 1977, this species was considered to be extinct as a result of extensive development within its range (Tanowitz 1978).

Monardella linoides ssp. *viminea* was first described in 1902 by Edward L. Greene, who named it *Monardella viminea*, from a type specimen collected by Vasey in 1880 (Greene 1902). Greene (1906) subsequently renamed the plant *Madronella viminea*. Munz (1935) reduced the rank of *Monardella viminea* to a subspecies of *Monardella linoides*. *Monardella linoides* ssp. *viminea* is a perennial herb of the mint family (Lamiaceae) with a woody base and aromatic foliage. The leaves of this species are linear to lanceolate. Its pale white to rose-colored flowers are borne in dense terminal heads subtended by greenish-white, often rose-tipped bracts. This taxon can be distinguished from other members of the genus by its glaucous-green, hairy stem and its conspicuously gland-dotted bracts. *Monardella linoides* ssp. *viminea* often grows in sandy washes and floodplains, and is frequently associated with

Eriogonum fasciculatum (California buckwheat), *Platanus racemosa* (sycamore), *Quercus agrifolia* (coast live oak), *Artemisia californica* (California sagebrush), and *Baccharis sarothroides* (coyote-bush) (Scheid 1985).

Approximately 6,000 individuals of *Monardella linooides* ssp. *viminea* from 20 populations are thought to be extant in the United States. This taxon was previously known from 27 occurrences in the United States. All but one population of approximately 200 individuals occurs between Pecos Canyon and Mission Gorge in San Diego County. Fifteen populations have fewer than 100 plants, and 6 of these contain fewer than 15 individuals. One population occurs near Arroyo Jatay in northern Baja California, Mexico.

Previous Federal Actions

Federal government action on the four plant taxa considered 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 endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975, and listed *Acanthomintha ilicifolia*, *Dudleya stolonifera*, *Monardella linooides* ssp. *viminea*, and *Hemizonia conjugens* as endangered. The Service published a notice on July 1, 1975 (40 FR 27823), of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act, and of its intention thereby to review the status of the plant taxa named therein. *A. ilicifolia*, *D. stolonifera*, *H. conjugens*, and *M. linooides* ssp. *viminea* were included in the July 1, 1975, notice. On June 16, 1976, the Service published a proposal (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 July 1, 1975, publication. *A. ilicifolia*, *D. stolonifera*, *H. conjugens*, and *M. linooides* ssp. *viminea* were also included in the June 16, 1976, proposal.

General comments received in response to the 1976 proposal were summarized in an April 26, 1978, notice (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 June 16, 1976, proposal, along with four other proposals that had expired.

The Service published a Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included *Acanthomintha ilicifolia*, *Dudleya stolonifera*, *Hemizonia conjugens*, and *Monardella linooides* ssp. *viminea* as category 1 candidate taxa (species for which data in the Service's possession are sufficient to support a proposal for listing). On November 28, 1983, the Service published in the **Federal Register** (48 FR 53640) a supplement to the 1980 Notice of Review. This supplement treated *A. ilicifolia*, *M. linooides* ssp. *viminea*, and *H. conjugens* as category 2 candidate taxa (species for which data in the Service's possession indicate listing may be appropriate, but for which additional biological information is needed to support a proposed rule). In the September 27, 1985, revised Notice of Review for plants (50 FR 39526), *D. stolonifera* was included as category 1 species; and *A. ilicifolia*, *H. conjugens*, and *M. linooides* ssp. *viminea* were included as category 2 taxa. Enough data were subsequently gathered to include *A. ilicifolia* as a category 1 species in the February 21, 1990, **Federal Register** (50 FR 45242). The plant Notice of Review was again revised on September 30, 1993 (58 FR 51144). The status of *D. stolonifera* and *A. ilicifolia* remained as category 1 candidate species; *H. conjugens* and *M. linooides* ssp. *viminea* remained as category 2 candidate species.

Section 4(b)(3)(B) of the Act requires the Secretary to make findings on

certain pending 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 all the species presently being proposed, because the 1975 Smithsonian report that included these species was accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of these species was warranted, but that the listing of these species was precluded by other pending listing actions of higher priority pursuant to section 4(b)(3)(c)(i) of the Act. The finding was reviewed in October 1984 through 1993.

