

they are managed as a conservation herd, rather than as a commercial herd. However, we no longer consider the Yellowstone herd to have remained in more of a "wild" state than any other conservation herd. Specifically, these wild plains bison are no longer thought to have remained in an unaltered condition from prehistoric times, as implied in the previous determination. In 1902, no more than 30 wild plains bison remained in Yellowstone (Halbert 2003, p. 24). In the same year, 18 female plains bison from the captive Pablo-Allard herd in Montana and 3 bulls from the captive Goodnight herd in Texas were purchased to supplement the Yellowstone herd (Halbert 2003, pp. 24–25). Additionally, intensive management (supplemental feeding, roundups, and selective culling) of the Yellowstone herd occurred from the 1920s through the late 1960s (Gogan *et al.* 2005, p. 1719). Wild plains bison from Yellowstone also have been used to start or augment many later conservation herds (Halbert and Derr 2007, p. 2). Despite geographic separation, the Yellowstone herd is essentially part of one metapopulation and is not markedly separate from other herds.

Summary of the Distinct Population Segment Analysis

On the basis of the preceding discussion, we believe that the petition has not provided substantial information to conclude that each of the four population segments may be discrete. Therefore, we did not evaluate significance or conservation status of the four population segments within the meaning of the DPS Policy. In conclusion, we do not believe that any of the population segments may constitute a valid DPS.

However, even if we had concluded that the four population segments may be discrete and significant, the petition does not present substantial information that any of the stressors described under the above five factor analysis are concentrated within any one DPS to indicate that any of the DPSs would be more likely to be threatened or endangered than the species at large. Thus, there is no information indicating stressors rise to the level of a threat for any population segment.

Finding

In summary, the petition does not present substantial information that wild plains bison may require listing either as a subspecies or a DPS. The conclusion that impacts from the various factors discussed above may constitute a threat is not supported by

the available information regarding distribution, abundance, and population trends of wild plains bison. Wild plains bison are distributed in parks, preserves, other public lands, and private lands throughout and external to their historical range. The current population of wild plains bison is estimated to be 20,500 animals in 62 conservation herds. Recent population trends appear stable to slightly increasing in conservation herds (as noted by the petitioners).

On the basis of our determination under section 4(b)(3)(A) of the Act, we conclude that the petition does not present substantial scientific or commercial information to indicate that listing the wild plains bison, or any of four proposed DPSs, under the Act as threatened or endangered may be warranted at this time. Although we will not review the status of the species at this time, we encourage interested parties to continue to gather data that will assist with conservation of the wild plains bison. If you wish to provide information regarding the wild plains bison, you may submit your information or materials to the Wyoming Field Supervisor (*see ADDRESSES*) at any time.

References Cited

A complete list of references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Wyoming Field Office (*see FOR FURTHER INFORMATION CONTACT*).

Authors

The primary authors of this notice are staff members of the Mountain-Prairie Regional Office and the Wyoming Field Office (*see ADDRESSES*).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Rowan W. Gould,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 2011-4121 Filed 2-23-11; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS-R8-ES-2010-0078; MO 92210-0-0008 B2]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List the Unsilvered Fritillary Butterfly as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service, announce a 90-day finding on a petition to list the unsilvered fritillary butterfly (*Speyeria adiaeste*) as threatened or endangered under the Endangered Species Act of 1973 (Act), as amended, and designate critical habitat. Based on our review, we find that the petition does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary may be warranted. Therefore, we are not initiating a status review in response to this petition. We ask the public to submit to us any new information that becomes available concerning the status of, or threats to, the unsilvered fritillary or its habitat at any time.

DATES: The finding announced in this document was made on February 24, 2011.

ADDRESSES: This finding is available on the Internet at <http://www.regulations.gov> at Docket Number FWS-R8-ES-2010-0078 and at <http://www.fws.gov/ventura>. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003; telephone 805-644-1766; facsimile 805-644-3958. Please submit any new information, materials, comments, or questions concerning this finding to the above street address.

FOR FURTHER INFORMATION CONTACT: Michael McCrary, Listing and Recovery Coordinator for Wildlife, Ventura Fish and Wildlife Office (*see ADDRESSES*), by telephone 805-644-1766, or by facsimile 805-644-3958. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq.*) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

Petition History

On January 12, 2010, we received a petition, dated January 6, 2010, from WildEarth Guardians, requesting that the unsilvered fritillary butterfly be listed as threatened or endangered and critical habitat be designated under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, as required by 50 CFR 424.14(a). In a February 10, 2010, letter to the petitioner, we acknowledged receipt of the petition and stated that we had secured the funding to conduct the initial finding as to whether the petition contains substantial information indicating that the action may be warranted. We also stated that we determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. This finding addresses the petition.

Previous Federal Actions

On January 6, 1992, the Service received a petition from Drs. Dennis Murphy and Alan Launer of the Stanford University Center for Conservation Biology to list *Speyeria adiastrum* to list *Speyeria adiastrum*, one of the three subspecies of unsilvered fritillary, as an endangered or threatened species. In our November 22, 1994, 90-day petition

finding (59 FR 28741), we determined that, although the *S. adiastrum* may be declining, existing information was not available to estimate the extent or rate of changes in habitat or population levels. We stated that further surveys were needed to adequately assess its distribution and population status, and beyond the information described above, the petitioner presented little else on the status of the animal. Therefore, the Service determined that the petition did not present substantial information that the requested action may be warranted.

Species Information

The unsilvered fritillary is a medium-sized, brush-footed butterfly limited to the central coast region of California (WildEarth Guardians 2010, p. 1). This butterfly has a 2–2.38-inch (5–6.1-centimeter (cm)) wingspan. The upper side of adult males is pale reddish-tan to bright red and the undersides are pale yellow to gray; females are larger and paler than males. The unsilvered fritillary has small, scattered, dark markings and a bold postmedian line. This species also has unsilvered hindwing spots that slightly contrast with background coloring, unlike the silvered markings of most *Speyeria* species (Butterflies and Moths of North America (BMNA) 2009, p. 1). Adults lay single eggs on fallen leaves and twigs near violets (*Viola* spp.). Caterpillars hibernate without feeding, but feed on violet leaves when they emerge in spring (NatureServe 2009, not paginated; BMNA 2009, p. 1). Adults have been observed feeding on the flowers of native and nonnative thistles (family *Asteraceae*) and California buckeye (*Aesculus californica*) (NatureServe 2009, not paginated). The unsilvered fritillary breeds once per year, with its adult butterfly stage occurring in June through July (flight period) (BMNA 2009, p. 1).

The unsilvered fritillary inhabits openings in conifer and redwood forests, as well as oak woodlands, chaparral, and grassy slopes (BMNA 2009, p. 2). Brittnacher *et al.* (1978, p. 200) considered it a xeric (adapted to an extremely dry habitat) *Speyeria* species that occurred in summer-dry locations.

