

(Catalog of Federal Domestic Assistance No. 97.022, "Flood Insurance.")

Dated: April 15, 2010.

**Sandra K. Knight,**

*Deputy Federal Insurance and Mitigation Administrator, Mitigation, Department of Homeland Security, Federal Emergency Management Agency.*

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R8-ES-2010-0031]  
[MO 92210-0-0008-B2]

#### Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List Hermes Copper Butterfly as Threatened or Endangered

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

**ACTION:** Notice of petition finding and initiation of status review.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list Hermes copper butterfly (*Hermelycaena [Lycaena] hermes*) as a threatened or endangered species under the Endangered Species Act of 1973, as amended (Act) and to designate critical habitat. We find the petition presents substantial scientific or commercial information indicating that listing the Hermes copper butterfly may be warranted. Therefore, with the publication of this notice, we are initiating a status review to determine if the petitioned action is warranted. To ensure that the status review is comprehensive, we are soliciting scientific and commercial data and other information regarding this species. Based on the status review, we will issue a 12-month finding on the petition, which will address whether the petitioned action is warranted, as provided in section 4(b)(3)(B) of the Act.

**DATES:** To allow us adequate time to conduct this review, we request that we receive information on or before July 6, 2010. Please note that if you are using the *Federal eRulemaking Portal* (see **ADDRESSES** section, below), the deadline for submitting an electronic comment is 11:59 p.m. Eastern Time on this date. After July 6, 2010, you must submit information directly to the Field Office (see **FOR FURTHER INFORMATION CONTACT** section below). Please note that we might not be able to address or

incorporate information that we receive after the above requested date.

**ADDRESSES:** You may submit comments by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Search for docket FWS-R8-ES-2010-0031 and then follow the instructions for submitting comments.

- U.S. mail or hand-delivery: Public Comments Processing, Attn: FWS-R8-ES-2010-0031; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the Request for Information section below for more details).

**FOR FURTHER INFORMATION CONTACT:** Jim Bartel, Field Supervisor, Carlsbad Fish and Wildlife Office, Carlsbad Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011, by telephone at 760-431-9440, or by facsimile to 760-431-9624. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800-877-8339.

#### **SUPPLEMENTARY INFORMATION:**

##### **Request for Information**

When we make a finding that a petition presents substantial information indicating that listing a species may be warranted, we are required to promptly review the status of the species (status review). For the status review to be complete and based on the best available scientific and commercial information, we request information on the Hermes copper butterfly from governmental agencies, Native American Tribes, the scientific community, industry, and any other interested parties. We seek information on:

- (1) The species' biology, range, and population trends, including:
  - (a) Habitat requirements for feeding, breeding, and sheltering;
  - (b) Genetics and taxonomy;
  - (c) Historical and current range, including distribution patterns;
  - (d) Historical and current population levels, and current and projected trends; and
  - (e) Past and ongoing conservation measures for the species and its habitat in the United States and Mexico.
- (2) The factors that are the basis for making a listing determination for a species under section 4(a) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), which are:

(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.

(3) Information on management programs for the conservation of Hermes copper butterfly.

(4) The potential effects of climate change on this species and its habitat, what regional climate change models are available, and whether they are reliable and credible to use as step-down models for assessing the effects of climate change on this species and its habitat.

(5) Additional information on the following locations in San Diego County, California, United States of America (U.S.A.) where the status of the species or level of the threat (such as fire), is unknown (petitioner location names used for the first time are in quotation marks if we added a location description):

- approximately 3 miles (mi) (5 kilometers (km)) south of the City of El Cajon ("El Cajon (3 miles South)");
- the neighborhood of Flinn Springs in the City of El Cajon ("Flinn Springs (El Cajon)");
- Fairmont Canyon in the City of San Diego ("Fairmont Canyon");
- the community of Kearny Mesa ("Kearny Mesa");
- City of San Diego urban core area;
- the Crosby property in the City of Rancho Santa Fe ("The Crosby");
- City of Spring Valley ("Spring Valley");
- community of Harmony Grove in the City of Escondido ("Harmony Grove");
- Steel Canyon near the community of Jamul ("Steel Canyon");
- Mission Valley in the City of San Diego ("Mission Valley");
- City of Poway near the intersection of Poway Road and State Route 395 ("Poway Road/Highway 395");
- community of Dulzura ("Dulzura");
- Deerhorn Valley near the community of Jamul ("Deerhorn Valley");
- area near Mt. Miguel; the community of Pine Valley ("Pine Valley");
- Big Rock Road in the city of Santee ("Santee's Big Rock Road");
- community of Alpine ("Alpine");
- community of Miramar ("Miramar");
- Sycamore Canyon and Gooden Ranch in the City of Santee ("Sycamore Canyon and Gooden Ranch");
- Otay Mountain foothills ("Otay-Foothill area");

- 1 mi (1.6 km) west of Lake Hodges (“Lake Hodges (1 mile West)”);
- Boulder Creek Road near the community of Descanso (“Boulder Creek Road”);
- Harbison Canyon near the community of Crest (“Harbison Canyon”);
- Little Cedar Creek near Otay Mountain (“Little Cedar Creek”);
- San Marcos Creek in the City of San Marcos (“San Marcos Creek”);
- Spring Canyon near the City of Santee (“Spring Canyon”); and
- Sycuan Peak in the community of Jamul (“Sycuan Peak”).

We would also like information for the following locations in Baja California, Mexico:

- 12 mi (19 km) north of the city of Ensenada (“Ensenada (12 mi north)”);
- 18 mi (29 km) south of Santo Tomas Valley (“Santo Tomas (18 mi south)”);
- the community of Bajamar (“Bajamar”); and the community of Salsipuedes (“Salsi Puedes”).

(6) Information on U.S. Forest Service Land and Resource Management Plan revisions and the status of the species on U.S. Forest Service lands.

Please include sufficient information with your submission (such as full references) to allow us to verify any scientific or commercial information you include.