In 1990, the Service received a petition to list *Hemizonia conjugens* (dated December 14, 1990) as endangered and a petition to list *Acanthomintha ilicifolia* (undated) as endangered from David Hogan of the San Diego Biodiversity Project. These petitions also requested the designation of critical habitat. *A. ilicifolia* and *H. conjugens* were included in the Smithsonian Institution's Report of 1975 that had been accepted as a petition. The Service, therefore, regarded Mr. Hogan's petitions to list these two taxa as second petitions.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species 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 lists. 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). The threats facing these four taxa are summarized in Table 1. These factors and their application to *Acanthomintha ilicifolia* (Gray), *Dudleya stolonifera* Moran (Laguna Beach liveforever), *Hemizonia conjugens* Keck (Otay tarweed), and *monardella linooides* ssp. *viminea* (Greene) Abrams (willowly monardella) are as follows:

	Trampling grazing	Alien plant species	ORV*	Urbanization	Mining	Alteration of hydrology
<i>Acanthomintha ilicifolia</i>	X	X	X	X	X	
<i>Dudleya Stolonifera</i>	X	X		X		
<i>Hemizonia Conjugens</i>	X		X	X		
<i>Monardella linooides</i> ssp. <i>viminea</i>	X	X	X	X		

*ORV=Off-road Vehicle.

A. *The present or threatened destruction, modification, or curtailment of their habitat or range.* The rapid urbanization of coastal southern California imminently threatens the four taxa in this proposed rule. Many of the same factors threatening *Acanthomintha ilicifolia*, *Hemizonia conjugens*, and *Monardella linooides* ssp. *viminea* in the United States (urban and agricultural development) are threatening these species in Baja California, Mexico.

Of the 35 historically known populations of *Acanthomintha ilicifolia* in the United States, 15 have been extirpated by residential or commercial developments. In addition, off-road vehicle activity and trampling by cattle and humans have contributed to the decline of this species. Thirteen of the remaining 20 populations of *A. ilicifolia* occur on unprotected land, and several of these are declining rapidly. For example, a site near Rancho Santa Fe supported hundreds of plants in 1978, but only three plants in 1986 (CNNDDB 1994). The habitat in this area was degraded, apparently from the impacts of adjacent development (CNNDDB 1994). A population of *A. ilicifolia* in Encinitas contained 11,000 plants in 1989, but only 1,400 in 1992. This population is threatened by trampling and soil erosion (Robert Taylor, botanical consultant, pers. comm. 1992). Another locality was partially extirpated by an unauthorized haul road, which eliminated 60 to 70 percent of the population (CNNDDB 1994).

Five of the known remaining locations of *Acanthomintha ilicifolia* occur on protected land. Two populations occur on the Cleveland National Forest (Viejas Mountain and Poser Mountain). Two populations are found in parks owned by the City of San Diego (Penasquitos Canyon and Mission Trail). One population, located on McGinty Mountain, is managed by The Nature Conservancy and the California Department of Fish and Game. However, these localities are vulnerable to habitat degradation resulting from trampling, dumping, erosion, and off-road vehicle activity. The McGinty Mountain population is threatened by a proposed water tower project (Fred Sproul, botanical consultant, pers. comm. 1992). Roads adjacent to populations in the vicinity of McGinty Mountain and Penasquitos Canyon provide easy access for foot traffic and off-road vehicle use (Mike Kelly, Friends of Los Penasquitos Canyon, pers. comm. 1992). The Viejas Mountain population has been adversely affected by trampling impacts associated with grazing, resulting in increased erosion and the invasion of

non-native plant species (Fred Sproul, pers. comm. 1992).

The status of *Acanthomintha ilicifolia* and its habitat in northwestern Baja California, Mexico, is not well documented. The species is known to occur as far south as Las Escobas near San Quintin, but its distribution in Mexico is spotty (Reid Moran, pers. comm. 1992). The San Diego Natural History Museum has herbarium specimens of *A. ilicifolia* from nine localities in Baja California, Mexico. However, little information is available on numbers of individuals or specific threats. One population near Tecate is threatened by an adjacent clay mining operation (Tom Oberbauer, senior planner, San Diego County, pers. comm. 1992). This northern region represents one of the most severely impacted areas in Baja California and many of the same factors (urban and agricultural development) that have affected the status of this taxon in the United States also threaten the species in Mexico.