Violets are the only known host plants for *Speyeria*, including the unsilvered fritillary, and the distribution of these plants limits the extent of available habitat the species can occupy (Brittnacher 1978, p. 199). Mattoon *et al.* (1971) (in Brittnacher *et al.* 1978, p. 199) found that all the North American violets they tested can adequately support larval growth, although some European ornamentals,

such as sweet violet (*Viola odorata*), are toxic to most *Speyeria* species.

The petition states that there are 16 species in the *Speyeria* genus (WildEarth Guardians 2010, p. 4). Brittnacher *et al.* (1978, p. 199) state that there are at least 14 closely related *Speyeria* species, 10 of which occur in California. In the draft recovery plan for the Behren's silverspot (*S. zerene behrensii*), the Service (2003, p. 3) stated that the genus *Speyeria* is a member of a complex group of 10 species, having a polytypic (*i.e.*, having many forms) population structure, with over 100 geographic subspecies. There are three recognized subspecies of the unsilvered fritillary, *Speyeria adiastrum adiastrum* (*adiastrum* subspecies), *S. a. clemencei* (*clemencei* subspecies), and *S. a. atossa* (*atossa* subspecies) (NatureServe 2009, not paginated); however, as discussed below, the *atossa* subspecies is considered extinct.

The historic range of the unsilvered fritillary covered much of the central and southern coastal region of California, extending from San Mateo County in the north to Los Angeles and Kern Counties in the south (BMNA 2009, p. 2). However, the current range is much smaller because the *atossa* subspecies is considered extinct (BMNA 2009, p. 2). Historically, the *atossa* subspecies was widely distributed in the Tehachapi Mountains, Tejon Mountains, and Mount Pinos region of Los Angeles and Kern Counties (Bruyera 2003, not paginated), living in open grasslands where violets, such as the pine violet (*Viola purpurea*), were abundant (Comstock 1927 in Hammond and McCorkle 1983, p. 220). The last known observations of the *atossa* subspecies occurred in 1959 just south of the town of Tehachapi and near Mount Pinos (Emmel and Emmel 1973 in Bruyera 2003, not paginated).

The two extant unsilvered fritillary subspecies occur in the central coast region of California from Santa Cruz County in the north to San Luis Obispo County in the south. The petition states that the *adiastrum* subspecies is limited to the higher elevations of the Santa Cruz Mountains in San Mateo, Santa Cruz, and Santa Clara Counties (WildEarth Guardians 2010, p. 5). The *clemencei* subspecies has a more extensive range (BMNA 2009, p. 2), and the petition states that it occurs in the Santa Lucia Mountains in Monterey and San Luis Obispo Counties (WildEarth Guardians 2010, p. 5). The petition states that the unsilvered fritillary is distributed spottily within this range (WildEarth Guardians 2010, p. 6); however, the petition does not provide any other data on its abundance or distribution.

The California Natural Diversity Database (CNDDDB) (2010, not paginated) has only two records for the *S. a. adiate*. One location is in Big Basin Redwoods State Park in Santa Cruz County, which is specifically discussed in the petition. The second location is on private land on the border between Santa Clara and Santa Cruz Counties. There are no records of *S. a. clemencei* in the CNDDDB.

NatureServe is cited frequently throughout the petition to support the assertion that the unsilvered fritillary should be listed under the Act. NatureServe is a nonprofit conservation organization that collects and manages data about the status and distribution of species and ecosystems of conservation concern and makes that information available to guide conservation, land-use planning, and natural resource management (NatureServe Web site 2009). As part of this service, NatureServe assesses and ranks the conservation status of species on a scale ranging from a "conservation status rank" of critically imperiled (1) to demonstrably secure (5). NatureServe ranks the unsilvered fritillary as G1G2, rounded to G1, "critically imperiled," meaning the species is at high risk of extinction due to extreme rarity or to a limited range. However, NatureServe states that more information on abundance and number of occurrences and metapopulation dynamics of the species would be necessary to further refine its rank. NatureServe indicates that the long-term trend for the species has been a large-to-substantial decline (50 to 90 percent). However, NatureServe does not indicate whether the range of the species has declined or the abundance of the species has declined or both, although it does note that there is not enough information to determine the abundance of the species. The loss of the *atossa* subspecies represents a large decline in the range of the species, but does not necessarily reflect the status of the *adiaste* or *clemencei* subspecies. Although NatureServe states that there is not enough information to determine the number of occurrences of the species, it estimates the number of occurrences at 1–20. NatureServe also ranks the three subspecies individually: *S. a. adiate* is ranked as T1, critically imperiled in California; *S. a. clemencei* is ranked as T1T2, similar to the full species' rank of G1G2; and *S. a. atossa* is ranked as TX because it is presumed extinct. NatureServe (2009) states that populations of the *adiaste* subspecies "seem to have declined," but does not provide any information to support this

observation. It should also be noted that NatureServe indicates on its Web site that conservation status ranks are neither a recommendation by the organization, nor an indication that a species requires legal status to assure its survival (NatureServe 2008, not paginated) and, in our view, should not be the sole basis for any decisions.

Furthermore, the CNDDDB includes *S. a. adiate* on its species-at-risk list, but the other two subspecies are not included. Similarly, the California Wildlife Action Plan includes *S. a. adiate* as a species at risk in the central coast region based on the CNDDDB classification.

Although the petition did not provide any information on the results of any surveys that may have been conducted to determine the status of the *atossa* subspecies, the information available at this time indicates that the *atossa* subspecies is considered extinct. We also agree with the petitioner and other organizations, including NatureServe, that the range of the remaining extant subspecies of the unsilvered fritillary is limited to the central coast of California. However, the range of the species as described in both the petition and by NatureServe includes at least the mountainous portions of five counties. Although only a portion of this area is suitable habitat for the species, the petition did not provide information on either the distribution of the species or on the extent or distribution of its habitat; information on either or both could be used to refine the range of the species beyond what is described in the petition. The petition also did not present any information that would indicate that the ranges of the remaining two subspecies have been reduced. Nor did the petition present any information on either the number of populations or overall abundance of the two subspecies, or any changes in these. The classification of the unsilvered fritillary as being critically imperiled by NatureServe is apparently based on the loss of the *atossa* subspecies and the limited range of the two extant subspecies, rather than information on their past or present distribution and abundance. Therefore, there is no information that shows that the range of the two remaining subspecies has been reduced or that the number of populations or abundance of either of them has declined or is declining.