If, after the status review, we determine that listing Hermes copper butterfly is warranted, we intend to propose critical habitat (see definition in section 3(5)(A) of the Act), as per section 4 of the Act, to the maximum extent prudent and determinable at the time we propose to list the species. Therefore, within the geographical range currently occupied by Hermes copper butterfly, we request data and information on:

- (1) What may constitute “physical or biological features essential to the conservation of the species,”
- (2) Where these features are currently found, and
- (3) Whether any of these features may require special management considerations or protection.

In addition, we request data and information on “specific areas outside the geographical area occupied by the species” that are “essential to the conservation of the species.” Please provide specific comments and information as to what, if any, critical habitat you think we should propose for designation if the species is proposed for listing, and why such habitat meets the requirements of section 4 of the Act.

Submissions merely stating support for or opposition to the action under consideration without providing

supporting information, although noted, will not be considered in making a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your information concerning this status review by one of the methods listed in the **ADDRESSES** section. If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If you submit a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this personal identifying information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Information and supporting documentation that we received and used in preparing this finding, will be available for you to review at <http://www.regulations.gov>, or you may make an appointment during normal business hours at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

### Background

Section 4(b)(3)(A) of the Act 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 review the status of the species, which is subsequently summarized in our 12-month finding.

New species information received since the our previous 90-day finding

(71 FR 44966, August 8, 2006) is limited to Marschalek and Deutschman’s (2008) study of the effect of habitat edges on Hermes copper butterfly, new species observation locations, and fire data (see *Species Information* sections below). We received additional information from the petitioners in an email on March 5, 2010 (Evans 2010). We reviewed and evaluated the information they submitted, and did not find that it provided any new data relative to the status of the species or threats to it or its habitat. The petitioners submitted one piece of anecdotal species information that we did not already have in our files, a personal communication (cited “D. Faulkner, V. Marquez-Waller pers. comm. on 4/16/08”) that a “Ladybird beetle” is a potential Hermes copper butterfly predator (Evans 2010 attachment, p. 8).

For biological and other scientific information on Hermes copper butterfly, please refer to our previous 90-day finding published in the **Federal Register** on August 8, 2006 (71 FR 44966).

### Previous Federal Actions

On August 8, 2006, we published 90-day findings for both Hermes copper butterfly and Thorne’s hairstreak butterfly in the **Federal Register**. The findings concluded that the petitions and information in our files did not present substantial scientific or commercial information indicating that listing Hermes copper (71 FR 44966) or Thorne’s hairstreak butterflies (71 FR 44980) was warranted. (For a detailed history of Federal actions involving Hermes copper butterfly prior to the 2006 90-day finding, please see the August 8, 2006, **Federal Register** Notice (71 FR 44966)). On March 17, 2009, CBD and David Hogan filed a complaint for declaratory and injunctive relief challenging the Service’s decision not to list Hermes copper butterfly and Thorne’s hairstreak butterfly as threatened or endangered under the Act. In a settlement agreement dated October 23, 2009 (Case No. 09-0533 S.D. Cal.), the Service agreed to submit new 90-day petition findings to the **Federal Register** by April 2, 2010, for Thorne’s hairstreak butterfly, and by May 13, 2010, for Hermes copper butterfly. As a part of the settlement agreement, we agreed to evaluate the October 25, 2004, petition filed by David Hogan and CBD, supporting information submitted with the petition, and information available in the Service’s files, including information that has become available since the publication of the negative 90-day findings on August 8, 2006. If the 90-day findings determine that listing

may be warranted, we agreed to submit a 12-month finding to the **Federal Register** by March 4, 2011, for Thorne's hairstreak butterfly, and by April 15, 2011, for Hermes copper butterfly. We published a 90-day finding in the **Federal Register** on April 5, 2010 (75 FR 17062) concluding that listing Thorne's hairstreak butterfly may be warranted. This notice constitutes our 90-day finding on the petition to list Hermes copper butterfly under section 4(b)(1)(A) of the Act.

#### *Species Information*

Hermes copper butterfly is endemic to the southern California region, primarily occurring in San Diego County, California, and a few records of the species have been documented in Baja California, Mexico (Faulkner and Klein 2005, p. 23). The species inhabits coastal sage scrub and southern mixed chaparral (Marschalek and Deutschman 2008, p. 98) and is dependent on its larval host plant, *Rhamnus crocea* (spiny redberry), to complete its lifecycle. Adult Hermes copper butterflies lay single eggs on *R. crocea* stems where they hatch and feed until pupation occurs at the base of the plant. Hermes copper butterflies have one flight period (termed univoltine) occurring in mid-May to early-July, depending on weather conditions and elevation (Faulkner and Klein 2005, pp. 23–24).

Adult Hermes copper butterflies have been known to nectar (feed) in coastal sage scrub and chaparral ecosystems on *Adenostema fasciculatum* (chamise), *Eriogonum fasciculatum* (California buckwheat), *Helianthus gracilentus* (slender sunflower), *Toxicodendron diversilobum* (poison oak), and *Hirshfeldia incana* (short-podded mustard) and are rarely seen far from their nectar source or host plant (Faulkner and Klein 2005, pp. 24–25; Marschalek and Deutschman 2008, p. 102). Marschalek and Deutschman (2008) documented densities of Hermes copper butterflies on paired transects along edges and within the interior of host plant stands in rural areas. Their study results indicate Hermes copper butterfly densities are significantly higher near host plant stand edges than in the interior (Marschalek and Deutschman 2008, p. 102), suggesting that this single factor in natural areas may have a positive effect on species' density.

Historical data indicate Hermes copper butterflies ranged from Fallbrook, California, in northern San Diego County to 18 mi (29 km) south of Santo Tomas in Baja California, Mexico, and from Pine Valley in eastern San

Diego County to Lopez Canyon in western San Diego County. Range-wide species surveys have not been completed; therefore, it is difficult to assess the extent of occupation throughout the historical range.

