

advances may lead to amending the current standard.

The FHWA simultaneously published a notice of its intent to initiate a study examining the relationship between hearing deficiencies and safe operation of commercial motor vehicles, and sought comments on that notice (Docket MC-93-25). 58 FR 65638.

The public was notified that the FHWA would accept comments on both notices for the periods listed above.

Advocates for Highway and Auto Safety (AHAS), an organization with an expressed interest in highway safety issues, subsequently requested that the FHWA extend each comment period by 60 days. The AHAS stated it needed additional time to gather information about the history of the hearing standard and the effect that hearing deficiencies may have on safety.

The FHWA is mindful of the need for all interested parties to have enough time to prepare thoughtful comments. The FHWA therefore is extending the deadline for comments to Docket MC-93-30 an additional 60 days and is reopening Docket MC-93-25 for 60 days. As indicated in the Rulemaking Analyses and Notices section of the ANPRM, all comments received before the close of business on the comment closing dates indicated above will be considered and will be available for examination in the dockets at the above address. Comments received after the closing dates will be filed in the dockets and will be considered to the extent practicable. In addition to late comments, the FHWA will continue to file relevant information in the dockets as it becomes available after the comment closing dates, and interested persons should continue to examine the dockets for new material.

Authority: 49 U.S.C. app. 2505; 49 U.S.C. 3102; and 49 CFR 1.48.

Issued on: January 28, 1994.

Rodney E. Slater,

Federal Highway Administrator.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AC32

27-94

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Callippe Silverspot Butterfly, Behren's Silverspot Butterfly, and the Alameda Whipsnake From Northern and Central California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine the callippe silverspot butterfly (*Speyeria callippe callippe*), Behren's silverspot butterfly (*Speyeria zerebe behrensi*), and the Alameda whipsnake (*Masticophis lateralis euryxanthus*) as endangered pursuant to the Endangered Species Act of 1973, as amended (Act). The three species are found in northern and central California.

These animals and the foodplants of the larval butterflies occur on private, county, and State land, and are imperiled by one or more of the following: overcollecting, commercial and residential development, competition from alien plants, inappropriate levels of livestock grazing, off-road vehicle use, trampling by hikers and livestock, and perhaps stochastic (i.e., random) extinction by virtue of the small, isolated nature of the remaining populations. This proposal, if made final, would implement protection provided by the Act for these animals. Critical habitat is not being proposed.

DATES: Comments from all interested parties must be received by April 5, 1994. Public hearing requests must be received by March 21, 1994.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Sacramento Field Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, room E-1823, Sacramento, California 95825. Comments and materials received will be available for inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. Chris Nagano at the above address or by telephone (916/978-4866).

SUPPLEMENTARY INFORMATION:

Background

The callippe silverspot butterfly (*Speyeria callippe callippe*) is a member of the Nymphalidae family. The animal

was described by J.A. Boisduval (1852) from specimens collected during the month of June by Pierre Lorquin in San Francisco, California (dos Passos and Grey 1947). Arnold (1983, 1985) conducted taxonomic studies on the subspecies of *Speyeria callippe* using wing characters. His investigation concluded that the species consisted of 3 subspecies rather than the widely recognized and accepted 16 subspecies. Based on his study, the range of *Speyeria callippe callippe* would extend from Oregon to southern California and east into the Great Basin (Arnold 1985). A comprehensive analysis of this species found that the original classification remains more appropriate and that subspecies *callippe* is restricted to the northern San Francisco Bay region (Hammond 1986, Murphy undated). Hammond determined that the analysis by Arnold used invalid morphological characteristics. The Service recognizes the conclusions of Hammond (1986) and the distribution of the callippe silverspot butterfly as described by Sterling Mattoon (Sterling Mattoon, amateur lepidopterist, *in litt.*, 1991).

The callippe silverspot butterfly is a medium-sized butterfly with a wingspan of approximately 55 millimeters (2.17 inches). The upper wings are brown with extensive black spots and lines, and the basal areas are extremely melanic (dark-colored). The undersides are brown, orange-brown, and tan with black lines and distinctive black and bright silver spots. The basal areas of the wings and body are densely pubescent (hairy). The discal area on the upper wings of the callippe silverspot butterfly is darker and more extensively yellow on the hindwings than the related Lilian's silverspot butterfly (*Speyeria callippe liliana*). The callippe silverspot butterfly is larger and has a darker ground color with more melanic areas on the basal areas of the wings than Comstock's silverspot butterfly (*Speyeria callippe comstocki*).