Evaluation of Information for This Finding

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR part 424 set forth the procedures for adding a species to, or removing a

species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. 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) of the Act:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

In making this 90-day finding, we evaluated whether information regarding threats to the unsilvered fritillary, as presented in the petition and other information available in our files, is substantial, thereby indicating that the petitioned action may be warranted. Our evaluation of this information is presented below.

It is the overall position of the petition that, of the three subspecies of the unsilvered fritillary, *Speyeria adiate atossa* is considered extinct, *S. a. adiate* is limited in range and declining, and *S. a. clemencei* has a more extensive range but faces multiple threats, and, therefore, the species in its entirety faces extinction or endangerment.

The petition states that the unsilvered fritillary has vanished from much of its range and asserts that this is due to human activities, including habitat loss and degradation due to burgeoning human populations, with resultant urban and suburban sprawl; increasing agriculture; extensive livestock grazing; off-road vehicle use; and other adverse land uses. The petition also asserts that climate change has taken and will take its toll through altered fire regimes, more severe and frequent droughts, and shifts in native plant distribution (WildEarth Guardians 2010, p. 12). The petition states that the Service should consider whether these threats intersect and act synergistically, thereby increasing the likelihood of extinction or endangerment of the unsilvered fritillary in the foreseeable future (WildEarth Guardians 2010, p. 16).

Additionally, the petition states that the Service should consider how the suite of threats identified for four Federally listed *Speyeria*, the Behren's silverspot (*Speyeria z. behrensii*), the Oregon silverspot (*S. z. hippolyta*), the Myrtle's silverspot (*S. z. myrtleae*), and the Callippe silverspot (*S. callippe callippe*), might likewise threaten the

unsilvered fritillary (WildEarth Guardians 2010, p. 11).

The endangered Behren's silverspot occurs at a single location near Point Arena, Mendocino County, California (Service 2003, p. iii). Threats identified in the recovery plan for this taxon are: Invasion by nonnative species, natural succession, fire suppression, residential development, and overcollection (Service 2003, pp. 12–16).

The threatened Oregon silverspot occurs at disjunct sites near the Pacific coast from Del Norte County, California, north to Long Beach Peninsula, Washington. Threats identified in the recovery plan for this taxon are: Invasion by nonnative species, fire suppression, land development, off-road vehicles, livestock grazing, erosion, roadkill, insecticides, and overcollection (Service 2001, pp. 18–20).

When listed, the endangered Myrtle's silverspot occurred in four areas in western Marin and southwestern Sonoma Counties, California, and the distribution and range have not significantly changed since listing in 1992 (Service 2009, p. 5). Threats identified in the recovery plan for this taxon are: Invasion by nonnative plants, loss of habitat from commercial and residential development, recreation, livestock grazing, agriculture, and overcollection (Service 1998, pp. 59–60).

The endangered Callippe silverspot occurs at San Bruno Mountain in San Mateo County and at Cordelia Hills in Sonoma County, California (Service 2009, p. 5). Threats identified in the listing rule for this taxon are: Habitat degradation due to human activities, off-road vehicles, invasion by nonnative plants, livestock grazing, and overcollection (December 5, 1997, 62 FR 64306, pp. 64311–64312).

The five factors discussed below are pertinent only in cases where the organism being proposed for listing may be a listable entity as defined by section 3(16) of the Act and is extant in the wild. The petition and its supporting information and information in our files indicate that the *atossa* subspecies is considered extinct. Because the *atossa* subspecies is considered extinct, the five factors are not analyzed for *atossa*. Therefore, the five factors are analyzed for the species of the unsilvered fritillary as a whole and for each of the two extant subspecies (*adiaste* and *clemencei*).

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

The petition asserts that development, fire suppression, widespread fires,

agriculture, overgrazing, and exotic vegetation are causing the loss or degradation of the unsilvered fritillary's habitat (WildEarth Guardians 2010, p. 8). Moreover, the petition claims that the extirpations and decline of the unsilvered fritillary indicate severe degradation of its habitat, and these activities are pushing this species' Central coast grassland and woodland ecosystems toward collapse (WildEarth Guardians 2010, pp. 7–8). The petition states that NatureServe (2009, not paginated) estimates that the unsilvered fritillary has undergone a large-to-substantial decline, on the order of 50 to 90 percent (WildEarth Guardians 2010, p. 7).

The petition also lists off-road vehicles as a threat to the unsilvered fritillary (WildEarth Guardians 2010, p. 9); however, it does not include any other information on either the operation of off-road vehicles in relation to unsilvered butterfly populations or the habitat of the species.

Development: Information in the Petition

As described in the petition, the various species of *Speyeria* butterflies are sensitive to human disturbance, and four species of *Speyeria* butterflies are listed as either threatened or endangered (WildEarth Guardians 2010, p. 11). Hammond and McCorkle (1983, p. 218) analyzed the general problem of declining *Speyeria* butterfly populations due to human-induced environmental disturbances and concluded that the fritillary butterflies of the genus *Speyeria* and their larval food plants, violets, are among the most sensitive organisms in native ecosystems, and are among the first to be exterminated as a result of widespread human disturbance.

Human disturbance has been particularly destructive to native ecological communities along the West Coast, and many forms of *Speyeria* have become extinct or are threatened with extinction in this region (Hammond and McCorkle 1983, p. 220). One example of this is the *atossa* subspecies, which, as mentioned earlier, is considered extinct. The *atossa* subspecies was once widely distributed and extremely abundant in the Sierra Madre, Tejon, and Tehachapi Mountains of southern California, where it occurred in open grasslands where violets, such as the pine violet (*Viola purpurea*), were abundant (Comstock 1927, in Hammond and McCorkle 1983, p. 220). According to Emmel and Emmel (1973, in Hammond and McCorkle 1983, p. 220), this subspecies is probably extinct today, with the last known specimen collected in 1959. Although

the actual causes of the *atossa* subspecies' decline are still not clear (University of California Berkeley 2009, p. 1), it is thought that overgrazing by livestock, combined with drought, so greatly reduced the larval food plant that the butterfly could no longer survive (Orsak 1974, in Hammond and McCorkle 1983, p. 220). Wildfire suppression practices may also have contributed to the spread of nonnative vegetation in the area, which tends to outcompete native low-growing annuals, including potential unsilvered fritillary host plants (John Emmel, pers. comm. in Bruyey 2003, not paginated).