#### *Habitat*

According to Thorne (1963, pp. 143–144), Hermes copper butterflies are dependent on *Rhamnus crocea* (spiny redberry), a wide-ranging perennial coastal sage scrub and chaparral-associated species, as its larval host and for completion of its lifecycle. The range of *R. crocea* extends throughout coastal northern California, central western California, southwestern California, and into Baja California, Mexico, to an elevation of 3,280 feet (ft) (1000 meters (m)). The coastal sage scrub and chaparral ecosystems in San Diego County have been subject to multiple fires of various levels of severity (Keeley and Fotheringham 2003, pp. 242–243; Faulkner and Klein 2005, p. 25). *Rhamnus crocea* and other coastal sage scrub or chaparral-associated species are adapted to intermittent fire, but researchers postulate that increased fire frequency may result in altered vegetation structure or type conversion throughout the range (Keeley and Fotheringham 2003, pp. 243–244; Keeley 2004, pp. 2–3) and lead to a significant decline in Hermes copper butterfly habitat availability and suitability. Anecdotal evidence indicates Hermes copper butterflies require mature *R. crocea* to complete their lifecycle; therefore, increased fire frequency may reduce suitable host plant availability. However, no quantitative studies have occurred to test this hypothesis.

For additional detailed species information on Hermes copper butterfly, please refer to our previous 90-day finding, which published in the **Federal Register** on August 8, 2006 (71 FR 44966).

#### **Evaluation of Information for this Finding**

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations in the Code of Federal Regulations (CFR) at 50 CFR 424, set forth the procedures for adding species to 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 on threats to Hermes copper butterfly, as presented in the 2004 petition and other information available in our files, is substantial, thereby indicating that the petitioned action may be warranted. In the sections that follow, we summarize information included in the 2004 petition and evaluate any new information in our files. For additional information regarding Hermes copper butterfly please refer to the previous 90-day finding published in the **Federal Register** on August 8, 2006 (71 FR 44966).

#### *A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range*

The petition, its appendices, and referenced documents discuss the following threats that are grouped under Factor A: development, wildfire, fire management techniques, and habitat fragmentation.

The petition includes a table that lists Hermes copper butterfly populations and their presumed status at 56 occurrences throughout San Diego County and into Mexico. The table identifies 22 occurrences that were presumed lost in the 2003 Otay, Cedar, and Paradise fires; 6 occurrences that were presumed lost to urban development; 8 occurrences that were known to be occupied and were mentioned in various environmental review documents; 2 occurrences with unknown locations and occupancy status; and 18 occurrences of unknown occupancy status (which include 4 in Baja California, Mexico).

#### *Development*

##### *Information Provided in the Petition*

The petitioner stated that Hermes copper butterfly is vulnerable to extinction due to loss of populations and habitat loss as a result of urban development. The petitioner's table lists 6 locations that are presumed lost to development and 8 locations discovered as a result of surveys and environmental reviews for development projects. There are 14 Hermes copper butterfly locations in the petitioner's table that do not include any indication of current occupancy status and an additional 2 occurrences with unknown locations and status.

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

At one of the 6 locations presumed lost to development (“Scripps Gateway” at the southwest corner of Interstate 15 and Scripps Poway Parkway), the last Hermes copper butterfly observation was in 1996, and information in our files indicates that development has not impacted this area. Further investigation is needed to accurately determine the species’ status at this location. The remaining 5 locations identified by the petitioner as lost to development were observed 45 or more years ago. We do not have more recent data on these specific locations and further investigation is needed to determine their status. However, information in our files indicates that some of the historical occurrences referenced by the petitioner (Kearny Mesa, Mission Valley, San Diego State College, and “Suncrest” in the community of Crest) have probably been impacted by urban development.

Information in our files indicates that the status of Hermes copper butterfly at 4 (the Crosby property in Rancho Santa Fe, Spring Valley, Harmony Grove, and Steel Canyon) of the 8 locations discovered as a result of surveys and environmental reviews for development projects is currently unknown, and the butterfly is currently extant at the other 4 locations (Skyline Truck Trail, Lyons Valley, Lawson Valley, and Jamul Highlands Road in the community of Jamul). Further investigation is needed to determine the status of Hermes copper butterfly at the Crosby property in Rancho Santa Fe, Spring Valley, Harmony Grove, and Steel Canyon.

Our files do not contain more recent data for the Mexico occurrences cited in the petition, or data on the 2 unknown locations listed in the petition that are of unknown status (Mission Valley and Poway Road/Highway 395). Further investigation is needed to accurately determine the status of Hermes copper butterfly at those locations.

Of the locations in the petitioner’s table, information in our files indicates that the current status of 5 (Dulzura, Deerhorn Valley, Mt. Miguel, Pine Valley, and Santee’s Big Rock Road) of the 14 locations is unknown, and that 9 of the occurrences (Lyons Peak, Black Mountain, the community of “Guatay,” McGinty Mountain, Poway, “Robert’s Ranch” near the intersection of State Route 79 and Interstate 8, San Diego National Wildlife Refuge, Sycuan Peak, and “Wright’s Field” in the community of Alpine) are extant. Further investigation of Hermes copper butterfly

occupancy at the Dulzura, Deerhorn Valley, Mt. Miguel, Pine Valley, and Santee’s Big Rock Road locations is needed to determine the species’ status at these locations.

Information in our files indicates the Service is currently evaluating habitat conservation plans (HCPs) for the San Diego County Water Authority, Joint Water Agencies, North San Diego County, East San Diego County, and the City of Santee where Hermes copper butterfly may be included as a “covered species” in order to avoid conflict with planned future development. These HCPs are seeking coverage for take of Hermes copper butterfly throughout their plan areas, but the plans are not yet finalized (see “*D. The Inadequacy of Existing Regulatory Mechanisms*” section below for further discussion of approved HCPs). Additionally, the population of San Diego County is predicted to grow 25.2 percent from 2000 to 2020 (California Department of Finance 2007), suggesting that urbanization pressure will continue to pose an increasing threat to remaining populations within the range of Hermes copper butterfly. Development on U.S. Forest Service lands may also pose a threat to Hermes copper butterflies. The species is considered an animal species-at-risk by the U.S. Forest Service; defined specifically, as an uncommon, narrow endemic, disjunct, or peripheral in the Cleveland National Forest (CNF) Land Resource Management Plan (LRMP) area, with substantial threats to species persistence or distribution from Forest Service activities (USFS 2005a, p. 119). Information in our files indicates that one specific project is currently in the permitting and implementation phase (Sunrise Powerlink) and there are existing energy projects within the CNF (Winter 2010, pers. comm.) that may pose a threat to Hermes copper butterfly habitat. These projects may impact Hermes copper butterfly through direct loss or fragmentation of available habitat. Although no roads or facility development has been planned for the CNF within Hermes copper butterfly habitat that we are aware of at this time, future development or the maintenance of existing facilities may potentially be a threat to Hermes copper butterfly through fragmentation of habitat. Information in our files indicates that the existing electrical energy lines that pass through the CNF may pose a potential threat of wildfire through accidental ignition (see “*Wildfire*” section below).