Approximately 8,000 to 10,000 individuals of *Dudleya stolonifera* in six locations are thought to be extant. Urban development and associated edge effects (see Factor E) threaten *D. stolonifera*. Approximately half of the Canyon Acres population of *D. stolonifera* has been cleared by the landowner (CNNDDB 1992).

Habitat for *Dudleya stolonifera* is also degraded by adjacent land uses. The type locality for *D. stolonifera* is adjacent to urban development and is declining due to increased shading and competition from non-native plants (Kei Nakai, botanical consultant, pers. comm. 1992). The largest population of *D. stolonifera*, located directly adjacent to residential development in Aliso Canyon (Orange County), is threatened by fuel modification and hydroseeding (City of Laguna Beach 1993; Fred Roberts, pers. comm. 1994).

Proposed development threatens the majority of the remaining populations of *Hemizonia conjugens* in the United States. In addition, much of the potentially suitable habitat for this species has been cleared for agriculture. Three of the 18 historic locations of *H. conjugens* are considered to be extirpated (Hogan 1990, S. Morey *in litt.* 1994). None of the existing populations are entirely protected. One population previously known from an open space easement in a residential area had 100 plants in 1987, but was subsequently reported as extirpated (Hogan 1990). The majority of remaining habitat for this species is degraded by illegal dumping and off-road vehicle activity. At least five of the remaining localities for *H. conjugens* are within proposed

development projects, and one of these may already be extirpated. At least 80 percent of the largest known population (about 60 percent of all known individuals) of this species is threatened by a proposed housing development (Dudek and Associates 1992, S. Morey *in litt.* 1994).

Monardella linooides ssp. *viminea* was previously known from 27 occurrences in the United States, seven of which have been extirpated by transportation projects and industrial development. Of the five remaining occurrences with at least 100 individuals, none are currently protected. The remaining populations of *M. linooides* ssp. *viminea* are threatened by urban development, sand and gravel mining, off-road vehicle activity, trampling, trash dumping, and erosion. One of the largest populations (2,000 to 3,000 individuals) is located on private property, on Federal land managed by the Navy, and on City-owned property (Sycamore Canyon City Park). This population has been damaged by off-road vehicles and fire, which continue to threaten the remaining populations of this taxon. Two populations on Miramar Naval Air Station land have been partially destroyed by road construction. The other two large populations of *M. linooides* ssp. *viminea* are on private property. One of these (approximately 340 individuals) is threatened by sand and gravel mining. The other population, with approximately 200 individuals, is on property proposed for development. Habitat for this taxon in Los Penasquitos City Regional Park is degraded by stream erosion, trash dumping, and the invasion of non-native species. Another population in San Clemente Park, owned by the City of San Diego, was reported to have approximately 60 plants in the early 1980's, but contained fewer than 35 plants in 1987 (CNNDDB 1992).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Dudleya stolonifera* is threatened by overcollection. Field-collected specimens of *Dudleya stolonifera* have been found in southern California nurseries, and are likely to be harvested for private collections (Kei Nakai, horticulturalist, *in litt.* 1978, and pers. comm. 1992). *D. stolonifera* and *Monardella linooides* ssp. *viminea* are known to be in cultivation (Mike Evans, Tree of Life Nursery, *in litt.* 1987; Hickman 1993). Overutilization is not known to be a factor for the other taxa in this proposed rule.

C. *Disease or predation.* Herbivory may threaten some populations of the plants contained in this proposed rule. For example, failure of the

Acanthomintha ilicifolia transplants at Quail Gardens was attributed primarily to rabbit predation (Don Miller, Quail Gardens, pers. comm. 1992). Herbivory by rabbits has also been identified as a threat to populations of *Monardella linoidea* ssp. *viminea* in San Clemente Park (John Rieger, biologist, California Department of Transportation, pers. comm. 1992).

D. *The inadequacy of existing regulatory mechanisms.* Existing regulatory mechanisms that could provide some protection for these taxa include: (1) the Federal Endangered Species Act in cases where these taxa occur in habitat occupied by a listed species; (2) conservation provisions under the Federal Clean Water Act; (3) listing under the California Endangered Species Act; (4) the California Environmental Quality Act; (4) implementation of conservation plans pursuant to the California Natural Community Conservation Planning program; (5) land acquisition and management by Federal, State, or local agencies or by private groups and organizations; (6) local laws and regulations; and (7) enforcement of Mexican laws.