The petition states that population and urban growth and development are important stressors to wildlife in the central coast region of California, including the unsilvered fritillary, and that suburban development has reduced both the various *Speyeria* species of butterflies and violets, their primary food source (WildEarth Guardians 2010, p. 8). As stated in the petition, the human population in this region has increased extensively and is likely continuing to grow (WildEarth Guardians 2010, p. 8). According to the California Wildlife Action Plan (Bunn *et al.* 2007, p. 200), population pressures have increased in recent years, and growth and development have expanded from urban centers to adjacent farmlands and rural areas both on the coast and in the interior portions of the central coast. As pointed out in the petition, these developed areas and infrastructure corridors not only result in direct loss of habitat, but also fragment the natural landscape and degrade the quality of adjacent habitat (WildEarth Guardians 2010, p. 9). Fragmentation hinders ecological processes that require landscape connectivity, such as natural fire regimes, movement of wide-ranging species, and genetic exchange, and it makes remaining natural lands more vulnerable to pollution and invasion by exotic plants and animals (Soulé and Terborgh 1999, in Bunn *et al.* 2007, p. 208).

Evaluation of Information Provided in the Petition and Available in Service Files

As noted in the petition, *Speyeria* are known to be sensitive to development, and development is considered to be a threat to the habitat of the four listed *Speyeria* butterflies. The primary threat to the Callippe (62 FR 64306), Behren's (62 FR 64306), Myrtle's (June 22, 1992, 57 FR 27848), and Oregon silverspot (July 2, 1980, 45 FR 44935) butterflies is the loss and degradation of habitat from human activities.

The petition asserts that urban and rural development is occurring within the range of the unsilvered fritillary and is negatively affecting it (WildEarth Guardians 2010, p. 8). We agree that the unsilvered fritillary is likely sensitive to development that removes or degrades its habitat; however, the petition only makes general assertions that development associated with population increases in the central coast is affecting the habitat of the unsilvered fritillary. The petition does not provide any information on the location of populations of the unsilvered fritillary or either of the two extant subspecies, except for the one occurrence of a protected population in Big Basin Redwoods State Park (WildEarth Guardians 2010, p. 11). The petition also does not provide any information regarding the amount of occupied habitat lost or degraded, nor does the petition identify areas within the unsilvered fritillary's range that are currently being developed or have plans for future development. As noted above in the Species Information section, only two records of the unsilvered fritillary are in the CNDDDB, one of which is in Big Basin Redwoods State Park, where development, agriculture, and off-road vehicles are not permitted. The petition references NatureServe in indicating that "few to several" occupied locations are protected, but it does not include any further information, nor does the petition include any land ownership information, beyond the fact that one of the locations is in Big Basin Redwoods State Park (WildEarth Guardians 2010, p. 11). We have no information in our files regarding specific locations of unsilvered fritillary butterfly populations, suitable habitat, or potential development impacts to the habitat for the species or subspecies. However, based on maps in our files, there are six State parks (Butano, Portola, Castle Rock, Henry Cowell Redwoods, Forest of Nisene Marks, and Wilder Ranch State Park), the extensive San Francisco State Fish and Game Refuge, and several County parks (e.g., San Pedro, Mt. Madonna, Uvas Canyon County Park) in the range of the species (Santa Cruz Mountains) that are not mentioned in the petition. Also, almost half of the range of the *clemencei* subspecies as identified in the petition (WildEarth Guardians 2010, p. 5) is public land, including the Los Padres National Forest, Ventana Wilderness Area, Hastings Natural History Reservation, and several State parks (e.g., Pfeiffer Big Sur, Julia Pfeiffer Burns). Although we do not have any information as to the presence of

populations or suitable habitat in these areas, they are all within the range of the fritillary and are protected from many types of impacts including development, agriculture, and, at least in the case of the Ventana Wilderness Area and State parks, off-road vehicles (Wilderness Act of 1964 (16 U.S.C. 1131 *et seq.*); <http://www.parks.ca.gov/>). Therefore, we have determined that the information provided in the petition and in our files concerning the effect of development on the unsilvered fritillary or either of its two subspecies does not present substantial information indicating that the petitioned action may be warranted.

Fire: Information in the Petition

The petition asserts that the unsilvered fritillary is a poor survivor of fires, but that the species also depends on fire to protect its habitat from brush and tree encroachment as well as to burn off dead thatch that can crowd out violets (WildEarth Guardians 2010, p. 8, citing Hammond and McCorkle 1983, p. 222; NatureServe 2009, not paginated). Wildfire suppression may also facilitate the spread of exotic vegetation (WildEarth Guardians 2010, p. 9, citing Bruyera 2003, not paginated). The petition states that the Service should consider how an altered fire regime may be a threat to this species' habitat, particularly given that the *clemencei* subspecies occurs in the fire-prone Santa Lucia range (WildEarth Guardians 2010, p. 8, citing NatureServe 2009, not paginated).

Evaluation of Information Provided in the Petition and Available in Service Files

Periodic fires can be an important factor in maintaining the grassland and coastal prairie habitat of the Callippe and Behren's silverspot butterflies, because, without fire, succession will eliminate the food plants of the larvae of the two butterflies (Orsak 1980 and Hammond and McCorkle 1984 in 62 FR 64306, p. 64315). Hammond and McCorkle (1983, p. 222) pointed out that without fire to maintain the grasslands against brush and tree invasion along the Oregon and Washington coasts, most of the coastal grasslands gradually disappeared to salal and salmonberry brushland or Sitka spruce forest, and even without brush and tree invasion, the native grasslands experience a second ecological problem in the absence of fire. The dead grass from the previous year's growth does not decay quickly in the coastal environment and gradually accumulates to form a thick layer of thatch that smothers and crowds out the violets and other

wildflowers that are important food sources for butterflies (Hammond and McCorkle 1983, p. 222). The reduction of historic disturbance regimes has probably accelerated expansion of several nonnative species which threaten Oregon silverspot populations, in addition to encouraging native shrub and tree growth. The spread of nonnative plants has reduced, degraded, or eliminated habitat for the Oregon silverspot at many sites (Service 2001, p. 16). The overgrowth of invasive plants remains one of the most serious present-day threats to the Myrtle's silverspot butterfly. It has been recognized as a threat to other listed butterflies as well (57 FR 27848; Service 1998; Adams 2004; Ehrlich and Hanski 2004; Severns 2007, in Service 2009, p. 15).

While the overgrowth and succession of the four *Speyeria* butterfly habitats may be ameliorated by periodic disturbance from fires that clear areas for *Speyeria* food plants, the effects on *Speyeria* larvae may be more severe. Although the larvae of these butterflies may survive fires that move rapidly through grassland habitats, hotter and slow-moving brush and woodland fires may kill them (Orsak 1980 and Hammond and McCorkle 1984 in 62 FR 64306, p. 64315). Under windy conditions, fast-moving grassland fires burn in patches that leave islands of unburned habitat where any butterflies present are not harmed.