In summary, we have evaluated information in our files and the petition and find there has been some loss of Hermes copper butterfly habitat due to

development, and we conclude there is substantial information indicating Hermes copper butterfly listing may be warranted due to the threat of urban development.

### Wildfire

#### Information Provided in the Petition

The petitioner claims that Hermes copper butterfly is highly vulnerable to extinction due to the threat of fire. The petitioner claims that excessive human-induced fires threaten the species’ survival, even on lands protected from development. The petitioner lists 22 locations that are presumed lost to fire (see analysis below for location descriptions).

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

Information in our files indicates that wildfire regimes throughout southern California have been changing for some time, and much of this change is attributed to human demography and population density. Specifically, fire frequency and season have increased throughout chaparral and coastal sage scrub ecosystems (Keeley and Fotheringham 2003, pp. 239–242). Information in our files indicates that the 2003 Otay, Cedar, and Paradise fires and the 2007 Harris, Poomacha, and Witch fires did impact some of the areas with documented Hermes copper butterfly occurrences (Alpine, Crestridge Ecological Reserve, the community of Descanso, Spring Valley, Miramar, Mission Trails Regional Park, Santee, Sycamore Canyon, Otay-Foothill area, and Rancho Jamul Ecological Reserve). However, the extent to which the habitat (chaparral and coastal sage scrub and, more specifically, the host plant *Rhamnus crocea*) was impacted is unknown and requires further investigation to accurately assess the impact to Hermes copper butterfly. Of the 22 locations identified in the petition as presumed lost to fire, 12 of these locations cited observation data dating back 20 or more years. We do not have more recent data on Hermes copper butterfly at those locations, and their current status is unknown. Of the remaining 10 locations, we have data in our files indicating that Hermes copper butterfly is extant at 5 locations: Mission Trails Regional Park, Crestridge Ecological Reserve, Descanso, Rancho Jamul, and Santee (Fanita Ranch). The remaining 5 locations noted in the petitioner’s table that potentially harbor Hermes copper butterfly would require further investigation to determine the species’ status.

Information in our files indicates that occurrences at 5 of the 22 locations identified in the petition as lost to wildfire are currently extant. Further investigation is needed to determine the status of the species at the remaining 17 locations; however, with the expected increased frequency of fires, the species may not be able to recolonize habitat patches where they have been extirpated by fire. Additionally, information in our files indicates that approximately 80 percent of the Hermes copper butterfly habitat (*Rhamnus crocea* and other coastal sage scrub or associated-chaparral species) on CNF lands burned in the 2003 and 2007 fires and only few of the historical locations on CNF are currently persisting (Winter 2010, pers. comm.).

After reviewing the petition and information in our files, we find substantial information exists indicating that listing Hermes copper butterfly may be warranted due to the threat to Hermes copper butterfly habitat as the result of increased fire frequency or excessive wildfire relative to historic conditions.

#### *Fire Management Techniques*

##### Information Provided in the Petition

The petitioner claims that prescribed burns used as fire management techniques are likely to impact the Hermes copper butterfly in a number of locations throughout the County of San Diego, including the Cleveland National Forest (CNF). The petitioner asserts that the County has relied on excessive brush clearing around homes and communities for fire protection and that the CNF has aggressively pursued prescribed burning as a vegetation management tool. The petitioner claims that prescribed burns are likely to reduce the survival of Hermes copper butterflies.

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

The County of San Diego's Zoning and Ordinance regulations and recommendations indicate that lands within the County of San Diego are required to have a defensible space around homes and structures, which may impact Hermes copper butterfly habitat; however, emphasis is placed on replacing flammable roofing material with fire-resistant shingles, planting fire-resistant landscape vegetation, using fire-resistant native plant species, avoiding invasive nonnative species in landscaping, and implementing other effective conservation-oriented fire management techniques (County of San

Diego 2006, p. 2; The Fire Safe Council of San Diego County 2009, p. 1). Information available to us at this time does not support the petitioner's claim that the County of San Diego is rejecting conservation-oriented rural planning or emphasizing prescribed burns. Although prescribed burning is conducted in potential Hermes copper butterfly habitat on Marine Corps Air Station Miramar, neither the petition nor information in our files indicates that prescribed burning is being conducted in occupied Hermes copper butterfly habitat.

According to the U.S. Forest Service's 2005 final environmental impact statement for land management plans in the Angeles, Cleveland, Los Padres and San Bernardino National Forests, Hermes copper butterfly is an animal species-at-risk due to prescribed burns or fuel reduction projects in the CNF (USFS 2005(a), p. 175). The CNF's conservation strategy for the next 3 to 5 years states their intention to monitor Hermes copper butterfly in burned areas and to prevent and suppress fires throughout the habitat of Hermes copper butterflies (USFS 2005(b), pp. 88-89). To further fire prevention efforts, the CNF is creating fuel breaks adjacent to homes and other developed areas to prevent spread of wildfire from developed areas onto CNF lands. Information in our files also indicates that CNF is not conducting large scale prescribed burns, but is actively engaged in fuel reduction throughout the forest (Winter 2010, pers. comm.).

