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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018-AE76

#### Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for *Chlorogalum purpureum* (Purple Amole), a Plant from the South Coast Ranges of California

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

**ACTION:** Proposed rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) proposes threatened status pursuant to the Endangered Species Act of 1973, as amended (Act), for the California plant, *Chlorogalum purpureum* (purple amole). One of the two varieties comprising this species, *C. p. var. purpureum*, is known only from the central south coast ranges in Monterey County, on lands managed by the Department of the Army at Fort Hunter Liggett. It is threatened by loss and alteration of habitat and direct loss of plants from construction and use of military training facilities, field training activities, and alteration of fire cycles due to military training. The other variety, *C. p. var. reductum*, is known only from two sites in the La Panza region of the coast ranges in San Luis Obispo County, on U.S. Forest Service and private lands. This taxon is threatened by illegal vehicle trespass into the population on Forest Service land. This proposed rule, if made final, would extend the Act's protection to these plants. Although this rule proposes *Chlorogalum purpureum* at the species level, each variety would be treated as a separate taxonomic unit for the purposes of applying the section 7 jeopardy standard and identifying recovery units, if this rule is made final. **DATES:** Comments from all interested parties must be received by May 29, 1998. Public hearing requests must be received by May 14, 1998.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Field Supervisor, Ventura Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2493 Portola Road, Suite B, Ventura, California 93003. Comments and materials received, as well as the supporting documentation

used in preparing the rule, will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Carl Benz, Assistant Field Supervisor, Listing and Recovery, at the address above (telephone 805/644-1766; facsimile 805/644-3958).

#### SUPPLEMENTARY INFORMATION:

##### Background

*Chlorogalum purpureum* (purple amole) was first described by Brandegee in 1893 from specimens collected in the Santa Lucia Mountains by William Vortriede a year earlier (Brandegee 1893). In 1904, E.L. Greene (1904) published the new combination *Laothoe purpurea* when he discovered that the genus name *Laothoe* had been published earlier than *Chlorogalum*. However, R.F. Hoover (1940) conserved the name *Chlorogalum* through the rule of *nomen conservandum*. Hoover (1964) described the variety *reductum*, commonly known as Camatta Canyon amole, based on its shorter stature compared to the nominative variety. This nomenclature was retained in the most recent treatment of the genus (Jernstedt 1993). These two varieties comprise the entire species.

*Chlorogalum purpureum* is a bulb-forming perennial herb in the lily family (Liliaceae). It has a basal rosette of linear leaves 2 to 5 millimeters (mm) (0.1 to 0.2 inches (in)) wide with wavy margins. A widely branching stem supports bluish-purple flowers with six recurved tepals (petals and sepals that have a similar appearance). The stems of *C. p. var. purpureum* are 25 to 40 centimeters (cm) (10 to 16 in) high, whereas those of *C. p. var. reductum* are only 10 to 20 cm (4 to 8 in) high (Hoover 1964, Jernstedt 1993). *Chlorogalum purpureum* is the only member of the genus with bluish-purple flowers that open during the day (Jernstedt 1993). Reproduction in *Chlorogalum purpureum* is primarily by seed. Hoover (1964) reports that clonal reproduction by longitudinal splitting of the bulbs is rare; some splitting has been noted in one population of *C. p. var. reductum* (Alice Koch, California Department of Fish and Game (CDFG), pers. comm. 1997b).

*Chlorogalum purpureum* occurs in grassland, oak woodland, and oak savannah between 300 and 620 meters (m) (1,000 and 2,050 feet (ft)) in elevation in the south coast ranges of California. *Chlorogalum purpureum* var. *purpureum* is known from oak woodlands and meadows at three sites near Jolon in Monterey County on lands

owned and managed by the Department of the Army (Fort Hunter Liggett). Historically, appropriate habitat may have existed east of the base, in Jolon Valley, but most of the flat areas in that valley have been converted to cropland, pasture, or vineyards. At Fort Hunter Liggett, the plant occurs on flat or gently sloping terrain with a gravelly surface underlain by clay soils, where other vegetation is sparse.

