

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

Ecological Services
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In Reply Refer to:
2024-0023296-INFO

HERMES COPPER BUTTERFLY SURVEY PROTOCOL

January 2024

U.S. Fish and Wildlife Service

The Hermes copper butterfly (*Lycaena Hermes*; Hermes) was listed as a threatened species on January 20, 2022 (86 FR 72394) and is protected under the provisions of the Endangered Species Act (Act) of 1973, as amended. This protocol provides recommended guidance on survey methodology for biologists seeking a presence/absence determination for a site. Survey and monitoring work as part of scientific inquiry involving quantitative data collection (such as population status determinations) is exempted under the 4(d) rule. Therefore, surveys conducted in accordance with this protocol will not require a recovery permit under section 10(a)(1)(A) of the Act, however as stated in the 4(d) rule in order to be exempt, such surveys require coordination with, and reporting to, the U.S. Fish and Wildlife Service (Service). Coordination for surveys should be done with the Carlsbad Fish and Wildlife Office (CFWO) Recovery Permit Coordinator. If Hermes are detected, the identification of occupied habitat will be done in coordination with the Service.

The County of San Diego (County) developed guidelines for Hermes as part of their [Report Format and Content Requirements](#) that address how to survey, assess impacts, and mitigate potential impacts. The County's guidelines state that they can be superseded by a Service issued protocol. This protocol addresses site assessments, surveys, and reporting but does not include the impact assessment and mitigation measures required by the County. We recommend site assessments for all projects mapped within the potential range of the Hermes ([interactive map](#)), as defined in the final rule and included as Figure 1 in this document. Site assessments are used to determine if a project site contains areas where surveying for Hermes is recommended. If a site does not contain suitable habitat, surveys are not recommended.

SITE ASSESSMENTS

1. Site assessments involve conducting a general field survey of the site and mapping spiny redberry (*Rhamnus crocea*), as defined below.
2. Site assessments are conducted before the first Hermes survey.
3. Spiny redberry (*Rhamnus crocea*) individuals or patches are considered potential habitat that may support Hermes within the range of the species.
 - a. All areas within 100 feet of spiny redberry should be surveyed (Figure 2).

- b. Focusing surveys near spiny redberry increases the likelihood of detection, but Hermes are also known to use adjacent habitat for nectaring, territorial displays, and dispersal.

SURVEYS

1. Sites should be surveyed six times with no more than one survey per week from mid-May to mid-July.
 - a. If weather makes this schedule infeasible, contact the CFWO to identify an appropriate alternate schedule.
2. Weather-related constraints include:
 - a. Temperatures are between 70 and 95 degrees Fahrenheit.
 - b. No fog, drizzle, or rain.
 - c. Cloud cover less than 25 percent.
 - d. No sustained winds greater than 15 miles per hour measured at 4–6 feet above ground level.
3. Surveys should be conducted at an average walking rate of 10–15 acres per hour.
4. To trigger Hermes to flush and become more observable, surveyors should lightly touch or brush shrubs approximately every 15 yards within the survey area using a walking stick or similar instrument to elicit flights that make Hermes detectable.
5. Flight season surveys will not be conducted concurrently with surveys for other species.

REPORTING

1. The first observation at a site should be reported to the CFWO Recovery Permit Coordinator, the California Department of Fish and Wildlife, and the County of San Diego within 24 hours.
2. A written report should be submitted to the CFWO Recovery Permit Coordinator within 45 days of the final survey. The report will include:
 - a. Name and copies of field notes for all biologists.
 - b. Signatures of all biologists.
 - c. Non-enlarged 7.5' U.S. Geological Survey (USGS) topographic map (depicting the location and boundary of the survey area), with the name of the USGS map identified, and aerial photo with Hermes observations identified.

- d. Site assessment map with spiny redberry locations identified.
- e. Site assessment map of vegetation communities delineated.
- f. Dates and times (start and end) of each survey.
- g. Air temperature, wind speed, and weather conditions at the start and end of each survey.
- h. A list of all butterflies observed during each survey.
- i. A list of dominant shrub species on the site and common potential nectar sources.