After reviewing information in our files and in the petition, we do not find substantial information to indicate that listing of Hermes copper butterfly may be warranted due to the use of prescribed fire as a fire management technique either in the County of San Diego or on the CNF. However, we will further investigate the potential threat of prescribed fires in our status review for this species.

#### *Habitat Fragmentation*

##### Information Provided in the Petition

The petitioner claims habitat (chaparral and coastal sage scrub) for Hermes copper butterfly is being fragmented through various mechanisms (i.e., urban development, fire, type-conversion, and roads) and that this threatens the species' survival. The petitioner's claims include the following:

- (1) Habitat fragmentation is reducing the overall area of habitat available for the Hermes copper butterfly;
- (2) Host plant, *Rhamnus crocea*, population distributions have been

fragmented throughout the range of Hermes copper butterfly by urban development, fire, vegetation type-conversion, road construction, and other factors; and

(3) Fragmentation leads to expansion of edge habitat that stresses Hermes copper butterfly populations.

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

Habitat fragmentation increases the ratio of edge to interior habitat area, creating a boundary around existing suitable habitat where the surrounding area is unsuitable for the particular organism. This process isolates the habitat patch from other surrounding suitable habitat patches and, depending on the movement dynamics of a particular organism, this habitat separation (or fragmentation) and isolation may result in increased extirpation risk (Bell *et al.* 1991, pp. 1-438).

Information in our files and in the petition indicates that habitat for Hermes copper butterfly has been fragmented by wildfire and urban development. Comparison of Hermes copper butterfly and host plant distribution data with satellite imagery indicates wildfire causes short-term fragmentation of habitat, and much historical habitat has been fragmented by development. Additionally, the extent of habitat fragmentation on USFS lands has not been quantified, but information available at this time indicates that there has been significant loss and possible patchy distribution of the habitat that is remaining (Winter 2010, pers. comm.). Specific impacts of habitat fragmentation on Hermes copper butterfly have not been documented and require further investigation. The smaller and more isolated butterfly populations are, the less likely its habitat patches will be recolonized following extirpation due to wildfire or another catastrophic event. Given that some locations that historically harbored Hermes copper butterflies have been impacted and the existence of a possibility of habitat fragmentation, further investigation is necessary to determine the implications of these findings to Hermes copper butterfly's persistence.

In summary, we evaluated the petition and information in our files and find substantial information has been presented in the petition or is available in our files to indicate listing Hermes copper butterfly may be warranted due to the present or threatened destruction, modification, or curtailment of the species' habitat or range. In particular,

we find that fires that have occurred in the north and south of the species' range and development (including urban development and activities on CNF lands) through the center of its distribution may have impacted the habitat (host plant and nectar sources) through loss or fragmentation and, in turn, may threaten the species' existence.

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

##### Information Provided in the Petition

The petitioner claims at least one commercial operation may impact Hermes copper butterfly. According to the petition, a company called "Morningstar Flower and Vibrational Essences" markets a Hermes copper "butterfly essence" through their website. The petitioner states it is unclear how these essences are manufactured or obtained; however, the petition states that flower essences are produced by soaking the material in water, alcohol, or vinegar. Additionally, the petition states that over-collection may impact the Hermes copper butterfly. The petitioner claims that a female Hermes copper butterfly was worth up to \$20.00 in 1986.

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

Neither the petition nor information available in our files indicates that commercial use threatens the existence of Hermes copper butterfly. Information in our files indicates that no Hermes copper butterflies, whole or physical parts, are used in the process of making these butterfly essences (Morning Star Essences, pers. comm., 2006). We are unaware of any other business that markets and sells "butterfly essences," and we have no information to indicate this activity threatens Hermes copper butterfly.

Additionally, there is no information in our files or the petition to indicate over-collection is a threat to Hermes copper butterfly. We have information in our files that on June 26, 2004, two different advertisements on the Internet offered specimens of Hermes copper butterfly for sale for approximately \$152.00 (Martin, pers. comm., 2004). However, there is no evidence that trade or collection directly contributes, or is a substantial threat, to the species.

After a review of information in our files and in the petition, we do not find substantial information to indicate that listing Hermes copper butterfly may be warranted due to overutilization for

commercial, recreational, scientific, or educational purposes. However, we will further investigate the potential threat of overutilization for commercial, recreational, scientific, or education purposes in our status review for this species.

#### *C. Disease or Predation*

##### *Disease*

There was no information provided in the petition nor do we have any information in our files to indicate that disease is a threat to the Hermes copper butterfly.

##### *Predation*

##### Information Provided in the Petition

The petitioner states that species experts suspect predatory insects, and parasitic insects, spiders, and possibly birds, prey upon Hermes copper butterfly. Additionally, the petitioner asserts that the harmful effects of otherwise normal predation or parasitism might be exacerbated by population reduction from excessive fires. We received additional information from the petitioner in an email on March 5, 2010 (Evans 2010). The petitioner submitted one piece of anecdotal species information we did not already have in our files, a personal communication (cited "D. Faulkner, V. Marquez-Waller pers. comm. on 4/16/08") that a "Ladybird beetle" is a potential Hermes copper butterfly predator (Evans 2010 attachment, p. 8).

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

Faulkner and Klein (2005, p. 26) state that no documentation exists of parasitism or predation on Hermes copper butterfly, and we have no information in our files that suggests parasitism or predation is a threat to the species' existence. The petitioner did not provide information to support the hypothesis that predation or parasitism may exacerbate population reduction as result of fire or any specific information that "Ladybird beetles" may be a significant predator, and we have no information in our files to support either of these claims.

After a review of information in our files and in the petition, we do not find substantial information to indicate that listing Hermes copper butterfly may be warranted due to disease or predation. However, we will further investigate the potential threat of disease and predation in our status review for this species.

#### *D. The Inadequacy of Existing Regulatory Mechanisms*

The petition states very few regulatory mechanisms are in place that afford Hermes copper butterfly conservation; however, the petitioner states the following mechanisms may provide some conservation:

- (1) The California Environmental Quality Act (CEQA);
- (2) National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*);
- (3) U.S. Forest Service management;
- (4) San Diego Multiple Species Conservation Plan (MSCP);
- (5) Biological Mitigation Ordinance (BMO);
- (6) County of San Diego Resource Protection Ordinance (RPO); and
- (7) City and County of San Diego open space parks.