The callippe silverspot butterfly is found in native grassland and adjacent habitats (Steiner 1990; Mattoon, *in litt.*, 1991; Thomas Reid Associates 1982). The females lay their eggs on the dry remains of the larval foodplant, Johnny jump-up (*Viola pedunculata*), or on the surrounding debris (Arnold 1981, Thomas Reid Associates 1982). Upon hatching after about a week, the larvae eat their egg shells. The caterpillars wander a short distance and spin a silk pad upon which they spend the summer and winter. The larvae are dark-colored with many branching sharp spines on the back. Upon termination of diapause in the spring, the caterpillars

immediately seek out the foodplant. In May, after having gone through five instars (i.e., skin sheddings), the larvae form pupa within a chamber of leaves that they have drawn together with silk. The adults emerge in about 2 weeks and live for approximately 3 weeks. Depending upon environmental conditions, the flight period of this single-brooded butterfly ranges from mid-May to late July. The adults exhibit hilltopping behavior, a phenomenon in which males and females seek a topographic summit to mate (Shields 1967).

The callippe silverspot butterfly was known historically to occur in seven populations in the San Francisco Bay region. This animal does not occur north of the Golden Gate or Carquinez Straits (Mattoon, *in litt.*, 1991; Paul Opler, U.S. Fish and Wildlife Service, pers. comm., 1992). The historic range of the callippe silverspot butterfly includes the inner coast range on the eastern shore of San Francisco Bay from northwestern Contra Costa County south to the Castro Valley area in Alameda County. On the west side of the Bay, it ranged from San Francisco south to the vicinity of La Honda in San Mateo County. Five colonies, including the one located at Twin Peaks in San Francisco, were extirpated. The remaining colonies exist on mostly privately owned land, but also on city, county, and State owned land. Currently, extant colonies are known only from San Bruno Mountain in San Mateo County and a city park (Mattoon, *in litt.*, 1991).

Behren's silverspot butterfly (*Speyeria zerene behrensi*) is a member of the Nymphalidae family. William H. Edwards described this taxon in 1869 based on an adult male collected by an unknown lepidopterist in Mendocino, California (dos Passos and Grey 1947, Edwards 1869). It is a medium-sized butterfly with a wingspan of approximately 55 millimeters (2.17 inches). The upper surfaces are golden brown with numerous black spots and lines. The undersides are brown, orange-brown, and tan with black lines and distinctive silver and black spots. The basal areas of the wings and body are densely pubescent.

Behren's silverspot butterfly is similar in appearance to two other subspecies of *Speyeria zerene* (Hammond 1980, Howe 1975, McCorkle and Hammond 1988). The threatened Oregon silverspot butterfly (*Speyeria zerene hippolyta*) has lighter basal suffusion on the upper sides of the wings than Behren's silverspot butterfly. Another related taxon, the endangered Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*), is larger in size and also

lighter in color than *Speyeria zerene behrensi*.

Behren's silverspot butterfly inhabits coastal terrace prairie habitat. The life history of Behren's silverspot butterfly is similar to the callippe silverspot butterfly. The females lay their eggs in the debris and dried stems of the larval foodplant, violet (*Viola adunca*) (McCorkle 1980, McCorkle and Hammond 1988). Upon hatching, the caterpillars wander a short distance and spin a silk pad upon which they pass the fall and winter. The larvae are dark-colored with many branching sharp spines on the back. The caterpillars immediately seek out the foodplant upon termination of diapause in the spring. Each larva then forms a pupa within a chamber of leaves that they have drawn together with silk. The adults emerge in about 2 weeks and live for approximately 3 weeks. Depending upon environmental conditions, the flight period of this single brooded butterfly ranges from July to August. Adult males patrol open areas in search of newly emerged females.

The historic range of Behren's silverspot butterfly extends from the mouth of the Russian River in Sonoma County northward along the immediate coast to southern Mendocino County in the vicinity of Point Arena (Mattoon, *in litt.*, 1989). The six historic populations were known to occur in coastal terrace prairie and adjacent habitats. The single extant population, which was recently discovered, occurs on privately owned land near Point Arena in Mendocino County.