Approved

Scott A. Sobiech
Field Supervisor

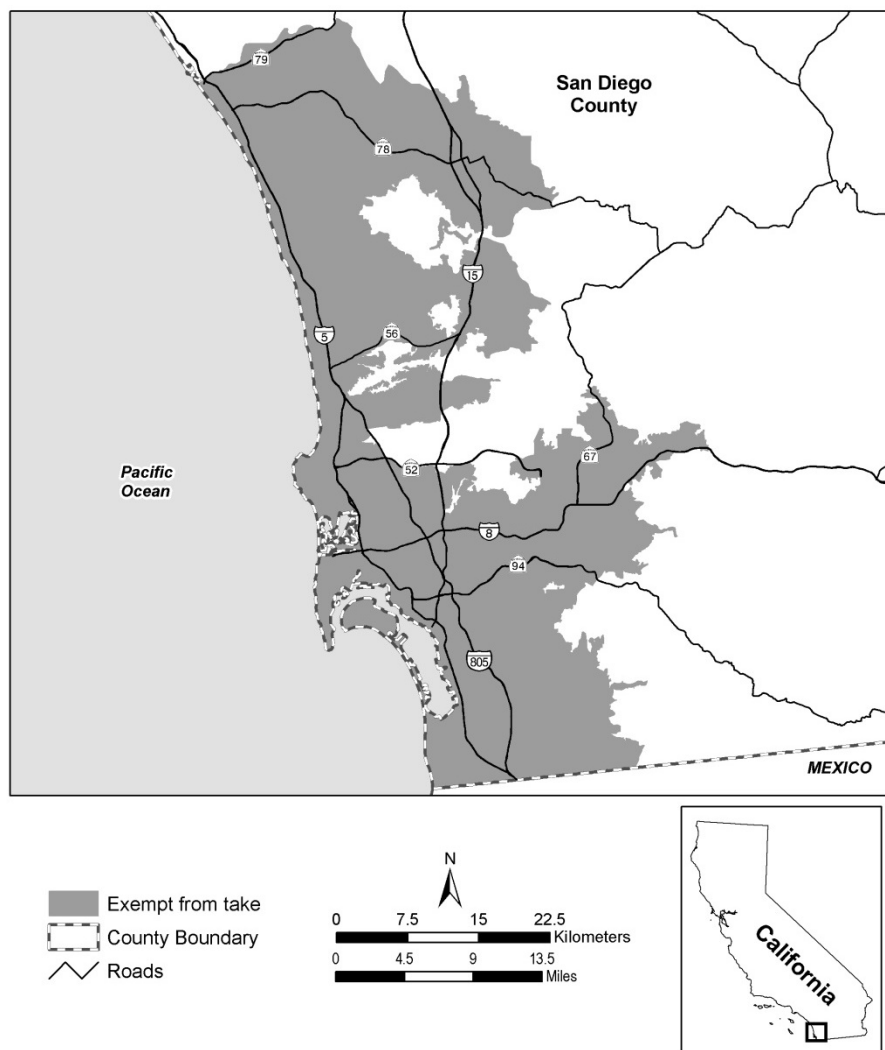


Figure 1. Recommended Survey Areas ([interactive map](#)).¹

¹ Surveys are recommended within potential habitat shown in white on the map. Grey areas are unlikely to support the species and are excluded from incidental take restrictions as identified in the final rule listing the Hermes copper butterfly as threatened.

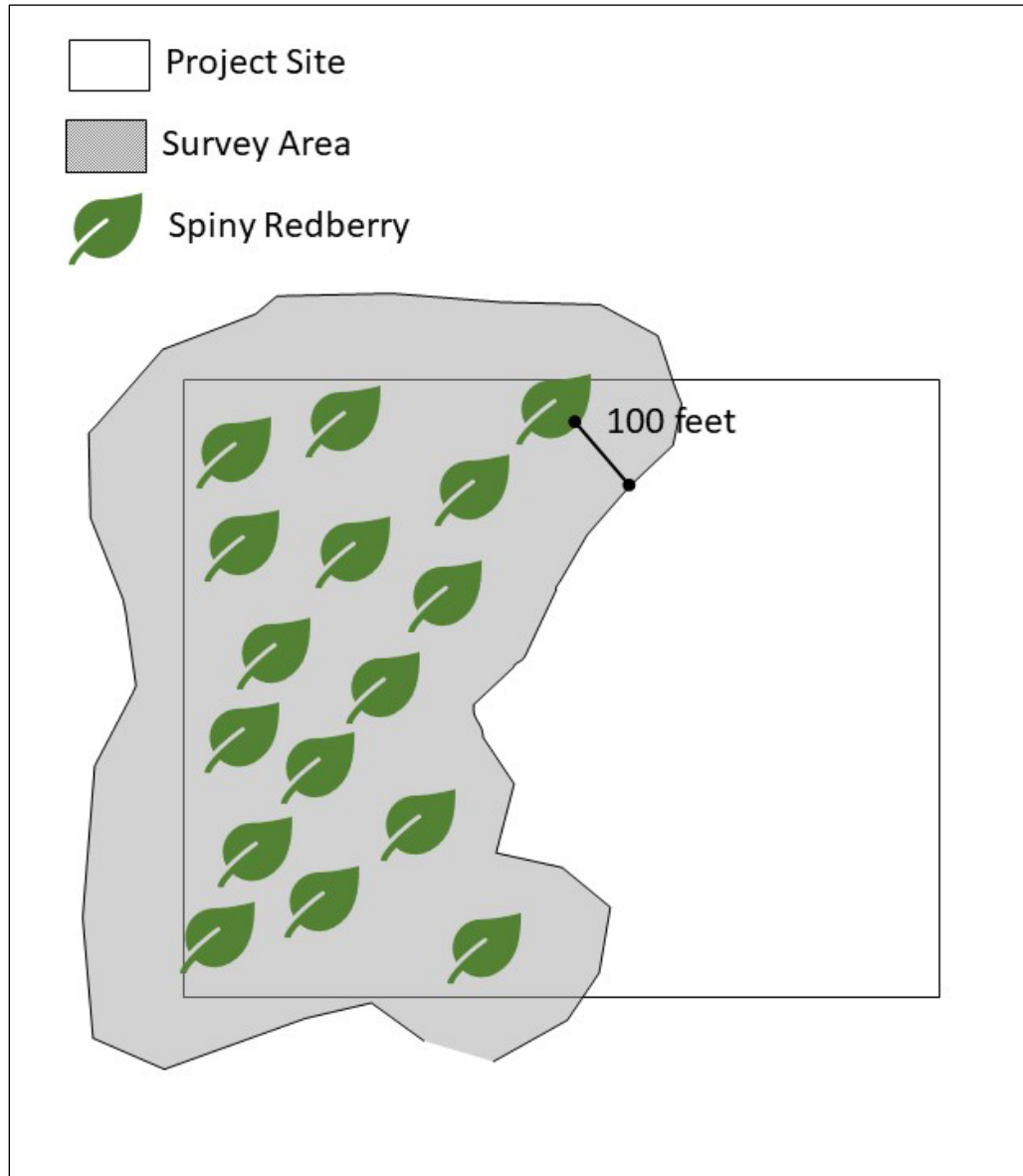


Figure 2. Defining the recommended survey area based on presence of spiny redberry.