The coastal California gnatcatcher (*Poliophtila californica californica*) is listed as a threatened species under the Act, and occurs in some of the areas occupied by these four plant taxa. However, the legal authority to protect the gnatcatcher does not extend to candidate species. For example, the City of San Diego has recently approved plans for a large-scale development project that will result in significant impacts to the California gnatcatcher and coastal sage scrub. No mitigation for impacts to *Hemizonia conjugens* has been recommended by the project proponent (Ellen Berryman, Service biologist, pers. comm. 1994). Currently, the Service is working with local fire management agencies in San Diego County on a cooperative agreement that would allow for incidental take of the California gnatcatcher within 30 m (100 ft) of existing development. If implemented, this agreement may result in additional impacts to several of the taxa here proposed (John Lovio, Service biologist, pers. comm. 1995).

Conservation agreements with other Federal agencies may reduce the decline of some species to the point at which listing as threatened or endangered would not be appropriate. However, conservation agreements with other Federal agencies would not appreciably benefit most of the taxa in this rule. Two of the four taxa (*Dudleya stolonifera* and *Hemizonia conjugens*) do not occur on Federal lands, and only a small fraction

of the populations of *Acanthomintha ilicifolia* occur on Federal lands (two of 14 populations). It is unlikely that a Conservation Agreement with the Forest Service on these populations would significantly affect the decline of the species. About one-half of the extant *Monardella linoidea* ssp. *viminea* populations occur on private land and the distribution of this taxon, frequently characterized by small populations, is extremely restricted. A conservation agreement with the Navy would not reduce the decline of this taxon over a significant portion of its range.

Monardella linoidea ssp. *viminea* could potentially be affected by projects requiring a permit from the Army Corps of Engineers under section 404 of the Clean Water Act. Although the objective of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (Pub. L. 92-500), which includes navigable and isolated waters, headwaters, and adjacent wetlands, there are no specific provisions that adequately address the need to conserve candidate species such as those considered herein. Candidate species receive no special consideration under section 404 of the Clean Water Act.

The California Fish and Game Commission has listed *Acanthomintha ilicifolia*, *Hemizonia conjugens*, and *Monardella linoidea* ssp. *viminea* as endangered and *Dudleya stolonifera* as threatened under the Native Plant Protection Act (chapter 10 section 1900 et seq. of the Fish and Game Code) and California Endangered Species Act (chapter 1.5 section 2050 et seq.). Though both statutes prohibit the "take" of State-listed plants (sections 1908 and 2080), State law exempts the taking of such plants via habitat modification or land use change by a landowner. After the Department notifies a land owner 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 plants" (chapter 10 section 1913). Although *H. conjugens* is listed as endangered by the State, at least two large-scale development projects have recently been approved by the City of San Diego that will have significant, unmitigated impacts on this species and its associated grassland/coastal sage scrub habitat (Ellen Berryman, pers. comm. 1994).

The majority of the known populations of *Acanthomintha ilicifolia*, *Dudleya stolonifera*, and *Hemizonia conjugens* occur on privately-owned land. Local and county zoning designations are subject to change and

may not adequately consider the needs of sensitive species in the establishment of open space areas. The few existing resource protection ordinances are subject to interpretation, and compliance is not required in cases where findings of overriding social and economic considerations are made. In many cases, land-use planning decisions are made on the basis of environmental review documents prepared as a requirement of the California Environmental Quality Act (CEQA) or the National Environmental Policy Act. These documents have not adequately addressed potential impacts to the four taxa or offered sufficient compensation for losses that continue to contribute to net loss of habitat. As an example, impacts to biological resources associated with two large-scale residential development projects (approximately 98 hectares (ha) (244 acres (ac)) and 266 ha (665 ac)) in the vicinity of Otay Mesa, occupied in part by *H. conjugens*, are considered to be significant even after all mitigation measures are implemented. Nonetheless, statements of overriding considerations were developed, and both projects were recently approved by the San Diego City Council (Ellen Berryman, pers. comm. 1994).