The petition asserts that the unsilvered fritillary can be negatively or positively affected by both presence of fire and absence of fire (WildEarth Guardians 2010, p. 8). However, the petition does not provide any information on past or more-recent fire activity within the range of the unsilvered fritillary and does not provide any information on the location of populations of the unsilvered fritillary, including either of its two subspecies that may or could potentially be affected by fire. Similarly, the petition does not provide any information on past, present, or planned fire suppression activities within the range of the species. Moreover, the petition (WildEarth Guardians 2010, p. 8) and NatureServe (2009) state that the Santa Lucia Mountains are fire prone, but do not provide information regarding the past or more-recent fire history in the Santa Lucia Mountains that would indicate this area is more fire-prone or whether the *clemencei* subspecies' habitat is more prone to wildfire than other areas of California. We have no information for either the specific locations of the unsilvered fritillary populations that may be

affected by fire, or the areas within the range of the species that have altered fire regimes or have high fire danger. Therefore, we have determined that the information provided concerning wildfire and fire suppression for the unsilvered fritillary or either of its extant subspecies does not present substantial information indicating that the petitioned action may be warranted.

Agriculture and Grazing: Information Provided in the Petition

The petition lists agriculture and livestock grazing as threats to the unsilvered fritillary and asserts that livestock eat and trample violet food plants and can cause proliferation of noxious weeds that displace violets (WildEarth Guardians 2010, p. 9). The petition asserts that approximately 11 percent of the central coast region of California is used for agriculture and livestock grazing, which can lead to habitat fragmentation, erosion, sedimentation, and degradation from herbicides and insecticides (WildEarth Guardians 2010, p. 9). The petition states that intensive agriculture is increasing in the region; vineyard acreage increased approximately 36 percent between 1998 and 2001 (WildEarth Guardians 2010, p. 9, citing Bunn *et al.* 2007, p. 211). The petition (WildEarth Guardians 2010, p. 8) notes that overgrazing is suspected to have played a role in the extinction of the *atossa* subspecies (NatureServe 2009, not paginated).

The petition also states that *Speyeria* butterflies are known to be susceptible to insecticides (WildEarth Guardians 2010, p. 16, citing NatureServe 2009, not paginated), and given the increase in agriculture within the unsilvered fritillary's range, insecticide use is likely to be an escalating threat to this species (WildEarth Guardians 2010, p. 16).

Evaluation of Information Provided in the Petition and Available in Service Files

The effect of grazing can be either beneficial or deleterious to native plants, depending on the grazing regime and the ecology of the plant species (DeVries and Raemakers 2001; Vogel *et al.* 2007, in Service 2009, p. 14). For the Callippe, Behren's, Myrtle's, and Oregon silverspots, livestock grazing was determined to be a threat if it occurred at levels such that the vegetation was overgrazed and the food plants and nectar sources of these butterflies were eliminated or reduced in abundance. However, light-to-moderate grazing can result in reduction of invasive woody plants and maintain early successional grassland habitats that are beneficial for

butterfly host plants (Service 2001, p. 16; Service 2009, p. 14). In fact, the Myrtle's silverspot has coexisted with cattle grazing for over 100 years at Point Reyes National Seashore. Adams (2004, in Service 2009, p. 14) found that the moderate grazing regime at Point Reyes National Seashore did not negatively affect the density or diversity of nectar plants, and butterflies were found more frequently in the areas that were grazed. Inadvertent trampling of the Myrtle's silverspot host plants by grazing cattle may also be considered a relatively minor threat (Service 2009, p. 14). Other studies have shown that optimal grazing increases the density of native plants, which may support butterfly populations (Heitschmidt and Stuth 1991 in Service 2009, p. 14).

The petition asserts that because 11 percent of the central coast region is used for agriculture and grazing, and because intensive agriculture (*e.g.*, vineyards) is increasing in the region, the unsilvered fritillary is and will become even more negatively affected by these land uses (WildEarth Guardians 2010, p. 9). While conversion of suitable habitat containing *Viola* spp. host plants to intensive agriculture would most likely eliminate the unsilvered fritillary's habitat, the petition does not provide any information, nor do we have any information in our files, regarding the extent or intensity of existing agriculture and grazing land use or any planned land-use conversion to vineyards or other types of agriculture or grazing that would occur within the unsilvered fritillary's range. Also, although vineyard acreage has increased along the central coast, as pointed out in the petition (WildEarth Guardians 2010, p. 9), much of the increase has been south of the area where the unsilvered fritillary is currently believed to occur, in the Santa Cruz Mountains and the Santa Lucia Mountains. Vineyard acreage has increased in the area around Paso Robles in San Luis Obispo County and Santa Barbara County (Bunn *et al.* 2007, p. 211). The petition does not provide any information, nor do we have any information in our files, on the location of populations of the unsilvered fritillary that may be or could potentially be affected by agriculture or grazing, and, thus, we do not have information indicating that agriculture and grazing practices are negatively affecting, or are likely to negatively affect, the unsilvered fritillary. We have determined that the information presented in the petition and available in our files concerning potential habitat

modification threats of agriculture and grazing to the habitat for the unsilvered fritillary or either of its extant subspecies does not present substantial information indicating that the petitioned action may be warranted.

Silverspot butterfly larvae are extremely sensitive to insecticides, and even the accumulation of runoff in the soil after spraying has proven lethal to the larvae of members of the genus *Speyeria* (Mattoon *et al.* 1971, in 62 FR 64306, p. 64314). In listing the Callippe and Behren's silverspot butterflies, the Service stated that the use of insecticides could threaten these butterflies if use occurred in proximity to occupied habitat (62 FR 64306, p. 64314). This petition, however, does not provide information regarding the use of insecticides within the unsilvered fritillary's range and simply asserts that insecticide use would increase as agriculture within the region increases. The petition also does not provide any information on the location of populations of the unsilvered fritillary that may or could potentially be affected by insecticides. The Service is not aware of plans to apply insecticides in or near the habitat occupied by the unsilvered fritillary, nor do we have any information in our files regarding areas of insecticide application relative to unsilvered fritillary habitat. Therefore, we have determined that the information presented in the petition and in our files concerning the potential threat of insecticides to the unsilvered fritillary or either of its extant subspecies does not present substantial information indicating that the petitioned action may be warranted.

Exotic (Nonnative) Vegetation: Information in the Petition

The petition states that exotic vegetation may have played a role in the extinction of the *atossa* subspecies and asserts that exotic vegetation could likewise threaten the extant subspecies of the unsilvered fritillary and the species as a whole (WildEarth Guardians 2010, p. 9). Citing Bruyey (2003, not paginated), the petition points to wildfire suppression as having facilitated the spread of exotic vegetation, which outcompeted native annuals, such as violets, and, in combination with other human disturbances, led to the extinction of the *atossa* subspecies (WildEarth Guardians 2010, p. 9).