Of the three localities of *Chlorogalum purpureum* var. *purpureum*, one is comprised of discontinuous and fragmented patches of plants scattered over an area 7 to 9 kilometers (km) (4 to 6 miles (mi)) long and about 5 km (3 mi) wide in the cantonment (housing and administration area), the Ammunition Supply Point and adjacent Training Area 13, and the boundary of Training Area 10 (U.S. Army Reserve 1997, map provided by U.S. Army Reserve 1997, Painter and Neese 1997). While some of the discontinuities in distribution are due to unsuitable intervening habitat, other patches have been fragmented by roads, the historical settlement of Jolon, and military training facilities. No population counts have been made at this site, but estimates of some areas within it suggest that it supports several thousand plants (U.S. Department of the Army 1997, Painter and Neese 1997). The second locality is about 4 km (2.5 mi) to the southeast in Training Area 25. The taxon is patchily distributed in an area of about 6 square km (2 square mi) that is laced with vehicle tracks and dirt roads. At one location there, 400 to 500 plants have been recorded (Painter and Neese 1997), but the entire site may support several thousand individuals. The third and southernmost locality is at the boundaries of Training Areas 23, 24, and 27. This is the largest known site and contains plants in high densities. Following a fire that may have promoted flowering, this site was estimated to support up to 10,000 plants (Painter and Neese 1997).

The primary threats to *Chlorogalum purpureum* var. *purpureum* are the loss, fragmentation, and alteration of habitat and direct elimination of plants from construction and use of military training facilities, military field training activities, alteration of fire cycles due to military training, and potentially from grazing and associated habitat changes.

About 110 km (70 mi) to the south, *Chlorogalum purpureum* var. *reductum* occurs in one region in the La Panza Range of San Luis Obispo County. It is known from only two sites. One is located just south of Highway 58; a smaller site is located approximately 5 to 8 km (3 to 5 mi) to the south. The

larger locality occurs on lands managed by the U.S. Forest Service (USFS) on Los Padres National Forest (LPNF), extending into a Caltrans right-of-way along the highway. This population is located on a narrow, flat-topped ridge or plateau surrounded by blue oak (*Quercus douglasii*) woodland. The plateau is probably the remains of an ancient elevated alluvial terrace, most of which has been eroded away by surrounding drainages that are now 90 to 120 m (300 to 400 ft) below the plateau (H. Ehrenspeck, *in litt.* 1994). The soils have been described as well-drained red clays with a large component of gravel and pebbles (Hoover 1964, Lopez 1992).

The population is patchily distributed over the plateau and adjacent high areas and has been estimated to occupy just 2 to 3 hectares (ha) (less than 8 acres (ac)) (Lopez 1992; M. Borchert and K. Danielsen, USFS, pers. comm. 1997). A graded dirt road about 10 m (30 ft) wide bisects the population. The road leads to private inholdings and residences on the LPNF and is bounded on either side by a pipe barrier that was installed in 1989 or 1990 to prevent off-highway vehicles (OHVs) from using the site (David Magney, biological consultant, pers. comm. 1997). A removable portion of the barrier and a barbed wire section of fence are still routinely breached by OHVs. Such illegal use has increased in the past two years, particularly during the past year (A. Koch, California Department of Fish and Game (CDFG), *in litt.* 1997a).

The population size at this site has ranged from 1,000 individuals to several hundred thousand individuals (Borchert 1981, Warner 1991, Borchert *et al.* 1997). This variability probably reflects changes in the above-ground presence of plants, since bulbs may remain dormant during years with unfavorable growing conditions. Monitoring along a 100 m (330 ft) transect showed that plant numbers were relatively stable between 1991 and 1997 (Borchert *et al.* 1997). This transect is not located in an area where vehicle trespass has continued to occur and is therefore not representative of the status of the population in areas subject to OHV activity.

The second known locality of *Chlorogalum purpureum* var. *reductum* was first documented by botanists in the mid 1990s. It is located 5 to 8 km (3 to 5 mi) south of the LPNF population in an area with similar soils and topography (David Chipping, California Polytechnic State University, *in litt.* 1997). The taxon has been estimated to occupy less than 0.1 ha (0.25 ac) and consists of several hundred plants in two or more patches on private land.

The landowner has expressed an interest in the plant and its protection (D. Chipping, *in litt.* 1997).

*Chlorogalum purpureum* var. *reductum* is threatened by illegal vehicle trespass into the larger locality on LPNF. In addition, grazing by livestock may potentially pose a threat.