The petitioner states that although the measures listed above exist, they have not proven effective in reducing what the petitioner believes are the primary threats to Hermes copper butterfly survival (urban development, wildfire, and habitat degradation).

#### *California Environmental Quality (CEQA) and National Environmental Policy Acts (NEPA)*

##### Information Provided in the Petition

The petitioner claims the Service has previously provided extensive discussion of the inadequacy of CEQA to protect imperiled species, identifying several listings in the **Federal Register** (62 FR 2318, January 16, 1997; 62 FR 4935, February 3, 1997; 61 FR 25829, May 23, 1996; 69 FR 47236, August 4, 2004). The petitioner did not provide information regarding NEPA.

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

CEQA and NEPA provide some protection for Hermes copper butterfly. CEQA (Public Resources Code, Sections 21000-21178, and Title 14 CCR, Section 753, and Sections 15000-15387) requires public agencies to disclose environmental impacts of a project on native species and natural communities during the land use planning process and to identify and impose mitigation measures to reduce project impacts to a less than significant level unless the agency makes a finding of overriding consideration. Through this process, CEQA ensures that proposed project effects on Hermes copper butterflies will be considered and, generally, reduced or mitigated. NEPA requires Federal agencies to disclose the significant impacts of a proposed action but does not require that such impacts be

reduced to a level of insignificance. These statutes provide some protection for Hermes copper butterfly and its habitat.

#### *U.S. Forest Service (USFS) Management Information Provided in the Petition*

The petitioner claims U.S. Forest Service regulations and management activities appear to provide few protections to Hermes copper butterfly. The petitioner states that, aside from monitoring survey results by others, there is no indication that the Cleveland National Forest (CNF) is engaged in the conservation of Hermes copper butterfly. Additionally, the petitioner states that Hermes copper butterfly is not recognized as a “sensitive species” by the U.S. Forest Service, which would provide monitoring efforts to track the species’ status and some protection from harmful projects. However, the petitioner states that even if the U.S. Forest Service recognized Hermes copper butterfly as a “sensitive species,” proactive conservation activities would not be implemented until the species receives protection from the Act.

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

Information in our files does support the petitioner’s claim that inadequacy of U.S. Forest Service management may be a contributing factor impacting the survival of the Hermes copper butterfly. According to the 2005 LRMP currently in place for CNF, Hermes copper butterfly is considered an animal species-at-risk by U.S. Forest Service but is not currently recognized as a “sensitive species” by the U.S. Forest Service. Because the butterfly is not currently identified as a “sensitive species,” preventative measures by the U.S. Forest Service to avoid impacts from development, excessive wildfire often as a result of development projects, and habitat fragmentation (see Factor A discussion) to Hermes copper butterflies or their habitat are not required. However, information in our files indicates that the U.S. Forest Service is taking some management actions to protect and conserve this species. The following management efforts are being implemented or are planned on U.S. Forest Service lands leading to the conservation and protection of Hermes copper butterfly:

(1) All historical locations have been surveyed;

(2) Re-vegetation of *Eriogonum fasciculatum* (California buckwheat), an important nectar source, is planned for the Barber Mountain area where most of

this nectar source was burned in the 2007 fire; and

(3) The Sunrise Powerlink project was modified to protect remaining Hermes copper butterfly habitat on Barber Mountain (Winter 2009, pers. comm.).

The “sensitive species” list is currently being updated by U.S. Forest Service and will likely include Hermes copper butterfly (Winter 2009, pers. comm.); however, this is a future action that is not certain.

In summary, although U.S. Forest Service has undertaken or is planning some preventative measures to avoid impacts to Hermes copper butterfly and its habitat, the failure of the CNF to identify Hermes copper butterfly as a sensitive species under its LRMP suggests that current regulation may not be adequate to protect the species and its habitat from future development, related impacts, such as habitat loss, (fragmentation and excessive wildfire), and similar impacts resulting from the maintenance of existing facilities and roads on U.S. Forest Service lands. The conservation measures and preventative actions listed above that the U.S. Forest Service has implemented or is planning to implement on the CNF are not required and do not prohibit activities that may impact Hermes copper butterfly or its habitat.

#### *San Diego Multiple Species Conservation Plan (MSCP), the Biological Mitigation Ordinance, and the County of San Diego Resource Protection Ordinance*

##### *Information Provided in the Petition*

The petitioner states that:

(1) Hermes copper butterfly is not recognized as a “covered species” under the County of San Diego’s Subarea Plan under the MSCP (MSCP 1998);

(2) The MSCP cannot provide the necessary management to benefit the species because no species-specific management is planned, described, or required; and

(3) The MSCP can benefit Hermes copper butterfly only in the event of collaterally beneficial conservation activities for other species and habitats.

The petitioner claims the informal treatment of Hermes copper butterfly by the MSCP provides few conservation benefits. The petitioner also states that the MSCP identifies only three sites where the butterfly occurs in the Metro-Lakeside-Jamul Segment of the County of San Diego Subarea Plan. The petitioner claims that conservation under the County of San Diego Subarea Plan is presumably provided under the Biological Mitigation Ordinance (BMO) that applies to more species than those

covered under MSCP, and establishes mitigation ratios and conditions for impacted species within the County. However, the petitioner states that the BMO only protects those “non-covered” species if they are inside the County of San Diego Subarea Plan’s Biological Resources Core Areas, and even then, the County of San Diego Subarea Plan does not require avoidance of important Hermes copper butterfly populations, habitat, or dispersal corridors. Moreover, the BMO would not improve the species’ status. The petitioners also claim the County of San Diego Resource Protection Ordinance (RPO), which imposes controls on development of wetlands, floodplains, steep slopes, sensitive biological habitats, and historical sites outside the boundaries of the County of San Diego Subarea Plan, does not directly protect species or impose any species-specific management efforts. Rather, the RPO attempts to minimize the impacts of urban development on habitat. The petition states that the County of San Diego asserts these regulatory measures will still contribute to conservation of the Hermes copper butterfly; however, the petitioner noted that the County of San Diego Subarea Plan provides only inadvertent protection to the species, which the petitioner believes is insufficient.