The Alameda whipsnake (*Masticophis lateralis euryxanthus*) is a member of the Colubridae family (Morey and Bioassay 1988). It was described by William Reimer (1954) from a specimen collected in Berkeley Hills, Alameda County, California. The common name "Alameda whipsnake" is utilized in this proposed rule instead of "Alameda striped racer" that was used in the November 21, 1991, Animal Notice of Review (56 FR 58804). "Whipsnake" is a widely recognized common name for other members of the genus *Masticophis* (Stebbins 1985). The Alameda whipsnake is a slender, fast moving diurnal snake with a narrow neck and a relatively broad head with large eyes. The dorsal surface is colored sooty black or dark brown with a distinct yellow-orange stripe down each side. The anterior portions of the ventral surface are orange-rufous colored, the midsection is cream colored, and the posterior and tail are pinkish. The adults reach a length of 91 to 122 centimeters (3 to 4 feet). This subspecies is distinguished from the more common

California whipsnake (*M. l. lateralis*) by its comparatively wide orange stripes, which run laterally down each side.

The Alameda whipsnake inhabits the inner coast range in western and central Contra Costa and Alameda Counties (McGinnis 1992). One of the two major populations extends from approximately El Sorbante south to about Hayward. The second is found from Clayton/Mount Diablo southeast to the Vasco Road area. It occurs mostly on privately owned land, but also occurs on State and county land.

The Alameda whipsnake usually is found in northern coastal scrub or chaparral, but it also may occur in adjacent habitats. This extremely fast-moving, lizard-eating specialist holds its head high off the ground in a cobra-like manner to peer over grass or rocks at potential prey. The Alameda whipsnake has been found to exhibit territorial behavior, possessing home ranges varying in size from 2 to 8.7 hectares (5.0 to 21.5 acres). Some animals have been recorded to have moved over 1 mile while traversing their areas (McGinnis 1992). The life history of the Alameda whipsnake is not well understood (Goldberg 1975, Hammerson 1978).

A proposed rule to list the callippe silverspot butterfly as endangered with critical habitat was published on July 3, 1978 (43 FR 28938). The critical habitat portion of that proposal was withdrawn by the Service on March 6, 1979 (44 FR 12382), because of procedural and other substantive changes in the Endangered Species Act by the 1978 amendments. The Service again published a proposed rule to designate critical habitat for the callippe silverspot butterfly on March 28, 1980 (45 FR 20503). The proposed rule to list the callippe silverspot butterfly was withdrawn on September 30, 1980 (45 FR 64607), because the 1978 Endangered Species Act amendments required that the final rule for the species be completed within 2 years after the date of publication proposing to list it as endangered or threatened.

The callippe silverspot butterfly was listed as a category 2 candidate species in the May 22, 1984 (49 FR 21664), and January 6, 1989 (54 FR 554), Animal Notices of Review. This category includes species that may be appropriate to list as endangered or threatened, but for which conclusive data on their biological vulnerability is not currently available to support proposed rules. The species was listed as a category 1 candidate species in the November 21, 1991 (56 FR 58804), Animal Notice of Review because of increased threats from overcollecting

(see Factor B in the "Summary of Factors Affecting the Species" section). This category includes taxa for which the Service has on file enough substantial information on biological vulnerability and threats to propose listing them as endangered or threatened.

Ms. Dee Warenycia petitioned the Service to list the callippe silverspot butterfly as an endangered species in a letter dated January 14, 1991, which was received on January 22, 1991. The Service completed a status review and determined that enough information exists to propose the species for listing. This proposal constitutes the final finding for the petitioned action.

On March 20, 1975, Behren's silverspot butterfly was listed as 1 of 42 insects whose status was being reviewed for listing as either endangered or threatened by the Service (40 FR 12691). This insect was listed as a category 2 species in the May 22, 1984 (49 FR 21664), and January 6, 1989 (54 FR 554), Animal Notices of Review. Dr. Dennis Murphy of Stanford University petitioned the Service to list Behren's silverspot butterfly as an endangered species in a letter dated June 28, 1989, which was received on June 29, 1989. The Service determined that the petition contained substantial information indicating that the requested action may be warranted and published notice of the 90-day finding on November 1, 1990 (55 FR 46080). The Service did not receive any new information in response to the November 1, 1990, notice. However, the species was listed as a category 1 species in the November 21, 1991 (56 FR 58804), Animal Notice of Review on the basis of significant increases in habitat loss and threats occurring throughout its range. This proposal constitutes the final finding for the petitioned action.