#### Previous Federal Action

Federal government actions on this species began as a result of section 12 of the Endangered Species Act, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct in the United States. This report (House Doc. No. 94-51) was presented to Congress on January 9, 1975, and included *Chlorogalum purpureum* var. *purpureum* and *C. p.* var. *reductum* as endangered. The Service published a notice on 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) (petition provisions are now found in section 4 (b)(3)) of the Act and its intention to review the status of the plant taxa named therein.

On June 16, 1976, the Service published a proposed rule 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. This list, which included *Chlorogalum purpureum* var. *purpureum* and *C. p.* var. *reductum* 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, **Federal Register** publication. General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909). In 1978, amendments to the Endangered Species Act required that all proposals over two 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 portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired. *Chlorogalum purpureum* var. *purpureum* and *C. p.* var. *reductum* were included in that withdrawal notice.

The Service published an updated Candidate Notice of Review for plants on December 15, 1980 (45 FR 82480). This notice included *Chlorogalum purpureum* var. *purpureum* and *C. p.* var. *reductum* as category 2 candidates. Category 2 candidates were formerly defined as taxa for which data on

biological vulnerability and threats in the Service's possession indicated that listing was possibly appropriate, but was not sufficient to support proposed rules. The two *Chlorogalum* taxa were listed as category 1 candidates in the revised plant notices of review published in the **Federal Register** on September 27, 1985 (50 FR 39526), February 21, 1990 (55 FR 6184), and September 30, 1993 (58 FR 51144). Category 1 candidates were defined as those taxa for which the Service had on file sufficient information on biological vulnerability and threats to support the preparation of listing proposals, but issuance of the proposed rule was precluded by other pending listing proposals of higher priority. The two *Chlorogalum* taxa were listed as candidates in the Notice of Review published on February 28, 1996 (61 FR 7596), as well as in the Notice of Review published on September 19, 1997 (62 FR 49398). The definition formerly applied to category 1 candidates now applies to candidates as a whole.

The processing of this proposed rule conforms with the Service's final listing priority guidance for fiscal year 1997, published in the **Federal Register** on December 5, 1996 (61 FR 64475). In a **Federal Register** notice published on October 23, 1997 (62 FR 55628), the guidance was extended beyond fiscal year 1997 until such time as the fiscal year 1998 appropriations bill for the Department of the Interior becomes law and new final guidance is published. The fiscal year 1997 guidance clarifies the order in which the Service will process rulemakings following two related events: (1) The lifting on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Pub. L. 104-6), and (2) the restoration of significant funding for listing through passage of the Omnibus Budget Reconciliation Act on April 26, 1996, following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. Based on biological considerations, this guidance establishes a "multi-tiered approach that assigns relative priorities, on a descending basis, to actions to be carried out under section 4 of the Act" (61 FR 64479). The guidance calls for giving highest priority to handling emergency situations (Tier 1) and second highest priority (Tier 2) to resolving the listing status of the outstanding proposed listings. Tier 3 includes the processing of new proposed listings for species facing high magnitude threats. This proposed rule for *Chlorogalum purpureum* falls under

Tier 3, since *C. p. var. reductum* has a listing priority number of 3; the listing priority number for *C. p. var. purpureum* is 9. The guidance states that "effective April 1, 1997, the Service will concurrently undertake all of the activities presently included in Tiers 1, 2, and 3" (61 FR 64480). The Service has thus begun implementing a more balanced listing program, including processing more Tier 3 activities. The completion of this Tier 3 activity follows those guidelines.

#### 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 an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Chlorogalum purpureum* Brandege (purple amole) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Chlorogalum purpureum* var. *purpureum* is known only from three localities on Fort Hunter Liggett, Monterey County. The northern site comprises discontinuous and fragmented patches over a 7 to 9 km (4 to 6 mi) area in the cantonment (housing and command center), several training areas, the Ammunition Supply point, and near the Jolon entrance gate. Habitat for *C. p. var. purpureum* has been destroyed and patches of plants have been isolated and fragmented by the historical settlement of Jolon, roads, and the construction and use of training facilities over the past several decades. In the 1980s, a large group of plants near the Jolon entrance gate was isolated by the addition of a new road (Matthews 1988). Bounded on all sides by roads, this area was used as a vehicle parking area. Representatives from Fort Hunter Liggett and the Monterey Chapter of the California Native Plant Society (CNPS) cooperated in constructing barriers to reduce impacts to the area (Matthews 1988). Although the military has committed to maintaining these protective barriers, this site remains vulnerable due to its proximity to roads. For example, in 1996 a vehicle mishap resulted in a large piece of earth-moving machinery entering the site; its tracks through the population were still evident in September 1997 (Painter and Neese 1997; D. Steeck, U.S. Fish and Wildlife Service, pers. obs. 1997).