The petition points out that in the listing rule for the Behren's and Callippe silverspot butterflies (62 FR 64306, pp. 64314–64315), the Service noted, "The invasion of California's native grassland and coastal prairie by

alien plants has adversely affected native flora and fauna. In the absence of control and eradication programs, invasive alien plants may eliminate the remaining native plants, including the host plants of Behren's and Callippe silverspot butterflies. Adequate levels of *Viola* spp. host plants are especially critical for the long-term survival of populations of these butterflies (S. Mattoon, *in litt.*, August 4, 1989, and November 22, 1992)." The petition states that this analysis likewise applies to the unsilvered fritillary (WildEarth Guardians 2010, p. 9).

Evaluation of Information Provided in the Petition and Available in Service Files

We recognize that nonnative vegetation can reduce and degrade habitat for *Speyeria* butterflies (*e.g.*, Service 2001, p. 16; Service 2009, p. 15), and that nonnative vegetation has been recognized as an indirect threat to other listed butterflies as well (57 FR 27848; Service 1998; Adams 2004; Ehrlich and Hanski 2004; Severns 2007 in Service 2009, p. 15). In the absence of control and eradication programs, invasive alien plants may eliminate the remaining native plants, including the host plants of Behren's and Callippe silverspot butterflies. The petition generalized that because other *Speyeria* butterflies are negatively impacted by nonnative vegetation, the unsilvered fritillary is as well (WildEarth Guardians 2010, p. 9). However, the petition does not include any information on where nonnative vegetation is degrading the unsilvered fritillary's habitat or the location of populations of the unsilvered fritillary that may be or could potentially be affected by nonnative plants. In addition, we have no information in our files regarding negative impacts to the unsilvered fritillary due to nonnative vegetation. Therefore, we have determined that the information presented in the petition and in our files concerning the potential threat of nonnative plants to the habitat of the unsilvered fritillary or either of its extant subspecies does not present substantial information indicating that the petitioned action may be warranted.

Drought: Information Provided in the Petition

The petition states that drought is considered a threat to the unsilvered fritillary (WildEarth Guardians 2010, p. 14, citing NatureServe 2009, not paginated). Drought has been hypothesized, but not definitively proven, to be a factor in the extinction of the *atossa* subspecies, as well as being a threat to the *clemencei*

subspecies (WildEarth Guardians 2010, p. 14, citing Davenport 2004, p. 16; NatureServe 2009, not paginated). The petition also asserts that climate change will result in more frequent and longer droughts (WildEarth Guardians 2010, p. 14).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide any information, nor do we have information in our files, to indicate that drought has or will negatively affect the habitat or the number and distribution of populations or the population sizes of the unsilvered fritillary. The petition cites sources that state generally that drought has been a severe problem in recent years (WildEarth Guardians 2010, p. 14, citing Davenport 2004, p. 16), but does not provide information specifically related to the effects of drought on the unsilvered fritillary. The cause of the extinction of the *atossa* subspecies is unclear, but it has been attributed to many different factors, including drought (Howe 1975, in Bruyey 2003, not paginated; Orzak 1974, in Hammond and McCorkle 1983, p. 220), overgrazing (Orzak 1974, in Hammond and McCorkle 1983, p. 220), disease (University of California Berkeley 2009, p. 1), invasion of nonnative species (Howe 1975, in Bruyey 2003, not paginated), and wildfire suppression (John Emmel, pers. comm., in Bruyey 2003, not paginated). Periodic droughts have been, and likely will continue to be, a normal part of the climate of California, and wildlife, including the unsilvered fritillary, have adapted to periodic droughts. Therefore, we have determined that the information presented in the petition and in our files concerning the potential threat of drought to the unsilvered fritillary or either of its extant subspecies does not present substantial information indicating that the petitioned action may be warranted.

Climate Change: Information Provided in the Petition

The petition asserts that climate change is having, and will continue to have, a multitude of effects on the unsilvered fritillary and its habitat, including more severe, longer, and more frequent droughts; increased catastrophic wildfire and alteration of natural fire regimes due to hotter conditions; and potential shifts in ranges of this species or the violet species on which it depends (WildEarth Guardians 2010, p. 12). The petition notes that recent warming in the southwestern United States is among

the most rapid in the nation, significantly more rapid than the global average (WildEarth Guardians 2010, p. 12, citing Karl *et al.* 2009, pp. 129–132). Increasing temperature, drought, wildfire, and invasive species will accelerate transformation of the landscape; two-thirds of the more than 5,500 native plant species in California are projected to experience range reductions of up to 80 percent before the end of this century under projected warming (WildEarth Guardians 2010, p. 13, citing Karl *et al.* 2009, p. 132). The petition claims that such a shift in native ecosystems could adversely affect the unsilvered fritillary, given its narrow distribution (WildEarth Guardians 2010, p. 13).

The petition cites a recent United States Forest Service report regarding the intersection of climate and fire regimes (WildEarth Guardians 2010, p. 14, citing Westerling *et al.* 2006, in Keeley *et al.* 2009, p. 20). The report states that recent studies show correlations among warming temperatures, earlier springs, and increased numbers of large forest fires in some parts of the western United States. Anticipated warming trends as a consequence of greenhouse gas accumulation may lead to further increases in the numbers of large fires and total area burned in some regions (Brown *et al.* 2004; Flannigan *et al.* 2005; McKenzie *et al.* 2004, in Keeley *et al.* 2009, p. 20). Allen and Breshears (1998, in Keeley *et al.* 2009, p. 20) also predict that global climate change will produce large changes in vegetation distributions at unprecedented rates, particularly in semiarid, fire-prone ecosystems. These anticipated changes in fuel distribution could reduce fire activity in some regions and lead to unanticipated impacts on future fire regimes (Keeley *et al.* 2009, p. 20).

Evaluation of Information Provided in the Petition and Available in Service Files

We recognize that global mean temperatures have increased over the last several decades and will almost certainly continue to increase in the future as a result of greenhouse gases. Although increasing temperature may have an effect on the unsilvered fritillary, the information presented in the petition or available in our files does not support a meaningful prediction as to whether the overall impact will be negative or positive, or some combination of negative and positive impacts. Increasing temperature could result in more severe and frequent drought, especially in the Southwest (Karl *et al.* 2009, p. 42). However, we are