Transplantation and relocation projects are frequently used to compensate for the loss of rare plant species under CEQA. Hall (1987) and Fiedler (1991) document several attempts at transplanting *Acanthomintha ilicifolia*, *Hemizonia conjugens*, and *Monardella linoidea* ssp. *viminea*. In one transplantation project for *A. ilicifolia*, maintenance and monitoring was scheduled for a period of 5 years. Subsequently, all records of the project were lost and the new property owner claimed no responsibility for the project. This site was destroyed by trash dumping and off-road vehicle use (Hall 1987). At least six of the eight transplant populations of this species are either rapidly declining or have been extirpated, largely as a result of weed invasion (Fred Sproul, Mitch Beauchamp, Robert Taylor, botanical consultants, pers. comm. 1992). Although two of the transplanted *A. ilicifolia* populations (Sabre Springs and San Pasqual) are somewhat stable, they are not likely to survive when weeding is discontinued (Robert Taylor, pers. comm. 1992). One year after 45 individuals of *M. linoidea* ssp. *viminea* were transplanted by the California Department of Transportation, only four had survived (Hall 1987). Of the 53 transplantation, relocation, or reintroduction projects reviewed by

Fiedler (1991), only 15 percent were considered to be fully successful. None of these included *A. ilicifolia*, *H. conjugens*, or *M. linoides* ssp. *viminea*. Transplantation has not yet been demonstrated to provide for the long-term viability of any of the four taxa under consideration in this proposed rule.

In 1991, the State of California established the Natural Communities Conservation Planning (NCCP) Program to address conservation needs of natural ecosystems throughout the State. The initial focus of the program is the coastal sage scrub community occupied, in part, by these four taxa.

Acanthomintha ilicifolia, *Dudleya stolonifera*, *Hemizonia conjugens*, and *Monardella linoides* ssp. *viminea* have been included as taxa for consideration under the coastal sage scrub NCCP Program. Several regional plans, the Multi-species Conservation Plan (MSCP) and the Multi-habitat Conservation Plan (MHCP) of San Diego County, and the Central/Coastal Subregional NCCP/Habitat Conservation Plan (Central/Coastal NCCP) of Orange County are under development by a consortium of county and municipal governments and other parties, including the California Department of Fish and Game and Service. Though no plans have been completed to date, progress is currently being made and significant protection will be provided by the NCCP program for the four taxa.

If adopted and implemented, the Central/Coastal NCCP as currently proposed may preclude the need to list *Dudleya stolonifera*. The Central/Coastal NCCP proposes protection for about 80 percent of the *D. stolonifera* populations in the San Joaquin Hills of Orange County. The largest population (about 40 percent of all individuals) would not be included within the preservation boundary. However, this population (Big Bend, Laguna Canyon) occurs on a rugged cliff and already receives some protection and management from the City of Laguna Beach which has recognized the significance of this locality since 1982.

While *Acanthomintha ilicifolia*, *Hemizonia conjugens*, and *Monardella linoides* ssp. *viminea* will benefit from the MSCP and MHCP planning efforts in San Diego County, these planning efforts have yet to be approved. If adopted and implemented, the plans may preclude the need to list one or more of these taxa. About 70 percent of the United States populations of *A. ilicifolia* occur within the MSCP subregion, including eight of 11 major populations. Four of these eight major populations are not adequately

conserved by the proposed preserve within the subregion, and other major populations are protected but subject to edge effects. The MHCP contains about 25 percent of the United States populations of *A. ilicifolia*, including two major populations. These populations are adequately protected.

All of the United States populations of *Hemizonia conjugens* occur within the MSCP subregion. Two of the major populations, containing about 70 percent of all known individuals, are within proposed development projects that would fragment the remaining habitat. The five remaining major populations (containing about 25 percent of all individuals) may be subject to edge effects. The Service is working with local jurisdictions and landowners to protect these populations.

While about 95 percent of the United States range of *Monardella linoides* ssp. *viminea* occurs within the MSCP subregion, only about 20 percent occurs outside Miramar Naval Air Station. Though Miramar is not participating in the MSCP, the Navy is working on a management plan with the advice of the Service. At least one additional small population occurs within the Poway Habitat Conservation Plan area. Current efforts in the MSCP and Poway, while proposing adequate conservation within their respective areas, are not enough to preclude listing. However, with the completion of the Navy's management plan, *M. linoides* ssp. *viminea* should be adequately protected.

Populations of *Acanthomintha ilicifolia* on Federal land (Cleveland National Forest) are being negatively affected by unauthorized grazing and illegal shooting and dumping (Winter 1991). The most significant populations of *Monardella linoides* ssp. *viminea* occur on Federal land at Miramar Naval Air Station. Though no management plan exists for this taxon, Miramar is nearing the completion of a draft plan. Management of the Naval Air Station will soon be transferred to the United States Marine Corps, which will participate in the planning effort.