In another portion of this northern locality, the Army is expanding training facilities (Holmann 1996). Since 1996, a new obstacle course and two small parking areas have been placed in habitat occupied by *Chlorogalum purpureum* var. *purpureum*. Although the obstacles themselves were placed to avoid some individual plants, foot traffic and use of the training facilities will likely degrade the habitat and eliminate a portion of the population. In addition to the obstacle course and parking areas, the Army has in the past 3 years constructed a confidence course and upgraded a firing range along the stretch of dirt road adjacent to the locality. The existence of some training facilities made this area more attractive for additional construction because the facilities could be located within walking distance of one another (Hormann 1996). For the same reason, this area is likely to be attractive for the siting of future training facilities.

The second locality is in Training Area 25, which is used for bivouacking and is crossed by numerous dirt roads and tracks. Large areas where substantial bivouacking occurred in 1997 were denuded, with much of the herbaceous grassland vegetation among the oaks destroyed. Dirt tracks were evident throughout the site (D. Steeck, pers. obs. 1997). Bivouacking in these areas apparently occurs in summer. Although soils are not as susceptible to compaction at that time, fruiting stalks are destroyed and the loss of vegetation, especially on vehicle tracks, may lead to erosion and the consequent loss of existing seeds and bulbs in the soil. Vehicle tracks were also evident in the third locality of *Chlorogalum purpureum* var. *purpureum* at the boundaries of Training Areas 23, 24, and 27. In 1997, the vegetation of this area appeared to be the least affected by training activities, although military training the previous year had caused a spring fire that burned the site and destroyed most of the year's seed crop (Painter and Neese 1997).

The larger site of *Chlorogalum purpureum* var. *reductum*, located on LPNF and estimated to occupy less than 3 ha (8 ac), is bisected by a dirt road that is currently about 10 m (33 ft) wide and runs the length of the population. Although this road has existed for many decades, grading during the past 5 years has widened it toward the bounds of the pipe barrier fence that lines it, causing direct loss of some individuals of *C. p. var. reductum* and additional habitat loss (D. Magney, pers. comm. 1997). Because the roadbed is graded and highly compacted, the loss of habitat due to the roadbed is relatively

permanent, barring extensive restoration efforts. In addition, the roadbed is now below the level of the surrounding soil, creating the potential for it to alter local drainage patterns.

In the 1970s and 1980s, most of the LPNF locality of *Chlorogalum purpureum* var. *reductum* was used as a staging area by OHV enthusiasts (McLeod 1987). An established 4-wheel drive route still runs near the population (USFS 1993). A portion of the population was fenced in the early 1980s by the CNPS with help from the USFS to protect it from OHV use. In 1989 or 1990, due to continued OHV use in the area, the USFS installed a pipe barrier along the dirt road to exclude vehicles from most of the population. Two areas, one a gap between the pipe fence and the barbed wire fence and the other a removable section of the pipe barrier, currently allow access by vehicles. Repeated vehicle trespass occurs on the site; vehicles, broken fencing, and recent vehicle tracks have been reported (A. Koch, CDFG, *in litt.* 1997; D. Steeck, pers. obs. 1997). The extent of trespass appears to have increased during the past two years (A. Koch, *in litt.* 1997). Repeated vehicle passes cause soil compaction, altering the soil's water-holding capacity and interfering with the ability of roots to penetrate the soil (Webb and Wilshire 1983). The existing scars of older vehicle tracks in the population are probably partly the result of soil compaction. Biologists attempting to establish seedlings of *C. p. var. reductum* in old OHV tracks in the LPNF population found that only 36 percent of the seeds planted in untreated tracks germinated and survived through their first 1.5 years. Survival was 66 percent for seeds planted in old tracks where the top 10 cm (4 in) of soil was scarified (loosened) prior to planting to reduce the effects of soil compaction. Bulbs in unscarified soil of old tracks also had a lower survival rate compared to those in scarified soil (Koch 1997).