The Alameda whipsnake (as the Alameda striped racer) was listed as a category 2 candidate species in the September 18, 1985 (50 FR 37958), Vertebrate Wildlife Notice of Review. In the January 6, 1989 (54 FR 554), Animal Notice of Review, the Service again included the Alameda whipsnake as a category 2 candidate species and solicited additional information on its status. The November 21, 1991 (56 FR 58804), Animal Notice of Review included the Alameda whipsnake as a category 1 candidate species on the basis of significant increases in habitat loss and threats occurring throughout its range.

This proposal to list the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake is based on the best available scientific

and commercial information, various scientific papers and unpublished reports available to the Service, and information gathered from various scientists specializing in these taxa, especially Mr. Sterling Mattoon and Mr. John Steiner.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. Species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to the callippe silverspot butterfly (*Speyeria callippe callippe*), Behren's silverspot butterfly (*Speyeria zerene behrensi*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of their habitat or range.* The primary cause of the declines of the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake is the loss of habitat from human activities. These species are imperiled by the current and potential future destruction and alteration of their habitats due to off-road vehicle use, trampling by hikers and equestrians, unsuitable levels of livestock grazing, and invasive exotic vegetation. The Alameda whipsnake and Behren's silverspot butterfly also are imperiled by residential and commercial development. Off-road vehicles and human or horse trampling pose threats to the colonies of the two butterfly species as these activities could crush the foodplants of the larvae or the adult nectar sources.

The callippe silverspot butterfly was once more widespread in the San Francisco Bay Area. At least five populations of this species have been eliminated by urban development and other causes. The species currently is known only from two sites in San Mateo and Alameda Counties. One of the known extant populations of the callippe silverspot butterfly is located in a city park. This colony is small and may be imperiled by human-induced and natural causes (Mattoon, *in litt.*, 1991). The other known extant population of the callippe silverspot butterfly is found on San Bruno Mountain in San Mateo County (Mattoon, *in litt.*, 1991; Thomas Reid Associates 1982). Although the majority

of the natural areas on San Bruno Mountain have been preserved and will remain undeveloped in perpetuity, collection of specimens by amateur lepidopterists poses a threat, as discussed under Factor B.

Behren's silverspot butterfly has been extirpated from a significant portion of its former range, which extended from the mouth of the Russian River in Sonoma County north to southern Mendocino County. One of the six known historic colonies was eliminated by a housing development (Mattoon, *in litt.*, 1989). No specimens have been observed at the other historic colonies since 1987. Currently, this animal is known only from a recently discovered locality northwest of the town of Point Arena in Mendocino County (Sally DeBecker, Pacific Gas and Electric, pers. comm., 1990). The site is subject to grazing by livestock. Although no plans have been proposed for the site, urban development is occurring in the area.

The central and western portions of Alameda and Contra Costa Counties are highly urbanized. Housing, commercial, and road construction have greatly reduced the amount of suitable habitat available for the Alameda whipsnake. McGinnis (1992) listed 60 localities for this species; 25 of them are considered to represent extant populations. A proposed reservoir northeast of Lake Chabot in Alameda County would result in the elimination of suitable habitat at the site (McGinnis 1992). Flooding at the proposed Los Vaqueros Reservoir in eastern Contra Costa County would not impact the reptile; however, proposed quarrying operations for the production of material for the dam and the inducement of development would result in habitat destruction (McGinnis 1990, 1992). Numerous housing developments currently threaten other populations. Within the City of Oakland, 6 residential projects have been built and 10 more are proposed in Alameda whipsnake habitat (Charles Bryant, Oakland Planning Department, *in litt.*, 1992). A 1,600-acre site that contains suitable habitat for the Alameda whipsnake in the City of Clayton is under review to determine potential commercial uses (Randall Hatch, Clayton Planning Department, *in litt.*, 1991). McGinnis (1992) documented nine other colonies scattered throughout the range of the snake that are likely to be adversely impacted by several planned residential developments.

B. *Overutilization for commercial, recreational, scientific or educational purposes.* Both the callippe silverspot butterfly and Behren's silverspot butterfly are highly prized by insect

collectors. Although there are no studies of the impact of the removal of individuals on natural populations of either of the butterfly species, studies of another endangered nymphalid butterfly (Gall 1984a, 1984b) and a lycaenid butterfly (Duffey 1968) indicate it is likely that the callippe and Behren's silverspot butterflies could be adversely affected due to their isolated, possibly small populations. The Service is aware of preserved specimens of the callippe silverspot butterfly that have been recently collected on San Bruno Mountain. Some of these specimens are traded for other butterfly taxa or held by the collectors in anticipation of their greater value if the species is listed. The Service also is aware of reports that Behren's silverspot butterfly is actively sought after by amateur lepidopterists.

