# Wandering Skipper Survey at the Kendall-Frost Mission Bay Marsh Reserve, San Diego, California

27 August 2010

Observers: Keith Greer, Isabelle Kay, Betsy Miller, and Kim Roeland

## Introduction

The wandering skipper (*Panoquina errans*) is a small butterfly of the family Hesperiidae. It is identifiable by its rich dark brown color and cream-colored spots on the dorsal forewing. The wandering skipper is found only along the coast in southern California, Baja California and northwestern mainland Mexico. Populations have been recorded from Huntington Beach, Upper Newport Bay, and Capistrano Beach (Orsak, 1977). In San Diego, the wandering skipper has been documented in the Tijuana Estuary, San Dieguito Lagoon, and Agua Hedionda lagoon (SanGIS, 2010), but it appears that no extensive survey data have been published.

The wandering skipper is on the IUCN Red List of Threatened Species (World Conservation Monitoring Centre, 1996) and is under consideration for possible listing on the endangered species list as a threatened species because of the reduction of salt marsh habitat.

The larval host plant for this species, salt grass (*Distichlis spicata*), is found in transitional habitats along the edge of the high marsh. Nectar sources include *Heliotropium* spp., *Haplopappus* spp., and *Frankenia salina* (Orsak 1977). Potential habitat for the wandering skipper was considered to be areas containing the larval host plant in close proximity to nectar plants.

Surveys were completed to determine presence of the wandering skipper in potential habitat areas within the Kendall-Frost Mission Bay Marsh Reserve, San Diego, California, in high salt marsh habitat near the field station, just north of Rose Creek, and at the Crown Point Restoration site.

## Methods

The surveys were conducted on August 27, 2010. The first survey focused on areas near the field station and north of Rose Creek in high marsh habitat between 10:27 a.m. and 11:30 a.m. A second survey, 11:55 a.m. to 12:13 p.m., was conducted in the Crown Point Restoration site.

Butterflies were detected using a Pollard walk (Pollard, 1977) with 2-4 observers moving along a line through potential habitat. Binoculars were used to aid visual identification. A handheld GPS unit (Garmin GPSMAP 60, WAAS enabled) was used to record the location of each individual detected; photos were taken when possible to confirm identification. Significant salt grass patches (typically > 5 $m^2$) were also recorded using the handheld GPS device.

Temperature and wind speed remained fairly constant for both surveys (72.3°F to 71.7°F and 0.68 – 2.0 mi/hr). Both wind and temperature were ideal for the identification of the wandering skipper. Initially cloud cover was 100%, and by the second survey, some clearing was occurring. Cloudy weather is typically not ideal for the wandering skipper survey; however, since many other species of skippers and other butterflies were observed, we determined that our detection of the wandering skipper was not impacted by the cloud cover.

## Results

Two individuals of wandering skipper were detected at the Kendall-Frost Mission Bay Marsh on a berm near the field station (Figures 1-2 and Table 1). The two individuals were observed copulating. Salt grass was not observed in any significant patches greater than 5

$m^2$, though small amounts of salt grass were found near the sighting locations for the wandering skippers.

No wandering skippers were detected near Rose Creek or at the second survey location at the Crown Point Restoration site. No salt grass was found at either location, though *Frankenia* and other nectaring plants were detected. The results indicate that salt grass is a critical element for the presence of the wandering skipper. Though flowering nectaring plants were available throughout the high marsh, the only location with wandering skipper was near salt grass.

This survey is not intended to be a comprehensive survey of the entire reserve, but can be added to surveys by others.

References

Orsak, L.J. 1977. The Butterflies of Orange County. Center for Pathobiology Miscellaneous Publication #3. University of California Press, New York. 349 pp.

Pollard, E. 1977. A method for assessing changes in the abundance of butterflies. Biological Conservation., 12:115-134.

SanGIS Digital sources: Natural Diversity Database and Sensitive Sighting Database. 2010.

World Conservation Monitoring Centre 1996. Panoquina errans. 2006 IUCN Red List of Threatened Species. Downloaded on 13 Aug 2010.