The ranges of *Acanthomintha ilicifolia*, *Hemizonia conjugens*, and *Monardella linoides* ssp. *viminea* extend into northern Baja California, Mexico. Mexico has laws that could provide protection to rare plants; however, enforcement of these laws is lacking (Service 1992).

On July 29, 1983, *Dudleya stolonifera* was included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is a treaty established to prevent international

trade that may be detrimental to the survival of plants and animals. Generally, both import and export permits are required from the importing and exporting countries before an Appendix I species may be shipped, and Appendix I species may not be exported for primarily commercial purposes. However, plants that are certified by the Service as artificially propagated in accordance with CITES conference resolutions may be exported for commercial purposes with only CITES export documents from the exporting country. CITES permits may not be issued if the export will be detrimental to the survival of the species or if the specimens were not legally acquired. However, CITES does not regulate take or domestic trade.

E. *Other natural or manmade factors affecting their continued existence.* At least two of the taxa in this proposed rule, *Dudleya stolonifera* and *Monardella linoides* ssp. *viminea*, are threatened with stochastic (random) extinction by virtue of their small population sizes. Chance events, such as floods, fires, or drought, can substantially reduce or eliminate populations and increase the likelihood of extinction. In addition, small populations are threatened by inbreeding depression (Lande 1988, Ellstrand 1992). Small populations can have significantly lower germination rates than larger populations of the same species due to high levels of homozygosity (Menges 1991). Local extinctions of plant species can occur in areas with a high degree of environmental stochasticity (e.g. large fluctuations in rainfall, etc.). Furthermore, *Acanthomintha ilicifolia* and *Hemizonia conjugens* are annuals that undergo large population fluctuations from year to year. Annuals may not have a persistent seed bank or may be unable to recolonize areas of suitable habitat due to dispersal barriers such as intervening development. These populations are particularly vulnerable to local extirpations.

Non-native grass and forb species have invaded many of southern California's plant communities. Their presence and abundance is generally an indirect result of habitat disturbance by development, mining, grazing, discing, and alteration of hydrology. The invasion of both native and non-native wetland plant species as a result of altered drainage patterns threatens habitat for *Monardella linoides* ssp. *viminea* (Scheid 1985). Grazing negatively affects *Acanthomintha ilicifolia* by increasing erosion, contributing to soil compaction, and introducing a variety of non-native

grasses that exclude *A. ilicifolia* from areas of otherwise suitable habitat (Winter 1991). Several populations of *Dudleya stolonifera* are threatened by trampling and the invasion of exotic plant species (Marsh 1992). All four taxa in this proposal are subject to displacement by exotic plant species.

Although many coastal sage scrub and chaparral species are adapted to periodic fires, the taxa in this proposal are threatened by fire that can result in the extirpation of individuals or entire populations of these species. In addition, the disruption in natural fire cycles can also result in the conversion of coastal sage scrub or chaparral habitats into non-native grasslands (Tyrrel 1982). For example, several catastrophic wildfires in 1993 burned over 16,000 ha (40,000 ac) of coastal sage scrub and associated habitats in Orange and San Diego Counties (Service, unpublished data). These fires affected three of the six remaining populations of *Dudleya stolonifera*. Due to the intensity of these burns, it is possible that some of the affected *D. stolonifera* populations will not fully recover.

Dudleya stolonifera, *Hemizonia conjugens*, *Acanthomintha ilicifolia*, and *Monardella linoides* ssp. *viminea* generally persist as small, isolated populations surrounded by urban or agricultural development. Much of the remaining habitat for these taxa is degraded, and is threatened by off-road vehicle activity, the invasion of nonnative plants, and trampling by cattle and humans. These four species are in danger of extinction throughout all or a significant portion of their ranges. The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these four taxa in determining to propose this rule. Based on this evaluation, the Service finds that the preferred action is to list *Dudleya stolonifera*, *Hemizonia conjugens*, *Acanthomintha ilicifolia*, and *Monardella linoides* ssp. *viminea* as endangered. These four taxa are threatened by one or more of the following factors: urbanization, agricultural conversion, off-road vehicle activity, stochastic events, overcollecting, trampling, and the invasion of nonnative species.

