

## **5-YEAR REVIEW**

### **Callippe silverspot butterfly (*Speyeria callippe callippe*)**

#### **GENERAL INFORMATION**

**Species:** Callippe silverspot butterfly (*Speyeria callippe callippe*)

**Date listed:** December 5, 1997

**FR citation:** 62 FR 49398

**Classification:** Endangered

**Most recent status review:**

The most recent status review of the callippe silverspot butterfly was a 5-year review completed by the Sacramento Fish and Wildlife Office in 2009 (Service 2009).

#### **Methodology used to complete the review:**

In accordance with section 4(c)(2) of the Endangered Species Act of 1973, as amended (Act), the purpose of a 5-year review is to assess each listed species to evaluate whether or not the species' status has changed and it should be classified differently or removed from the Lists of Threatened and Endangered Wildlife and Plants. The U.S. Fish and Wildlife Service's (Service) Sacramento Fish and Wildlife Office conducted a Species Status Assessment (SSA) and developed an SSA report on the callippe silverspot butterfly (Service 2020a), which was used to inform this 5-year review. The SSA report represents our evaluation of the best available scientific information, including the habitat and demographic needs and the current and future condition of the species. The SSA report was reviewed through independent peer review.

#### **FR Notice citation announcing this status review:**

A notice announcing the initiation of the 5-year review for this taxon and the opening of a 60-day period to receive information from the public was published in the Federal Register on February 10, 2020 (85 FR 4692-4694; Service 2020b). We received one response to our request for comments, which aligns with our analysis in the SSA report and is incorporated in the recommendations in this status review.

#### **REVIEW ANALYSIS**

##### **Updated Information and Species Status**

A summary of new information incorporated throughout the SSA report is included in Chapter 1. The SSA report provides a summary of the factors influencing the viability of the species, management and conservation measures, and current status of the species in Chapter 4, and projects potential future condition of the species under three plausible scenarios in Chapter 5. The SSA report provides an analysis of the current and future condition of four populations throughout the current range of the species. A summary of species viability is presented in Chapter 6.

##### **Threats**

Current or potential future threats to callippe silverspot butterfly include: habitat fragmentation (Factor A); grassland conversion (Factor A); illegal collection (Factor B); habitat modification by non-native plant species, which is exacerbated by human alteration of the global nitrogen

cycle (Factor E); pesticide use (Factor E); fire (Factor E); small population size (Factor E); and climate change (Factor E).

### Recovery Criteria

There currently is not a published recovery plan for the callippe silverspot butterfly.

### Synthesis

At the time of listing, the primary threats to the survival and recovery of the callippe silverspot butterfly were the loss and degradation of habitat from human activities. Habitat loss and the degradation of remaining habitat, including invasion of non-native plant species, continue to be primary threats to the species' recovery. Currently, one population is in moderate condition and the remaining three are in low condition. After reviewing the best available scientific information, we conclude that the callippe silverspot butterfly remains an endangered species.

### RESULTS

#### Recommended Classification:

- Downlist to Threatened**
- Uplist to Endangered**
- Delist** (*Indicate reasons for delisting per 50 CFR 424.11*):
  - Extinction*
  - Recovery*
  - Original data for classification in error*
- No change is needed**

#### New Recovery Priority Number: No change

The Service has determined that the current recovery priority number (9C) should remain unchanged. The current recovery number, "9", indicates that a subspecies has a moderate degree of threat as well as a high recovery potential. The "C" indicates conflict with construction or other development projects or other forms of economic activity.

### RECOMMENDATIONS FOR FUTURE ACTIONS

- *Continue demographic monitoring:* Continued surveys for populations will assist with assessing status and trends.
- *Monitor nectar plants across populations and establish quantitative metrics for assessing condition of nectar plants.* Understanding nectar plant diversity and abundance at each of the populations will be helpful in assessing condition. Establishing quantitative metrics for assessing condition of nectar plants can be used in subsequent versions of the SSA report.
- *Survey host plants across population sites.* As with nectar plants, understanding the density and/or linear coverage of host plants at each of the population sites will help with assessing population condition in future status assessments.

- *Implement a pilot grazing study on San Bruno Mountain.* Grazing is expected to reduce non-native grasses, thatch, and scrub encroachment, thereby improving habitat for callippe silverspot butterfly nectar and host plant species. Cattle grazing as a habitat management tool should be consistent with other rare plant needs on San Bruno Mountain.
- *Review, update, and publish a Recovery Plan and Recovery Implementation Schedule:* Update the internal draft recovery plan using the SSA report. The Recovery Plan and Recovery Implementation Schedule will describe the vision and criteria for recovery of the species and identify specific activities needed.
- *Establish a callippe silverspot butterfly working group or recovery implementation team:* The group would serve to coordinate and facilitate recovery actions and implementation. By conducting organized discussions with relevant parties, coordination in conservation efforts will be increased.

## REFERENCES

- (Service) U.S. Fish and Wildlife Service. 2009. Callippe silverspot butterfly (*Speyeria callippe callippe*) 5-year review: summary and evaluation. Sacramento Fish and Wildlife Office, Sacramento, CA.
- (Service) U.S. Fish and Wildlife Service. 2020a. Species Status Assessment for the callippe silverspot butterfly (*Speyeria callippe callippe*) Version 1.0. July 2020. Sacramento, CA.
- (Service) U.S. Fish and Wildlife Service (Service). 2020b. Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of 66 Species in California and Nevada. Federal Register 85(17): 4692-4694.

**U.S. FISH AND WILDLIFE SERVICE  
5-YEAR REVIEW of callippe silverspot butterfly**

**Current Classification:** Endangered

**Recommendation resulting from the 5-Year Review:**

- Downlist to Threatened
- Uplist to Endangered
- Delist
- No change needed

**FIELD OFFICE APPROVAL:**

**Field Supervisor, Sacramento Fish and Wildlife Office**

Approve **JOSHUA HULL**  Digitally signed by JOSHUA HULL  
Date: 2020.07.22 13:26:04 -07'00' Date \_\_\_\_\_