not aware of any formal studies on the direct effect of rising global temperature on drought severity or frequency (Karl *et al.* 2009, p. 5). Also, drought severity and frequency are a function of a complex series of factors, such as El Niño intensity and duration and geographic variations in sea surface temperature, which may also be affected in some manner by increasing temperatures, thereby compounding the uncertainty associated with precipitation projections (Karl *et al.* 2009, p. 105). Uncertainty also arises when extrapolating from a larger scale (e.g., North America or the Southwest) to the limited range of the unsilvered fritillary. A projected increase in mean temperatures in the Southwest does not necessarily equate to a similar degree of increase in local areas, such as the central coast of California, and both the degree and direction of changes in climate and weather will vary at the local level. More importantly, the response of plants and animals to climate change is uncertain and will likely vary locally and regionally. For example, citing Karl *et al.* (2009, p. 132), the petition states that the ranges of many California plants are projected to decline up to 80 percent due to climate change. However, this projection is only one of many projections. The 80-percent projection is a worst-case scenario in which the most severe degree of climate change was assumed, and in which plants were assumed to have no ability to shift their range in response to climate change. Other scenarios, where plants were assumed to be able to shift range, revealed that plant ranges in some areas were projected to increase, such as in the Central Western region which includes the range of the unsilvered fritillary (Loarie *et al.* 2008, Figure 4, p. 6). In addition, although the range of some types of vegetation may decline, grasslands are expected to increase (Karl p. 131), which may be beneficial for the unsilvered fritillary. Finally, we cannot meaningfully predict the impact on the unsilvered fritillary if drought severity and frequency were to increase in the central coast. For example, wildfires are likely to increase with worsening droughts (Karl *et al.* 2009, p. 43), but as pointed out in the petition, wildfires may have a positive as well as a negative effect on the unsilvered fritillary and its habitat. Therefore, we have determined that the information presented in the petition and in our files concerning the potential threat of climate change to the unsilvered fritillary or either of its extant subspecies does not present

substantial information indicating that the petitioned action may be warranted.

Summary of Factor A

The petition lists development, agriculture, livestock grazing, insecticides, invasive plants, drought, and climate change as threats to the unsilvered fritillary. However, the petition provided only this general list of potential threats to the unsilvered fritillary, but did not provide information that these potential threats are acting on the habitat of the unsilvered fritillary. We recognize that other listed *Speyeria* butterflies have been reduced, some substantially, due to human-caused disturbances, but the petition does not cite any site-specific proposed development projects or land-use conversion projects that would occur within unsilvered fritillary habitat. In addition, the petition does not provide specific information on the location(s) of unsilvered fritillary populations. Therefore, it is not possible to determine if a development project would actually affect the unsilvered fritillary, given that we do not have recent data detailing where this species occurs. The best information that we have regarding the location of known populations is the two records in the CNDDDB, one of which is in a State park and is protected by California State law (NatureServe 2009, not paginated). Also, a large portion of the *clemencei* subspecies' range is public land and therefore protected from many sources of habitat destruction and alteration. The petition also does not provide any information that any other threats to the unsilvered fritillary's habitat—including agriculture, livestock grazing, insecticides, or invasive plants—are occurring within the current range of the species and its two remaining subspecies, or are threatening the habitat of the species. There is ample evidence that global mean temperatures will likely increase in the future due to greenhouse gases; however, the petition does not present any information, nor do we have any information in our files, that indicates that the local climate and weather of the central coast is likely to change, the projected degree and nature of any change, or that drought is likely to increase in severity or frequency. Consequently, we find that the information provided in the petition and in our files does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary or either of its extant subspecies may be warranted due to the present or threatened destruction, modification, or curtailment of the species' habitat or range.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Information Provided in the Petition

The petition states that collection is not known to constitute a threat to the unsilvered fritillary; however, the rarity of the species makes it more attractive to collectors (WildEarth Guardians 2010, p. 9). The petition also states that butterfly populations that are small and easily accessible are especially vulnerable to overcollection (WildEarth Guardians 2010, p. 9).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide any information, nor do we have any information in our files, that would indicate that the unsilvered fritillary is a target of collectors or that it is threatened by collection. Although an extensive commercial trade has been documented for the Callippe silverspot and the Behren's silverspot butterflies, as well as for other imperiled and rare butterflies (U.S. Attorney's Office 1994, *United States v. Richard J. Skalski, Thomas W. Kral, and Marc L. Grinnell, Case No. CR932013, 1993*, in 62 FR 64306, p. 64313), insects are rarely affected by human overcollecting pressures, due to their high reproductive capabilities (Pyle, Bentzen, and Opler 1981, in Hammond and McCorkle 1983, p. 218).

In summary, we find that the information provided in the petition and available in our files does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary or either of its extant subspecies may be warranted due to overutilization for commercial, recreational, scientific, or educational purposes.

C. Disease or Predation

Information Provided in the Petition

The petition states that adult and larval butterflies are subject to predation by a wide variety of vertebrate and invertebrate wildlife (e.g., birds, reptiles, amphibians, and other insects) and that the small size of unsilvered fritillary populations increases their vulnerability to extirpation from disease or predation (WildEarth Guardians 2010, p. 10). The petition also states that scientists have suggested that disease could explain the extinction of the *atossa* subspecies; however, drought and overgrazing have also been mentioned as reasons for this subspecies' extinction (WildEarth

Guardians 2010, p. 9, citing Orzak 1974, in Hammond and McCorkle 1983, p. 220).

Evaluation of Information Provided in the Petition and Available in Service Files

The petition does not provide any information that would indicate that disease or predation are threats to the unsilvered fritillary, nor do we have any information in our files that would indicate that disease or predation are threats to the species. Disease has been suggested as a potential cause of the extinction of the *atossa* subspecies (University of California Berkeley 2009, p. 1). However, the petition did not present any information that would substantiate that claim, and the extinction of the *atossa* subspecies has also been attributed to several other causes. The petition also did not provide any information on the types of diseases known to occur in the unsilvered fritillary or other *Speyeria* butterflies or any species of butterfly or their vulnerability to disease. Therefore, we find that the information provided in the petition and available in our files does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary or either of its extant subspecies may be warranted due to disease or predation.

D. The Inadequacy of Existing Regulatory Mechanisms

Information Provided in the Petition

The petition asserts that the unsilvered fritillary is not adequately protected by Federal or State laws or policies to prevent its endangerment or extinction (WildEarth Guardians 2010, p. 10). The unsilvered fritillary is not listed under the Act, nor are any of its subspecies. The species is also not listed under the California Endangered Species Act (CESA), because the CESA does not provide for the listing and protection of insects. The petition further states that while the various rankings of the unsilvered fritillary and its subspecies by NatureServe (*e.g.*, G1G2), CNDDDB, and the California Wildlife Action Plan (*see* Species Information section) indicate biological imperilment, they do not provide any regulatory or policy mechanisms to protect the unsilvered fritillary (WildEarth Guardians 2010, p. 10). The petition provides no further information on any other State, Federal, or local regulations.