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

Information in our files indicates that Hermes copper butterfly is not a “covered species” under the County of San Diego Subarea Plan (Service 1998, p. 2). Although not a “covered species” under the plan, the Hermes copper butterfly and its habitat receive some indirect protection through land use restrictions applicable to lands within the County of San Diego under the BMO (in effect since 2004) and the RPO. The BMO, which applies to areas in the county covered by the County’s approved MSCP Subarea Plan, implements preserve design criteria for urban development and provides for conservation of sensitive biological habitats, such as chaparral, coastal sage scrub, and woodland, by establishing mitigation ratios and project development conditions. Therefore, the BMO may provide some protection and mitigation for larval and adult habitat for the Hermes copper butterfly within the County of San Diego MSCP Subarea Plan to the extent that habitat occurs within sensitive biological habitats regulated by the BML. The RPO, which applies to the entire County of San Diego (and not solely outside the

boundaries of the MSCP as stated in the petition), provides protection and requires mitigation for impacts to Hermes copper butterfly habitat that is deemed sensitive habitat land or occurs on steep slopes. The County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2009, p. 7) includes guidance that habitat occupied by Hermes copper butterfly should be considered sensitive, thus triggering species-based mitigation and avoidance to the maximum extent possible under the RPO. Hermes copper butterfly is included on the County's Group 1 Sensitive Animals List because it is considered a rare endemic species and is on the State of California's special animal taxa list (County of San Diego 2009, p. 50; CDFG 2009). Therefore, the MSCP, BMO, and RPO provide variable protection to the Hermes copper butterfly habitat depending on the specific regulatory mechanism and habitat location.

#### *City of San Diego and County of San Diego Open Space Parks*

##### Information Provided in the Petition

The petition states that remaining Hermes copper butterfly populations are not necessarily protected from edge effects, wildfire, or potential park development by the nature of their location on the following open space park lands managed by the City or County of San Diego: Mission Trails Regional Park, McGinty Mountain, and Black Mountain. The petitioner claims Hermes copper butterfly cannot directly benefit from these open spaces without formal protection.

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

Information in our files does not support the petitioner's claim that lack of specific management plans or area-specific management directives for open space parks threatens the persistence of Hermes copper butterfly. Furthermore, McGinty Mountain is part of the San Diego National Wildlife Refuge and is not managed by the City or County of San Diego. Although there are no formal management plans in our files written by the City or County of San Diego for these specific parks, it appears Hermes copper butterfly is persisting at all three locations listed in the petition. Information in our files indicates that:

(1) Hermes copper butterfly has been observed historically at Mission Trails Regional Park since the late 1950s through current surveys in 2009;

(2) Observations at McGinty Mountain were first reported in the 1980s and the butterfly has been repeatedly observed since; and

(3) The City of San Diego's website on the Black Mountain Open Space Park states that all plants and animals found within the park are protected and must not be harmed or removed (City of San Diego 2009); Hermes copper butterflies were observed on Black Mountain in 2004.

There are few known occurrences of Hermes copper butterflies in City or County open space parks. Although there is no formal regulation or management specifically for Hermes copper butterflies on these lands, we are not aware of any evidence to suggest that the absence of such regulation and management poses a threat to the Hermes copper butterfly or its habitat.

In summary, we have evaluated the petition and information in our files and find substantial information exists to indicate that listing the Hermes butterfly may be warranted because existing regulatory mechanisms may not adequately address the threats of habitat loss and fragmentation posed by development related impacts, including human-induced, excessive wildfire (see Factor A discussion). The regulatory mechanisms discussed above provide a patchwork of protection for Hermes copper butterfly and its habitat; however, the cumulative protection provided by these mechanisms may not adequately remove the threat of habitat loss and fragmentation resulting from development. We do not believe that the observed increase in frequency of natural wildfires recently observed in Hermes butterfly habitat is a threat amenable to reduction or elimination by regulatory mechanisms. However, we will further investigate the effectiveness of existing regulatory mechanisms to protect the Hermes copper butterfly and its habitat from wildfire and other potential threats in our status review of the species.

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

The petition, its appendices, and referenced documents discuss the following threats that are grouped under Factor E: wildfire, vulnerability of small and isolated populations, and global climate change.

##### *Mortality Due to Wildfire*

##### Information Provided in the Petition

The petitioner states that the Hermes copper butterfly cannot escape fire. The petitioner states that: (1) Pupae and

larvae are likely killed when fire burns *Rhamnus crocea* and other nearby coastal sage scrub or chaparral vegetation; (2) adults are likely killed by fire due to their habit of remaining close to their host plant; and (3) adults are likely outpaced by an approaching fire. The petition claims excessive fires over the last several decades have reduced Hermes copper butterfly population numbers and disrupted metapopulation dynamics and stability.

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

Fire causes direct mortality of Hermes copper butterflies, and is reported to have extirpated a population in habitat where they were not observed again until 18 years after the fire (Faulkner and Klein 2005, pp. 24–26). The persistence of Hermes copper butterfly after the 2003 fires was at first questioned because much of the fire footprint appeared to cover known locations occupied by the species (Betzler *et al.* 2003, p. 12). However, information in our files indicates Hermes copper butterfly persisted in reduced numbers at sites within the 2003 and 2007 fire footprints (such as Mission Trails Regional Park, Wildwood Glen Lane in CNF, Barber Mountain, and Potrero Road). Given the described negative impacts of fire on Hermes copper butterfly populations (Faulkner and Klein 2005, pp. 24–26), it is likely the species' existence is threatened by wildfires. Additional surveys and monitoring are needed to determine the survival and recolonization rate following fire to address the petitioner's claim of a direct mortality extinction threat due to high fire frequency. After reviewing the petition and information in our files, we find substantial information exists indicating that listing the Hermes copper butterfly may be warranted due to the threat of mortality from wildfire.