There is an extensive commercial trade for the two butterfly species proposed herein for listing, as well as other imperiled or rare butterflies (Chris Nagano and John Mendoza, U.S. Fish and Wildlife Service, pers. obs., 1992). Collecting from small colonies or repeated handling and marking (particularly of females and in years of low abundance) could seriously damage the populations through loss of individuals and genetic variability (Gall 1984b, Murphy 1988, Singer and Wedlake 1981). Collection of females dispersing from a colony also can reduce the probability that new colonies will be established. Collectors pose a threat because they may deplete butterfly colonies below the thresholds of survival or recovery (Collins and Morris 1985).

The Alameda whipsnake does not appear to be particularly popular among reptile collectors; however, Federal listing could raise the value of the animals within reptilian trade markets and increase the threat of unauthorized collection above current levels (Ken McCloud, U.S. Fish and Wildlife Service, pers. comm., 1992). Even limited interest in the species among reptile collectors could pose a serious threat to populations that contain few individuals.

C. Disease or predation. There are no indications that disease or predation pose a significant threat to the callippe silverspot butterfly or Behren's silverspot butterfly. The real or potential occurrence of disease in the Alameda whipsnake is unknown.

A number of native mammals and birds are known or likely to be predators of the Alameda whipsnake, including kingsnakes (*Lampropeltis* sp.), raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), opossums (*Didelphis marsupialis*), foxes (*Vulpes* sp.), and

hawks (*Buteo* sp.). The introduction of the red fox (*Vulpes vulpes*), a species not native to this region of the State, in the 19th century poses an additional threat to the Alameda whipsnake. The snakes seem to protect themselves both physically and behaviorally from this predator, perhaps due to their adaptations to native predators, and the snake populations seem to withstand predation from these animals. However, in situations where Alameda whipsnake habitat has become fragmented, isolated, and otherwise degraded by human activities, increased predatory pressure may become excessive, especially where alien species, such as rats (*Rattus* sp.), and feral and domestic cats and dogs are introduced. These additional threats become particularly acute where urban development is immediately adjacent to Alameda whipsnake habitat. Although the actual impact of predation under such situations has not been studied, the likelihood for serious impact exists.

D. The inadequacy of existing regulatory mechanisms. The callippe silverspot butterfly and Behren's silverspot butterfly are not specifically protected under any Federal, State or local law. The California Department of Fish and Game has indicated that it is unable to protect insects under its current regulations (Pete Bontadelli, California Department of Fish and Game, *in litt.*, 1990). Although the San Bruno Mountain Habitat Conservation Plan provides protection from habitat destruction caused by habitat loss, the unauthorized collection remains an ongoing threat as discussed in Factor B.

The California Environmental Quality Act and California Endangered Species Act are the primary environmental legislation passed at the State level that potentially benefits the conservation of the Alameda whipsnake. The animal was listed as a threatened species by the State of California in 1971 (California Department of Fish and Game 1987). Although these State laws provide a measure of protection to the species and have resulted in the formulation of mitigation measures to reduce or offset impacts for projects proposed in certain Alameda whipsnake habitats, these laws are not adequate to protect the species in all cases. Numerous activities do not fall under the purview of this legislation, such as certain projects proposed by the Federal government and projects falling under State statutory exemptions. Where overriding social and economic considerations can be demonstrated, these laws allow project proposals to go forward, even in cases where the continued existence of the species may be jeopardized or where

adverse impacts are not mitigated to the point of insignificance.

E. Other natural or man-made factors affecting their continued existence. Use of insecticides could be a threat to the two butterfly species. Silverspot butterfly larvae are extremely sensitive to pesticides 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). There is the potential that species in the food chain of the snake would be impacted as well.

High levels of grazing by livestock may pose a threat to the extant populations of the two butterfly species. Overgrazing could cause trampling and the ingestion of the larval foodplants and the adult nectar sources. Low levels of grazing could allow other plants to outcompete the species required by the callippe and Behren's silverspot butterflies.

Grazing has adversely affected the habitat of the Alameda whipsnake in many areas east of the coast range (McGinnis 1992). Livestock grazing that significantly reduces or eliminates shrub and grass cover is detrimental to this animal. Most snake species, including the Alameda whipsnake, avoid open barren areas because of the increased danger from predators and the lack of prey (McGinnis 1992). Overgrazing has eliminated otherwise suitable Alameda whipsnake habitat in the area between Black Diamond Mines Regional Park and Marsh Creek Road in Contra Costa County and along the west facing slopes of the Altamont Pass region between Vasco Road and Altamont Pass Road in Alameda County.