**Table 1. Wandering Skipper Locations, Kendall-Frost Marsh**

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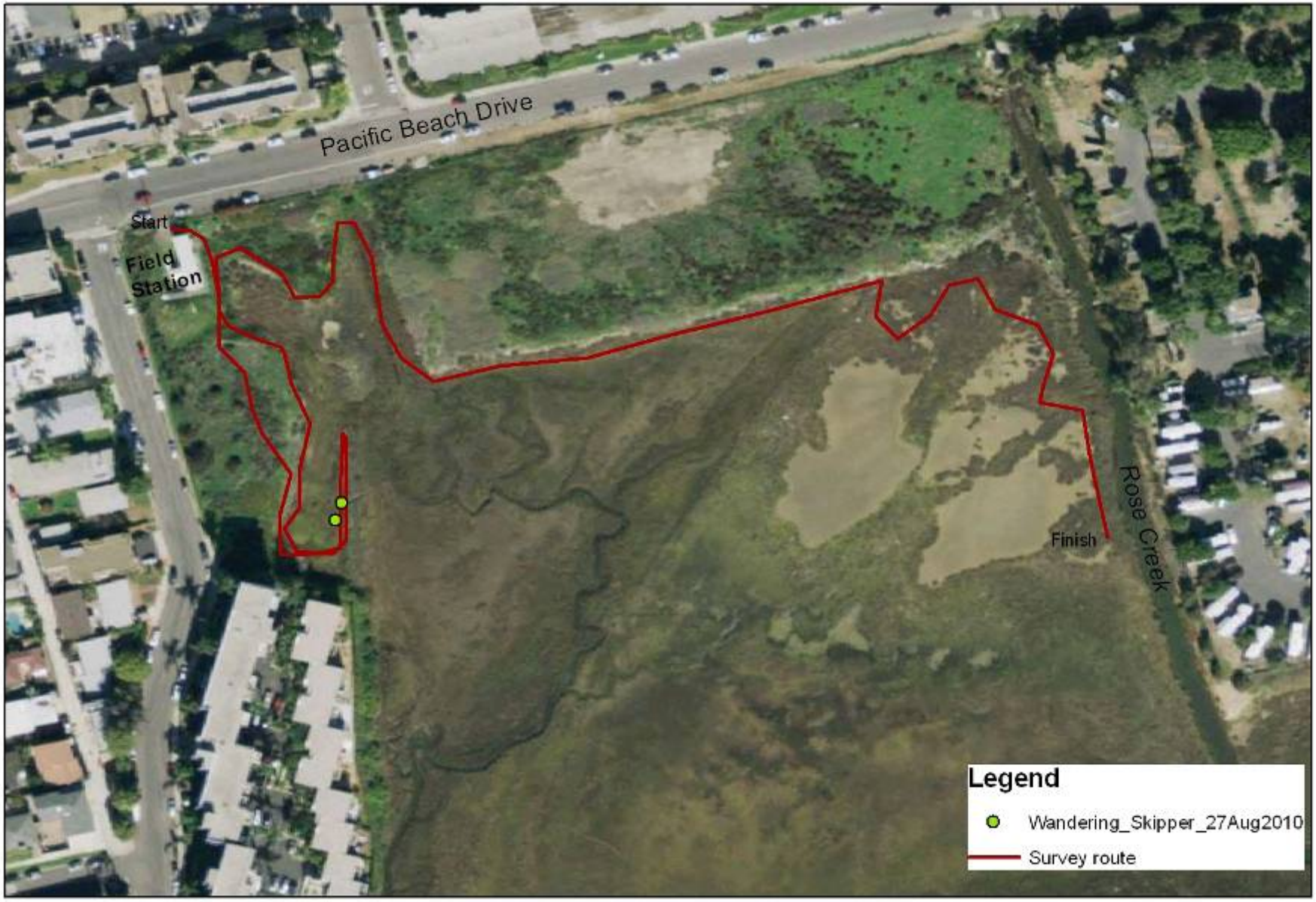
| Observation Point | Date | Time | N (degrees) | W (degrees) |
|---|---|---|---|---|
| 1 | 8/27/2010 | 10:48 | -117.2301 | 32.7951 |
| 2 | 8/27/2010 | 10:51 | -117.2301 | 32.7952 |