The sites of *Chlorogalum purpureum* var. *reductum* on private land are reported to be extremely small (less than 0.1 ha (0.25 ac) with several hundred plants), compared to the population managed by USFS. Because this taxon is so narrowly distributed, the degradation of even an acre or two of the habitat in the LPNF population constitutes a significant portion of this taxon's range.

Most localities of *Chlorogalum purpureum* are, or have been, subject to cattle grazing. Potential negative effects of livestock use of habitat occupied by *C. purpureum* include soil compaction, soil disturbance, introduction or spread

of nonnative aggressive weedy species, direct crushing of the above-ground portion of plants, loss of flowers or fruit, and diminished seedling establishment. It has been suggested, however, that light grazing may benefit *C. purpureum* var. *reductum* by reducing competition from annual grasses (The Nature Conservancy 1987, CDFG 1990). Predation by cattle is discussed below under factor C of the "Summary of Factors Affecting the Species."

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Overutilization is not known to be a factor affecting this species.

C. *Disease or predation.* Nearly every locality of *Chlorogalum purpureum* either is or has been subject to cattle grazing. The potential negative effects of grazing in the habitat include the loss of flowers or fruit, which could result in reduced reproduction. All three localities of *C. p. var. purpureum* at Fort Hunter Liggett were grazed prior to 1991. A recent grazing assessment of Fort Hunter Liggett states that documented overgrazing occurred there from 1963 to 1977, after which a study of grazing was begun (Stechman 1995). During this time, cattle stocking rates continued to exceed the capacity of the habitats to support them, especially when combined with the drought of the late 1980s and early 1990s (Stechman 1995). No specific information is available on the condition of the localities of *C. p. var. purpureum* during the period of overgrazing, as no basewide surveys for sensitive plant species had been conducted and the status of populations was not tracked. Grazing on Fort Hunter Liggett stopped in 1991 (Stechman 1995), but is scheduled to be resumed in the future, although no date has been set. If the recommendations in the grazing assessment are followed, cattle grazing leases would include most of the extended northern locality of this taxon and all of the second locality in Training Area 25. Only the southernmost locality, at the boundaries of Training Areas 23, 24, and 27, would be completely excluded from cattle use.

*Chlorogalum purpureum* var. *reductum* is within an active grazing allotment on the LPNF that cattle use from February through May (USFS 1997). The permitted level of use of the allotment by livestock is moderate (USFS 1997). The effects of grazing on this taxon are not known. In 1986 livestock use became a problem when cattle congregated within the population behind a fence built to block vehicle access (The Nature Conservancy 1987). A pipe barrier with low sections was later installed to permit cattle

movement over the barriers. Because the period of cattle use coincides with that of growth and flowering of *C. p. var. reductum*, it is likely that reproduction would be negatively affected if cattle congregated on the plateau within the locality containing the population for extended periods. In 1995 and 1996, cattle appeared to move relatively rapidly from the locality into lower areas (A. Koch, pers. comm. 1997). In 1997, fecal evidence suggests that they spent relatively more time within the locality (D. Steeck, pers. obs. 1997; A. Koch, pers. comm. 1997). Although current monitoring data are insufficient to evaluate the effects of grazing on *C. p. var. reductum*, grazing has the potential to negatively affect reproduction and seedling establishment, and may exacerbate damage already caused by vehicles.

D. *The inadequacy of existing regulatory mechanisms.* Pursuant to the Native Plant Protection Act (Div. 2, chapter 10 sec. 1900 *et seq.* of the California Department of Fish and Game Code) and the California Endangered Species Act (Div. 3, chapter 1.5 sec. 2050 *et seq.*), the California Fish and Game Commission listed *Chlorogalum purpureum* var. *reductum* as rare in 1978. California Senate Bill 879, passed in 1997 and effective January 1, 1998, requires individuals to obtain a section 2081(b) permit from CDFG to take a listed species incidental to otherwise lawful activities, and requires that all impacts be fully mitigated and all measures be capable of successful implementation. These requirements have not been tested; it will take several years before their effectiveness can be evaluated.