Off-road vehicles and human or horse foot traffic may pose a threat to the colonies of the two butterfly species. These activities could result in harassment, injury, or death of individuals of these two species by trampling or crushing the eggs, larvae, or pupae.

Adequate levels of *Viola* are critical for the long-term survival of populations of the two butterfly species (Mattoon, *in litt.*, 1989, 1991). However, California's native grassland and coastal prairie have been adversely affected by the introduction and invasion of numerous non-native plants (Heady 1988, Heady *et al.* 1988). Often these introduced and alien plants, such as iceplant (*Carprobrotus* sp.), gum trees (*Eucalyptus* spp.), and French broom (*Ulex europaeus*), outcompete and largely supplant the native vegetation. Without control and eradication programs, the introduced and alien taxa will continue to invade and eliminate

the remaining native plant communities, including the host plants of the callippe and Behren's silverspot butterflies. Non-native vegetative communities also may eliminate habitat for the Alameda whipsnake.

Periodic fires are an important factor in maintaining the grassland and coastal prairie habitat of the silverspot butterflies (Hammond and McCorkle 1984, Orsak 1980). Without fire, succession eliminates the foodplants of the larvae of the callippe and Behren's silverspot butterflies. Periodic "cool," fast-moving fires seem important for the maintenance of the habitat of the two butterflies. Without fire, dead grass and other vegetation from previous years may not decay quickly enough and gradually accumulate to form a thick layer of thatch that smothers and crowds out the violets. The larvae of the silverspot butterflies may survive fires that move rapidly through grassland habitats, in contrast to hotter, slower-moving brush and woodland fires that may kill them (McCorkle and Hammond 1988, Orsak 1980). Under windy conditions, grassland fires also burn in patches, which leave "islands" of unburned habitat that may contain butterflies.

In small populations, the breeding of closely related individuals can cause genetic problems, particularly the expression of deleterious genes (known as inbreeding depression). Individuals and populations possessing deleterious genetic material are less able to cope with environmental conditions and adapt to environmental changes, even those that are relatively minor. Further, small populations are subject to the effects of genetic drift (the loss of random genetic variability). This phenomenon also reduces the ability of individuals and populations to successfully respond to environmental stresses. Overall, these genetic factors could influence the survivability of the smaller, genetically isolated populations of each of the three species that are the subject of this proposed rule.

The callippe silverspot butterfly, Behren's silverspot butterfly, and the Alameda whipsnake also may suffer from associated effects of habitat fragmentation. Subdivision of land into smaller blocks of habitat often is the result of human-related activities, such as livestock grazing, road construction, and urban development, and serves to exacerbate the isolation of extant populations. Most of the populations of the three species proposed for listing herein are isolated from other conspecific populations. Since recolonization from neighboring populations is unlikely or impossible,

this isolation could have negative demographic effects, such as low reproductive success. Also, by further reducing population size and genetic interchange among populations, habitat fragmentation increases the probability of genetic drift and inbreeding depression. This may result in less vigorous and adaptable populations of the three species proposed for listing.

Due to the existence of only small and fragmented populations, the three species proposed for listing also may be vulnerable to random fluctuations or variations (stochasticity), such as changes in annual weather patterns, availability of food, and other natural or human-induced environmental factors. For example, when the populations of the callippe and Behren's silverspot butterflies were large, the effects of a drought or a low abundance of foodplants would not cause the extinction of these species. However, given the current population status, events such as drought or low foodplant abundance could cause their extinction.

The Service has carefully assessed the best scientific and commercial information regarding past, present, and future threats faced by these species to propose this rule. As described in more detail above under Factors A, B, C, D, and E, the available information indicates that the callippe silverspot butterfly, Behren's silverspot butterfly, and the Alameda whipsnake should be listed pursuant to section 4 of the Act. The limited range of these species makes them vulnerable to overcollecting, rapid urbanization, off-road vehicle use, inappropriate levels of grazing, and loss of habitat due to invasive exotic vegetation. Stochastic events, which commonly affect small isolated populations, also may result in extirpation of some populations of these species. Ongoing and proposed development projects pose an imminent threat to Behren's silverspot butterfly and the Alameda whipsnake throughout their ranges. Extraordinary increases in human populations and associated pressures for urban development have rendered existing mechanisms inadequate.