Critical habitat is not being proposed for these taxa for the reasons discussed below.

Critical Habitat

Critical habitat is defined in 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 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is listed. 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.

The Service finds that the designation of critical habitat is not prudent for these four species at this time. Publication of precise maps and descriptions of critical habitat would increase the degree of threat to the four taxa from take or vandalism and could contribute to their decline. The listing of these species under the Act publicizes the rarity of the plants and, thus, can make them attractive to researchers, curiosity seekers, or collectors of rare plants. *Dudleya stolonifera* and *Monardella linoides* ssp. *viminea* are known to be in cultivation.

Most populations of *Acanthomintha ilicifolia*, *Dudleya stolonifera*, and *Hemizonia conjugens* are on privately owned land with little or no Federal involvement. Therefore, the designation of critical habitat would provide no additional benefit for these taxa. Several populations of *Monardella linoides* ssp. *viminea* are found on Federal land at Miramar Naval Air Station. In addition, this taxon generally occurs along streams and washes where Federal involvement may occur through section 404 of the Clean Water Act. All appropriate Federal and State agencies and local planning agencies have been notified of the locations and importance of protecting habitat for these species. Protection of habitat for the four taxa will be addressed through the recovery process and through the section 7

consultation process. Therefore, the Service finds that designation of critical habitat for these species is not prudent at this time, because such designation would increase the degree of threat from vandalism, collecting, or other human activities and because it is unlikely to aid in the conservation of the taxa.

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 activities. Recognition through listing results in public awareness and conservation actions by Federal, State, local, 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) of the Act 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 such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agencies expected to have involvement with *Monardella linoides* ssp. *viminea* include the Army Corps of Engineers and the Environmental Protection Agency due to their permit authority, under section 404 of the Clean Water Act. *M. linoides* ssp. *viminea* occurs on Miramar Naval Air Station. This base will likely be involved through military activities or potential transfer of excess Federal lands. The Forest Service has jurisdiction over several populations of

Acanthomintha ilicifolia, *M. linoidea* ssp. *viminea* may be affected by projects funded in part by the Federal Highway Administration.

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 17.61 and 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 in interstate or foreign commerce, or remove and reduce the species to possession 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. Certain exceptions to the prohibitions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.62, 17.63, and 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered or threatened plants under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. It is anticipated that permits may be sought for cultivated specimens, since two of the taxa are known to be under cultivation and are in domestic trade.

It is the policy of the Service (59 FR 36272) 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. Such information is intended to clarify the potential impacts of a species' listing on proposed and ongoing activities within the species' range. Three of the four species in this rule are known to occur on lands under the jurisdiction of the Forest Service or the Department of Defense. Collection, damage, or destruction of listed plants on these lands is

prohibited without a Federal endangered species permit. Such activities 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.

Questions regarding whether specific activities will constitute a violation of section 9 should be directed to the Field Supervisor of the Service's Carlsbad Office (see ADDRESSES section). Requests for copies of the regulations regarding listed species and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Ecological Services, Endangered Species Permits, 911 NE Lith Avenue, Portland, Oregon 97232-4181 (503) 231-2063 or FAX (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 species.

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

The Endangered Species Act provides for one or more public hearings on this proposal, if requested. Requests must be received by September 25, 1995. Such

requests must be made in writing and be 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 and 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 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

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

Author

The primary authors of this proposed rule are Ellen Berryman and Edna Rey-Vizgirdas (see ADDRESSES section) (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 name	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
*	*	*	*	*	*		*
<i>Acanthomintha ilicifolia</i> .	San Diego thornmint	U.S.A. (CA)	Lamiaceae	E		NA	NA
*	*	*	*	*	*		*
<i>Dudleya stolonifera</i> ..	Laguna Beach liveforever.	U.S.A. (CA)	Crassulaceae	E		NA	NA
*	*	*	*	*	*		*
<i>Hemizonia conjugens</i> .	Otay tarweed	U.S.A. (CA) Mexico .	Asteraceae	E		NA	NA
*	*	*	*	*	*		*
<i>Monardella linoides</i> ssp. viminea.	Willow monardella .	U.S.A. (CA) Mexico .	Lamiaceae	E		NA	NA
*	*	*	*	*	*		*

Dated: July 5, 1995.

Mollie Beattie,

Director, Fish and Wildlife Service.

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