*Chlorogalum purpureum* var. *reductum* occurs primarily on Federal lands managed by the LPNF. State listing provides no consultation or other requirements for protection on Federal lands, although it is USFS policy to work with the State in the conservation of such taxa. The management of sensitive resources on the LPNF is guided by various policies and regulations, including the National Environmental Policy Act (NEPA) of 1969 (Pub.L. 91-109, 42 U.S.C. 4321-4347, 83 Stat. 852), National Forest Management Act (16 U.S.C. 1600 *et seq.*), and the Land and Resource Management Plan for the Los Padres National Forest (1988).

The NEPA requires that the USFS disclose and consider potential environmental impacts of a proposed project. Under new regulations, 10-year grazing permits are subject to the NEPA process. The USFS recently produced an Environmental Assessment (EA) for

the grazing allotment where *Chlorogalum purpureum* var. *reductum* occurs (USFS 1997). This EA states that the USFS will monitor the effects of grazing on this taxon. Although NEPA requires disclosure of potential effects of Federal actions, and allows for comment by agencies and the public, it does not, of itself, provide additional protection.

The Land and Resource Management Plan for LPNF (1988) directs the USFS to ensure the viability of sensitive plant species and to emphasize the improvement and protection of habitat for sensitive species in their management activities. These regulations appear to be adequate, but their implementation by the USFS has not been consistent. Unless the points of access are blocked by more permanent means, illegal trespass by vehicles into the habitat of *Chlorogalum purpureum* var. *reductum* is likely to continue. Since the construction of the pipe barriers, it appears that staff and funding have not been adequate to monitor trespassing, repair fencing, or bolster barriers in a timely manner, particularly during the past two years.

*Chlorogalum purpureum* var. *purpureum* occurs solely on Federal lands managed by Fort Hunter Liggett. The Department of Defense has various policies and directives to guide the management of sensitive natural resources. Army Regulation 200-3 provides for environmental review of projects that might affect sensitive and listed species. Fort Hunter Liggett has had an environmental review process since 1994. *Chlorogalum purpureum* var. *purpureum* is included in this process. In some cases, projects are being modified to reduce impacts to this taxon. For example, an alternative site for a planned bayonet course is being considered to avoid placing it within or directly adjacent to the locality of *C. p. var. purpureum*. In other cases, such as the recent construction of the obstacle course and parking areas, projects continue to be sited in occupied habitat and to affect this taxon. In addition, environmental review only occurs for projects that require excavation; bivouacking and vehicle impacts are not covered by this process. The environmental review process does not always allow for assessment surveys to be conducted at the time of year when the plant can be identified (H. Hormann, *in litt.* 1997). For example, surveys for the proposed bayonet course occurred in late summer 1997, when the above-ground portions of the plants were dry and difficult to locate.

Under Army Regulation 200-3, a Species Management Plan for *Chlorogalum purpureum* var.

*purpureum* has been developed (Hazebrook and Clark 1997). While some of the goals will benefit the taxon if achieved, the actual protection it affords is minimal and based primarily on avoiding impacts to populations "when feasible." To date, no areas where *C. purpureum* var. *purpureum* occurs on the base are off-limits to training. The Service concludes that Army directives, while improving the consideration that this taxon receives on the base, have not yet altered activities to sufficiently reduce the threats posed by military activities.

E. *Other natural or manmade factors affecting its continued existence.* Other factors affecting individuals of this species include military training and changes in fire frequency. Training activities that involve trampling, camping, or driving through occupied habitat are likely to directly crush flowers, fruits, and vegetative parts of *Chlorogalum purpureum* var. *purpureum* and result in diminished reproductive success, lower seedling establishment, and reduced plant vigor. Training activities increase in the spring, around April, and peak in the summer (U.S. Dept. of Army 1997), a period that coincides with flowering and fruiting of the taxon. Seedling establishment may be reduced by direct crushing and also due to changes in soil bulk density and water-holding capacity. Training activities lead to soil compaction and soil disturbance which also encourages the invasion of weedy, nonnative plant species that may compete directly with *C. p.* var. *purpureum*.