Other alternatives to this action were considered but not preferred because not listing these species at all or listing them as threatened would not provide adequate protection and not be in keeping with the purposes of the Act. Based on this evaluation, the preferred action is to list the callippe silverspot butterfly (*Speyeria callippe callippe*), Behren's silverspot butterfly (*Speyeria zerene behrensii*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*) as endangered. For

reasons discussed below, the Service is not proposing to designate critical habitat for these animal species at this time.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not prudent at this time for the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake. The Service's 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 such threat to the species; or (2) such designation of critical habitat would not be beneficial to the species.

As discussed under "Summary of Factors Affecting the Species," the three animals and their habitats are vulnerable to several activities. The Service is concerned about the impacts of the illicit commercial trade of the Alameda whipsnake, callippe silverspot butterfly, and Behren's silverspot butterfly. Unauthorized collecting is an activity that can be difficult to control because it can be done in a fairly discrete manner. The precise pinpointing of localities that would result from publication of critical habitat descriptions and maps in the **Federal Register** would increase enforcement problems because the species proposed herein for listing would be more vulnerable to collecting, as well as vandalism to their habitat. The potential for declines due to the collection of these species is so great that any benefit from the designation of critical habitat is outweighed by the risk of increased taking. Therefore, the Service finds that designation of critical habitat for these animals is not prudent. Protection of the habitat of these species will be addressed through the section 4 recovery process and through the section 7 consultation process.

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 private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking 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. 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 proposed species. If a species is subsequently listed, section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

No populations of the callippe silverspot butterfly, Behren's silverspot butterfly, and the Alameda whipsnake are known to occur on property owned by the Federal government. However, several Federal agencies would be affected by the listing of these animals. The U.S. Department of Housing and Urban Development (HUD) may insure housing loans in areas that presently support the species proposed for listing herein. Therefore, HUD actions regarding these loans would be subject to review by the Service under section 7 of the Act. The U.S. Bureau of Reclamation would be affected by the listing of these animals as this is the lead agency in administering the permits for the proposed Los Vaqueros Reservoir. The Army Corps of Engineers' activities or issuances of permits subject to section 404 of the Clean Water Act would be subject to the Endangered Species Act section 7 requirements. The Department of Transportation (Federal Highways Administration) may be involved with the construction and maintenance of roads and highways in areas where some or all of these species may be affected, hence this agency would also be subject to section 7 of the Endangered Species Act. Any Federal actions that are subject to environmental

review under the National Environmental Policy Act may be subject to the requirements of section 7 of the Act.

In 1982, a habitat conservation plan (HCP) was completed and a section 10(a) incidental take permit was issued to the cities of Brisbane, Daly City, and South San Francisco and the county of San Mateo for the endangered mission blue butterfly (*Icaricia icarioides missionensis*), San Bruno elfin butterfly (*Incisalia mossii bayensis*), and San Francisco garter snake (*Thamnophis sirtiralis tetrataenia*). The HCP, entitled "San Bruno Mountain Habitat Conservation Plan" (U.S. Fish and Wildlife Service permit number PRT 2-9818), permanently protects about 1,115 hectares (2,752 acres) of natural habitat at this site. The conference report on the 1982 amendments to the Endangered Species Act of 1973 indicates that Congress intended HCPs to encompass both listed and unlisted species, especially unlisted species that might later be protected. Although the callippe silverspot butterfly was not included in the section 10(a) permit, the San Bruno Mountain HCP included specific considerations and provisions in the event it did become listed by the Service. Habitat of one of the two known extant populations of the callippe silverspot butterfly is protected under this HCP. The permit allows for the loss of animals and habitat through urban development containing approximately 8 percent of the San Bruno Mountain population of the callippe silverspot butterfly. Although habitat is protected, the Service is aware of numerous preserved specimens of the callippe silverspot butterfly that have been collected recently on San Bruno Mountain on lands where the animal is not protected.

The Act and implementing regulations found at 50 CFR 17.21 for endangered species set forth a series of prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (including harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt any such activity), import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any such species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that was taken illegally. Certain exceptions can apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. Further information regarding regulations and requirements for permits may be obtained from the U.S. Fish and Wildlife Service, Office of Management Authority, Permits Branch, 4401 North Fairfax Drive, room 420C, Arlington, Virginia 22203-3507 (telephone 703/358-2104).