Evaluation of Information Provided in the Petition and Available in Service Files

As discussed in the petition and in the Species Information section above, several sources express concern over the status of the unsilvered fritillary, and the species is included in the State's CNDDDB list of at-risk species (WildEarth Guardians 2010, p. 11). However, contrary to the petition, we believe that the at-risk classification extends some level of consideration under the California Environmental Quality Act when project impacts are reviewed. Also, one of the two occurrences in the CNDDDB is within Big Basin Redwoods State Park, and its habitat within the park is afforded a high degree of protection by State law and regulations. Additionally, information in our files indicates that a substantial portion of the putative range of the unsilvered fritillary, as identified in the petition (WildEarth Guardians 2010, p. 5), is public land (Ventana Wilderness, Los Padres National Forest, and State and County parks), where, if present, the species would be protected from many types of impacts (*e.g.*, development, agriculture, and, at least in the case of Ventana Wilderness and State parks, off-road vehicles) by Federal, State, and local laws and regulations. Therefore, we find that the information provided in the petition and available in our files does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary or either of its extant subspecies may be warranted due to the inadequacy of existing regulatory mechanisms. There are no significant threats to the species as discussed in factors A, B, C, and E.

E. Other Natural or Manmade Factors Affecting the Species' Continued Existence

Biological Vulnerability: Information Provided in the Petition

The petition states that because the unsilvered fritillary's range was historically limited, has been further reduced by anthropogenic causes, and is vulnerable to weather events such as drought and catastrophic fires, the Service should consider this butterfly's narrow range itself as a threat to the taxon (WildEarth Guardians 2010, pp. 15–16). For example, loss of habitat and populations of another *Speyeria* species, the Regal fritillary (*Speyeria idalia*), have disrupted the gene flow between populations, and the species is consequently more prone to extinction due to genetic and demographic factors (WildEarth Guardians 2010, p. 16, citing Williams *et al.* 2003, p. 17). The petition

further states that the Service has routinely recognized that small population size and restricted range increase the likelihood of extinction (WildEarth Guardians 2010, p. 15). The petition also lists human population growth (*see* factor A for a discussion of population growth and development), insecticide use (*see* factor A for a discussion of insecticide use), and nonnative thistle seed weevils (scientific name not provided in petition) as threats to the unsilvered fritillary. Finally, the petition asserts that the cumulative effects of grazing, development, agriculture, off-road vehicles, and climate change threaten the species.

Evaluation of Information Provided in the Petition and Available in Service Files

We recognize the risks that stochastic (random chance) events may present to small populations, and we agree that the limited range of the unsilvered fritillary may exacerbate its vulnerability to these events. However, the mere fact that a rare species is potentially vulnerable to stochastic processes does not necessarily mean that it is reasonably likely to experience, or have its status affected by, a given stochastic process. There must be some information to indicate that the unsilvered fritillary and its habitat are at least susceptible to a threat or stochastic event, such as a severe, widespread disease among its host plants, and that the species would be negatively affected by the event. Typically, it is the combination of small size, the number of populations, and isolation of small populations, in conjunction with a threat or stochastic event (*e.g.*, catastrophic fire), that may pose a threat to a species. The petition, however, includes only very limited information on the number of populations and does not provide information on the distribution and size of populations or the presence or absence of connectivity between populations. Also, the mere fact that a species is rare does not necessarily equate to a threat. A species that has always been rare, yet continues to survive, could be well equipped to continue to exist into the future. Many naturally rare species have persisted for long periods within small geographic areas, and many naturally rare species exhibit traits that allow them to persist despite their small population sizes.

The petition states that "nonnative thistle seed weevils may also pose a threat to the unsilvered fritillary" (WildEarth Guardians 2010, p. 16, NatureServe 2009, not paginated). However, neither the petition nor

NatureServe provides any other information on thistle seed weevils or the impact they may have on the unsilvered fritillary. We assume that weevils can destroy thistles, which are one of the plants on which the unsilvered fritillary has been observed feeding (NatureServe 2009, not paginated). However, beyond that, we have no information in our files, and the petition did not provide any information that thistle seed weevils occur within the range of the unsilvered fritillary, or that they are destroying substantial numbers of thistles.

The information in the petition and in our files on the potential impacts of grazing, development, agriculture, off-road vehicles, and climate change are discussed in factor A. These potential impacts in combination could have a greater effect on the unsilvered fritillary than they would have individually. However, as summarized in factor A, the petition provided only this general list of potential threats to the unsilvered fritillary, but did not provide information that these potential threats are acting on the habitat of the unsilvered fritillary. The petition also did not provide any information that multiple potential threats are acting together on the habitat of the unsilvered fritillary.

In summary, we find that the information provided in the petition and available in our files does not present substantial scientific or commercial information indicating that listing the unsilvered fritillary or either of its extant subspecies may be warranted due to other natural or manmade factors affecting the species' continued existence.

Finding

In summary, the petition does not present substantial scientific or commercial information, because it does not provide any information on the location and magnitude of threats within the range of the species or specific threats to any occurrence or population of the species or either of its

extant subspecies. The petition provides only very limited information on the number of populations within this area and no information on the distribution and size of populations, and we do not have this information in our files. The unsilvered fritillary is a rare butterfly occurring in the Santa Cruz Mountains of San Mateo, Santa Cruz, and Santa Clara Counties, and in the Santa Lucia Mountains of Monterey and San Luis Obispo Counties, California, which is an area encompassing thousands of square miles. The petition cites threats to other listed *Speyeria* butterflies and requests we consider those relative to the unsilvered fritillary. While four other *Speyeria* species are listed as either threatened or endangered, the fact that these species are listed under the Act does not in and of itself mean that the unsilvered fritillary or either of its extant subspecies is threatened or endangered.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species may warrant listing as threatened or endangered as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively may not be sufficient to compel a finding that listing may be warranted. The information must contain evidence sufficient to suggest that these factors may be operative threats that act on the

species to the point that the species may meet the definition of threatened or endangered under the Act. We found no information to suggest that threats are acting on the unsilvered fritillary such that the species may become extinct now or in the foreseeable future.

On the basis of our determination under section 4(b)(3)(A) of the Act, we conclude that the petition does not present substantial scientific or commercial information to indicate that listing the unsilvered fritillary or either of its extant subspecies under the Act as threatened or endangered may be warranted at this time. Although we will not review the status of the species at this time, we encourage interested parties to continue to gather data that will assist with the conservation of the unsilvered fritillary or either of its extant subspecies. If you wish to provide information regarding the unsilvered fritillary or either of its extant subspecies, you may submit your information or materials to the Field Supervisor, Ventura Fish and Wildlife Office (*see ADDRESSES*), at any time.

References Cited

A complete list of references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Ventura Fish and Wildlife Office (*see ADDRESSES*).

Author

The primary authors of this notice are the staff members of the Ventura Fish and Wildlife Office (*see FOR FURTHER INFORMATION CONTACT*).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: February 7, 2011.

Rowan W. Gould,

Acting Director, U.S. Fish and Wildlife Service.

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