#### *Vulnerability of Small and Isolated Populations*

##### Information Provided in the Petition

The petitioner asserts that endemic taxa such as Hermes copper butterfly are considered more prone to extinction than widespread species due to their restricted geographical range and that population isolation is exacerbated by habitat fragmentation (see Factor A above for discussion of habitat fragmentation). According to the petition, the common factors that increase the vulnerability of small and isolated populations to extinction are demographic fluctuations,

environmental stochasticity (random events), and reduced genetic diversity.

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

Small population size, a low number of populations, or population isolation are not necessarily factors that may threaten a species independently. Typically, it is the combination of small size and number and isolation of populations in conjunction with other threats (such as the present or threatened destruction, modification, or curtailment of the species' habitat or range) that may significantly increase the probability of species' extinction.

Information in our files indicates large annual fluctuations in observed abundance of adult butterflies are common throughout this butterfly's range. Adult butterfly abundance may fluctuate approximately two orders of magnitude from one year to the next and may be correlated with rainfall levels (Klein and Faulkner 2003, p. 96); however, it is not clear how adult observations correlate with abundance of all life stages, including diapausing (quiescent) stages. Also, much uncertainty exists regarding the species' distribution because the range of its host plant, *Rhamnus crocea*, extends well beyond the known range of the butterfly and surveys have not been conducted throughout the host plant's range (especially inland San Diego County and northwestern Baja California, Mexico).

Population isolation and fragmentation may render smaller populations more vulnerable to stochastic extirpation. Small populations and isolation could also subject the butterfly to genetic drift and restricted gene flow that may decrease genetic variability over time and could adversely affect species' viability (Allee 1931, pp. 12-37; Stephens *et al.* 1999, pp. 185-190; Dennis 2002, pp. 389-401). Information in our files indicates that reduced adult Hermes copper butterfly densities are present in burned areas (see Factor A discussion on *Wildfire*) and new occurrences (such as at Potrero Road, north Lyons Valley, and west Japatul Valley) have been documented after the 2003 and 2007 fires. Sufficient distribution, population structure, genetic, or demographic information about the species to determine the effect of isolation and small population size is currently unavailable. However, information in our files indicates that the habitat area and range that the species inhabits have been reduced and fragmented and the status of some historical occurrences remains

unknown after recent fires; therefore, stochastic extinction as a result of restricted geographical range or population isolation may pose a significant threat to the species.

#### Global Climate Change

##### Information Provided in the Petition

The petitioner asserts that butterflies (in general) are threatened by global climate change and are specifically sensitive to small changes in microclimate, such as fluctuations in moisture, temperature, or sunlight. According to the petition, studies of Edith's checkerspot butterfly (*Euphydryas editha*) have shown that whole ecosystems may move northward or shift in elevation as the Earth's climate warms (Parmesan and Galbraith 2004, p. 9).

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

We recognize recent evaluations by Parmesan and Galbraith (2004, pp. 1-2, 29-33) that indicate that whole ecosystems may be shifting northward and upward in elevation, or are otherwise being altered by differing climate tolerance among species within a community. Additionally, we recognize that climate change is likely to cause changes in the arrangement and community composition of occupied habitat patches. Current climate change predictions for terrestrial areas in the Northern Hemisphere indicate warmer air temperatures, more intense precipitation events, and increased summer continental drying (Field *et al.* 1999, pp. 1-3; Hayhoe *et al.* 2004, p. 12422; Cayan *et al.* 2005, p. 6; Intergovernmental Panel on Climate Change (IPCC) 2007, p. 11). However, predictions of climatic conditions for smaller subregions, such as California, remain less certain. Thus, the information currently available in our files on the effects of global climate change, such as increasing temperatures or moisture, require further analysis and comparison with local climate models and other literature to make sufficiently certain estimates of the likely magnitude of predicted effects on Hermes copper butterfly. Given the current uncertainty, we find that information in our files does not provide substantial information suggesting that global climate change may be a factor that threatens Hermes copper butterfly. We will further investigate this potential threat to Hermes copper butterfly in our status review of the species.

In summary, we find the petition and information in our files provide

substantial information indicating that listing Hermes copper butterfly may be warranted due to other natural or manmade factors affecting the species' continued existence. Specifically, we find that mortality due to wildfire and restricted geographical range or population isolation may pose significant threats to the species.

#### Finding

On the basis of our determination under section 4(b)(3)(A) of the Act, we determine that the petition presents substantial scientific or commercial information indicating that listing the Hermes copper butterfly may be warranted. This finding is based on information provided under Factor A (present or threatened destruction, modification, or curtailment of the species' habitat or range), Factor D (the inadequacy of existing regulatory mechanisms), and Factor E (other natural or manmade factors affecting the species' continued existence). Because we find that the petition presents substantial information indicating that listing the Hermes copper butterfly may be warranted, we are initiating a status review to determine whether listing the Hermes copper butterfly under the Act is warranted.

The "substantial information" standard for a 90-day finding differs from the Act's "best scientific and commercial data" standard that applies to a status review to determine whether a petitioned action is warranted. A 90-day finding does not constitute a status review under the Act. In a 12-month finding, we will determine whether a petitioned action is warranted after we have completed a thorough status review of the species, which is conducted following a substantial 90-day finding. Because the Act's standards for 90-day and 12-month findings are different, as described above, a substantial 90-day finding does not mean that the 12-month finding will result in a warranted finding.

The petitioner requested that critical habitat be designated for this species. If we determine in our 12-month finding that listing Hermes copper butterfly is warranted, we will address the designation of critical habitat at the time of the proposed rulemaking. The proposed rulemaking may be published concurrently with the 12-month finding or at a later date.

#### References Cited

A complete list of references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Carlsbad Fish and Wildlife

Office (see **FOR FURTHER INFORMATION CONTACT**).

**Author**

The primary authors of this notice are staff members of the Carlsbad 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: April 19, 2010.

**Daniel M. Ashe,**

*Acting Director, Fish and Wildlife Service.*

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