Public Comments Solicited

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

- (1) Biological, commercial, trade, or other relevant data concerning any threat (or the lack thereof) to the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake;
- (2) The location of any additional populations of the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake;
- (3) Reasons why locations of habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
- (4) Additional information concerning the range, distribution, and population size of the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake; and
- (5) Current or planned activities in the subject areas that may impact the callippe silverspot butterfly, Behren's silverspot butterfly, and Alameda whipsnake.

Any final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to the adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal. The Service plans to conduct a public hearing, and the dates and location will be announced at a later date. Requests regarding a public hearing must be received within 45 days of the date of

the proposal. Such requests must be made in writing (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

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Author

The primary author of this proposed rule is Chris Nagano, staff entomologist, Sacramento Field Office (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

Accordingly, the Service hereby proposes to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Section 17.11(h) is amended by adding the following, in alphabetical order under Reptiles and Insects, to the

List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

(h) * * *

Species		Historic range	Vetebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
REPTILES							
Whipsnake (= striped racer), Alameda.	<i>Masticophis lateralis euryxanthus.</i>	U.S.A. (CA)	Entire	E		NA	NA
INSECTS							
Butterfly, Behren's silverspot.	<i>Speyeria zerene behrensii.</i>	U.S.A. (CA)	NA	E		NA	NA
Butterfly, callippe silverspot.	<i>Speyeria callippe callippe.</i>	U.S.A. (CA)	NA	E		NA	NA

Dated: January 31, 1994.
 Mollie H. Beattie,
 Director, U.S. Fish and Wildlife Service.
 [FR Doc. 94-2548 Filed 2-3-94; 8:45 am]
 BILLING CODE 4310-65-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 625

[I.D. 013194A]

Summer Flounder Fishery

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of availability of a fishery management plan amendment and request for comments.

SUMMARY: NMFS issues this notice that the Mid-Atlantic Fishery Management Council (Council) has submitted Amendment 6 to the Fishery Management Plan for the Summer Flounder Fishery (FMP) for review by the Secretary of Commerce (Secretary) and is requesting comments from the public.

DATES: Written comments on Amendment 6 must be received on or before March 31, 1994.

ADDRESSES: Written comments should be mailed to Richard B. Roe, Regional Director, National Marine Fisheries Service, Northeast Regional Office, One Blackburn Drive, Gloucester, MA

01930-3799. Mark the outside of the envelope "Comments on Summer Flounder Plan".

Copies of the amendment are available from David R. Keifer, Executive Director, Mid-Atlantic Fishery Management Council, room 2115, Federal Building, 300 S. New Street, Dover, DE 19901-6790.

FOR FURTHER INFORMATION CONTACT: Myles Raizin, Resource Policy Analyst, 508-281-9104.

SUPPLEMENTARY INFORMATION: The Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*) (Magnuson Act) requires that each regional fishery management council submit any fishery management plan or plan amendment it prepares to the Secretary for review and approval, disapproval, or partial disapproval. The Magnuson Act also requires that the Secretary, upon receiving the plan or amendment, must immediately publish a notice that it is available for public review and comment. The Secretary will consider the public comments in determining whether to approve, disapprove, or partially disapprove the FMP amendment.

Current regulations prohibit otter trawl vessels retaining 100 pounds or more of summer flounder between May 1 and October 31, or 200 pounds or more of summer flounder between November 1 and April 30, and having any net, or any piece of net not meeting the minimum mesh size requirements on board. Amendment 6 would allow nets not meeting the minimum mesh size to be on board a vessel even if the above thresholds are exceeded,

provided the nets are appropriately stowed. Once the threshold amounts of summer flounder are retained, nets that do not meet the minimum mesh size requirements could not be used for the remainder of the fishing trip.

The proposed amendment would also modify the schedule for establishing the annual management measures for the recreational fishery for summer flounder. The regulations setting the recreational possession limit would be revised to allow the measure to be set later in the year to provide an opportunity to review data from the previous year. The timing provisions would be revised to require the Regional Director to publish the proposed commercial quota and other measures by October 15 and the proposed recreational measures by February 15 of the year for which the specifications are being proposed.

Amendment 6 would also clarify the language prohibiting twisted mesh, authorize an experimental fishery under certain conditions, and make the definition of a fish box consistent with that in the Fishery Management Plan for the Northeast Multispecies Fishery.

Regulations proposed by the Council and based on this amendment are scheduled to be published within 15 days.

Authority: 16 U.S.C. 1801 *et seq.*