Burning at too frequent intervals or during seasons of growth and reproduction may threaten *Chlorogalum purpureum* var. *purpureum* at Fort Hunter Liggett. A spring burn at the southernmost locality on Fort Hunter Liggett in 1995 may have stimulated increased flowering in the spring of 1996. However, the fire destroyed most of the seed crop because it occurred in May, rather than August, when most seeds would have been dispersed (Painter and Neese 1997). Burning at too frequent intervals may damage a population due to the slow growth rate of seedlings, which take from 8 to 15 years to reach reproductive maturity (Judith Jernstedt, University of California at Davis, pers. comm. 1997). In addition, immature plants with small bulbs located near the soil surface may be particularly vulnerable to fires.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this

rule. Based on this evaluation, the preferred action is to list the species as threatened. *Chlorogalum purpureum* does not appear to be in danger of extinction throughout all or a significant portion of its range at this time. Threats to the species are primarily associated with unauthorized activity (i.e., vehicle trespass) on USFS lands and military activities due to its location in active training areas and the housing and administration area of an Army base. However, because the Army's environmental directives are increasing the consideration afforded this and other rare plant species on Fort Hunter Liggett and because the USFS has implemented some management actions for this species, the Service determines that threatened status is currently appropriate. The species is not currently in danger of extinction, but is likely to become so if trends of increasing use of its habitat for military training activities continue and if OHV activities increase on USFS lands.

#### 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 consideration 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 determined to be endangered or threatened. The Service finds that designation of critical habitat for *Chlorogalum purpureum* is not prudent. 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 largest sites of *Chlorogalum purpureum* are located at Fort Hunter Liggett military base. Military training and support activities comprise the primary threat to the three localities. The Army is aware of the plant's location and is developing a monitoring program. Designation of these areas as critical habitat would provide no additional protection against threats to the species. On Federal lands managed by the LPNF, suitable habitat for *Chlorogalum purpureum* occurs in a discrete, well-defined area. The primary threat to this population is illegal trespass by OHVs. The USFS is aware of the plant's location and has implemented active management, including construction of fences and barriers as well as monitoring. Designation of this area as critical habitat would add no additional protection against the threats faced by the species. The other known localities of *Chlorogalum purpureum* are small and occur only on private lands where there is very little likelihood of Federal involvement. Designation of critical habitat for this species is, therefore, not prudent because of lack of benefit.

#### 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 encourages and results in conservation actions by Federal, State, and local agencies, private organizations, and individuals. The Act provides for possible land acquisition from willing sellers and cooperation with the States and requires that recovery actions be carried out 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 any proposed or designated critical habitat. 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 any is designated. 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.

Although this rule treats *Chlorogalum purpureum* at the specific level (i.e., it is proposed as one species rather than as two separate varieties), each of the varieties would be treated as a separate taxonomic entity for the purposes of section 7 consultation and the recovery process, if the species is listed. In other words, the jeopardy standard could be applied to either *C. p.* var. *purpureum* or *C. p.* var. *reductum* as separately identified recovery units.

Federal agencies that may affect the species proposed in this rule through activities they fund, authorize, or carry out are the USFS (at Los Padres National Forest), the Department of the Army (at Fort Hunter Liggett) and, to a much smaller extent, the Federal Highway Administration through funds provided for State highway construction or maintenance.

*Chlorogalum purpureum* var. *purpureum* occurs wholly on Federal lands managed by the Department of the Army. Activities the Army funds, authorizes, or carries out that could affect this taxon include, but are not limited to, construction and use of training facilities, field training exercises, road construction and maintenance, prescribed burning, fire suppression activities, livestock grazing, and hunting.

*Chlorogalum purpureum* var. *reductum* occurs primarily on public lands managed by the USFS on Los Padres National Forest. Activities that the USFS funds, authorizes, or carries out that could affect this taxon include grazing, OHV activities, road maintenance, and special use permits authorizing use and the development of management plans for special use areas.

Listing *Chlorogalum purpureum* as threatened will provide for the development of a recovery plan. The plan will bring together Federal, State, and local efforts for the plant's conservation, establishing a framework for cooperation and coordination. The plan will set recovery priorities and describe site-specific management actions necessary to achieve the conservation of the species.

Additionally, pursuant to section 6 of the Act, the Service will be more likely to grant funds to affected states for management actions promoting the protection and recovery of the species.