# Figure 1. Kendall-Frost Wandering Skipper Survey Field Station and Rose Creek



# Figure 2. Kendall-Frost Wandering Skipper Survey
# Crown Point Restoration Site

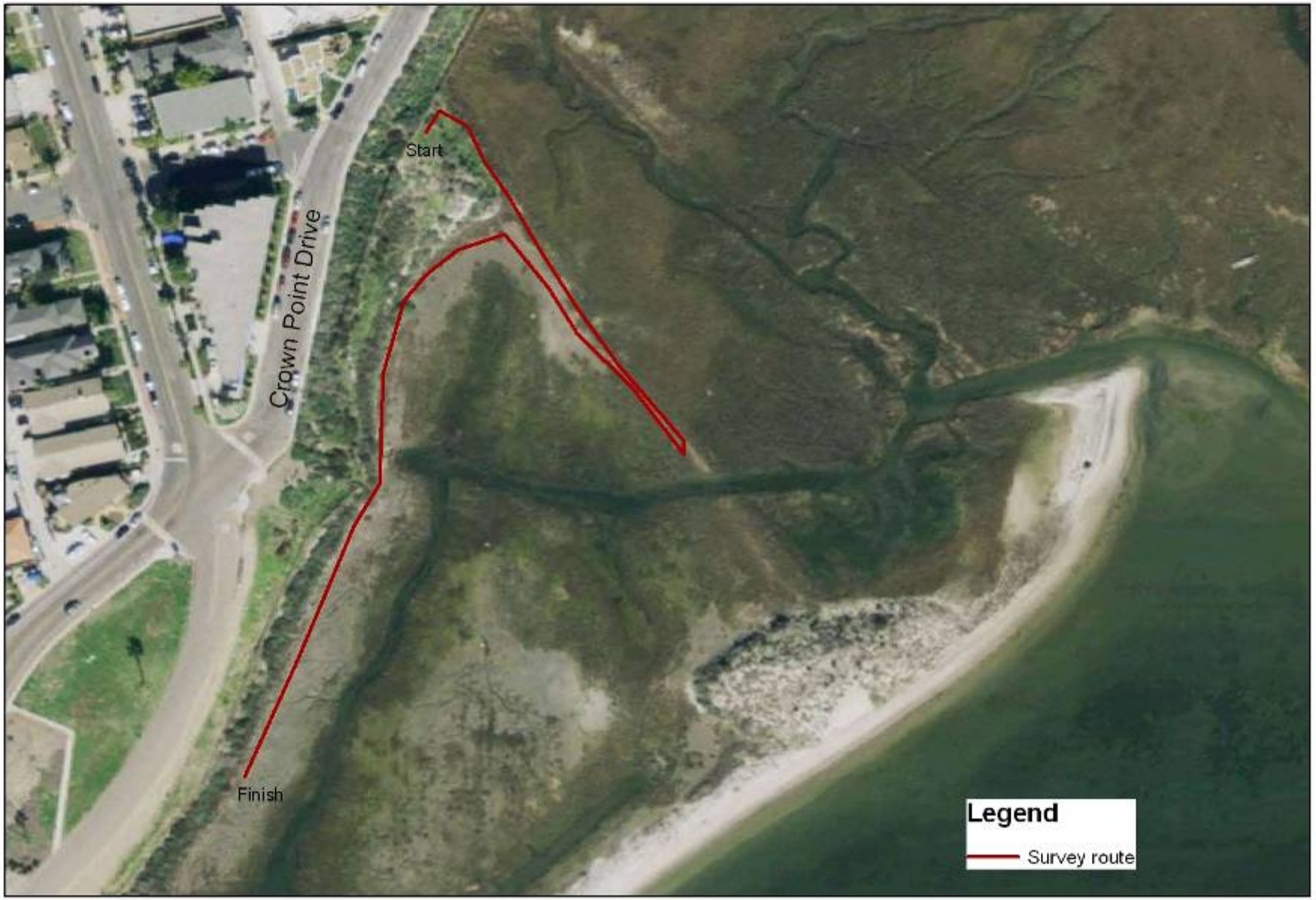


Figure 2. Habitat on berm where two wandering skippers were observed mating, Kendall-Frost Mission Bay Marsh Reserve, San Diego.