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 17.71 for threatened plants, 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. Section 4(d) of the Act allows for the provision of such protection to threatened species through regulation. This protection may apply to this 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, 17.63, and 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered or threatened plant species 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 trade permits would ever be sought or issued because this species is not in cultivation or common in the wild. Information collections associated with these permits are approved under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and assigned Office of Management and Budget clearance number 1018-0094. For additional information concerning these permits and associated requirements, see 50 CFR 17.72.

Requests for copies of the regulations on listed species and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Endangered Species Permits, 911 NE 11th Avenue, Portland, Oregon

97232-4181 (telephone: 503/231-2063; facsimile: 503/231-6243).

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 those activities that would or would not be likely to constitute a violation of section 9 of the Act if a species is listed. The intent of this policy is to increase public awareness of the effect of the listing on proposed and ongoing activities within the species' range. *Chlorogalum purpureum* occurs on lands under the jurisdiction of the USFS and Department of the Army. Collection of the species on Federal lands is prohibited, although in appropriate cases a Federal endangered species permit may be issued to allow collection. Such activities on areas not under Federal jurisdiction would constitute a violation of section 9 if conducted in knowing violation of California State law or regulations, or in violation of State criminal trespass law. The Service is not currently 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. The Service believes that, based upon the best available information, the following actions will not result in a violation of section 9, provided these activities are carried out in accordance with existing regulations and permit requirements:

(1) Activities authorized, funded, or carried out by Federal agencies (e.g., grazing management, military activities, road construction and maintenance, prescribed burning, fire suppression activities, hunting, or other land use activities that would significantly modify the species' habitat), when such activity is conducted in accordance with any reasonable and prudent measures given by the Service according to section 7 of the Act;

(2) Casual, dispersed human activities on foot or horseback (e.g., bird-watching, photography, camping, hiking); and

(3) Activities on private lands (without Federal funding or involvement), such as grazing management, residential development, road construction, pesticide/herbicide application, residential landscape maintenance, and pipelines or utility lines crossing suitable habitat.

Questions regarding whether specific activities would constitute a violation of section 9, should this species be listed, should be directed to the Field Supervisor of the Ventura Fish and Wildlife Office (see **ADDRESSES** section).

**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 are particularly sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Chlorogalum purpureum*;

(2) The location of any additional populations of the species and the reasons why any habitat should or should not be determined to be critical habitat pursuant to section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of the species; and

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

A final determination of whether to list this species will take into consideration the comments and any additional information received by the Service. Such communications may lead to a final decision-making document that differs from this proposal.

The 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 be addressed to the Field Supervisor (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).

**Required Determinations**

This proposed rule does not contain collections of information that require approval by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.*

**References Cited**

A complete list of all references cited herein is available upon request from

the Ventura Fish and Wildlife Office (see **ADDRESSES** section).

Author: The primary author of this proposal is Diane Steeck, Ventura Fish and Wildlife Office (see **ADDRESSES** section).

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

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, 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. 4201–4205; Pub. L. 99–625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants:

**§ 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>Chlorogalum purpureum</i> .	Purple amole .....	U.S.A. (CA) .....	Liliaceae—Lily .....	T	.....	NA	NA
*	*	*	*	*	*		*

Dated: March 17, 1998.

**Jamie Rappaport Clark,**

Director, Fish and Wildlife Service.

[FR Doc. 98–8050 Filed 3–27–98; 8:45 am]

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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

RIN 1018–AE81

**Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Four Plants from South Central Coastal California**

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

**ACTION:** Proposed rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) proposes to list *Cirsium loncholepis* (La Graciosa thistle), *Eriodictyon capitatum* (Lompoc

yerba santa), *Hemizonia increscens* ssp. *villosa* (Gaviota tarplant), and *Lupinus nipomensis* (Nipomo Mesa lupine) as endangered, pursuant to the Endangered Species Act of 1973, as amended (Act). These plants are in danger of extinction because their habitats have been significantly reduced by residential, commercial, and oil and gas development. Their remaining habitats have been adversely affected by development, military activities, alteration of natural fire cycles and the invasion of alien plant species. The limited distribution and small population sizes of these four taxa also make them more vulnerable to extinction from naturally occurring events. Existing regulations do not