

**Inventory for Mardon Skipper, *Polites mardon*,
on the Mt. Hood National Forest**

**Report to the Interagency Special Status Sensitive Species Program
FY 2009**



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March 23, 2010**

Summary

This project surveyed potential mardon skipper (*Polites mardon*) habitat at six sites on the Mt. Hood National Forest (Forest) in 2009. Meadow habitat at several sites located on the Forest is similar to habitat at known mardon skipper sites on the Mt. Adams Ranger District, Gifford Pinchot National Forest in Washington. Survey areas were prioritized by habitat most similar to the occupied mardon skipper sites on Mt. Adams. A total of 18 surveys for Mardon skipper were conducted at 6 sites on the Hood River and Barlow Ranger Districts of the Forest from June 11 through July 27. No mardon skippers were found within the project area.

Introduction

The mardon skipper is a small, non-migratory butterfly currently found at four geographically disjunct locations in Washington, Oregon, and California (Potter et al. 1999). Mardon skippers are known to be associated with native bunch grasses such as *Festuca* species, although the habitat requirements for the species are not fully understood. In the Mt. Adams area, closest geographically and in habitat to our survey area, mardon skippers are associated with relatively small, montane meadow habitats in the grand fir zone (Topik 1989). Occupied sites range from 1,800 to 5,600 feet in elevation, although most sites are found between 3,000 and 4,000 feet elevation. Occupied habitats include relatively dry meadows with a dominant ground cover of *Festuca* grasses, to mesic or riparian sites with a dominant ground cover of pasture grasses (*Poa* species, *Bromus* species) and forbs.

Due to the mardon skipper's small population size, limited distribution, and recognized threats, the species is federally designated as a candidate species for listing under the Endangered Species Act. The mardon skipper was also listed in Washington as a state endangered species in 1999 (Black & Vaughan 2005), and is currently listed as a USDA Forest Service Region 6 sensitive species. A description of the morphology and life history of the mardon skipper can be found in the Conservation Assessment for the Mardon skipper (Kerwin and Huff 2007).

There is a large range gap in the known distribution of the mardon skipper starting at the Columbia River Gorge and extending south to the southern Oregon Cascades. We do not know if the mardon skipper is present within this gap due to limited past survey efforts for butterflies. In order to learn more about the abundance and distribution of the mardon skipper, and to determine if the species is found within the distribution gaps, we focused our survey effort in a geographic area that was located between the known locations in Washington and southern Oregon.

Inventory Area

Our project area included survey sites within the Mt. Hood National Forest. The survey sites in the inventory area are located approximately 50 miles south of documented mardon skipper sites near Mt. Adams, Washington.

Surveys were conducted for mardon skippers on the Forest in 2006 and 2008. A list of sites with potential mardon skipper habitat was identified during those surveys by Cathy Flick and Vince Harke. Based on those surveys and input from species experts, we chose 6 meadows (Appendix A) with a variety of habitat types, ranging in elevation from 3,000

to 4,800 feet elevation. Due to limited resources, we concentrated our efforts in the best suitable habitat, and therefore we chose to survey sites that were similar to the occupied sites on Mt. Adams. Because mardon skippers are found in a variety of grassland habitats on Mt. Adams, we selected a diversity of open habitats, ranging from dry meadows with a dominant ground cover of fescue and non-native grasses, riparian sites with a dominant ground cover of pasture grasses, and wetland meadows with drier, bunchgrass hummocks and edges.

Methods

We used the survey protocol for mardon skipper (Seitz et al. 2006). Sites were surveyed by walking through the area and recording the number of skippers observed. At two sites, individual Sonoran skippers were captured with an insect net and examined in a viewing jar for positive identification. All skippers captured for identification were released live at the capture sites. Close-focus binoculars were also used to aid in positive identification of individual butterflies. Sites were visited between June 12 and July 29 during the likely flight period for mardon skipper, which varied between sites. The timing of emergence tends to be later at higher elevations (Potter et al. 1999). Surveys were conducted under weather conditions suitable for butterfly activity as stated in the survey protocol (Seitz et al. 2006). General observations about habitat such as butterfly species, nectar plants present, and grass communities were noted.

Survey Results

A total of six sites were surveyed for Mardon skipper during 2009 on the Mt. Hood National Forest (Appendix A). No mardon skippers were observed.

Bear Springs-

This site was surveyed on June 11, 16, and 24. This site was also surveyed in 2006 and 2008. The timing of the June 11 and 16 surveys appeared to be appropriate for mardon skipper occupancy since strawberry were blooming. The strawberries on the June 24 survey were at the end of their blooming cycle and fifteen Sonoran skippers were found on June 24.

Brook Meadows-

This site was surveyed on July 14, 20, and 27. This site was also surveyed in 2008. The timing for surveys appeared to be appropriate based on the condition of flowering plants, although by the 27th most flowering plants appeared to be near the end of their blooming cycle.

Camas Prairie-

This site was surveyed on June 12, 16 and 24. This site was also surveyed in 2006 and 2008. The first survey on June 12 may have been slightly early for mardon skipper based on the condition of flowering plants, but the following two surveys appeared to be at the appropriate time. Five Sonoran skippers were seen on June 24.

Gibson Prairie-

This site was surveyed on July 6, 10, and 17. This site was also surveyed in 2008. The timing for surveys appeared to be appropriate based on the condition of flowering plants.

Horkelia Meadows-

This site was surveyed on July 14, 20, and 27. This site was also surveyed in 2008. The timing for surveys appeared to be appropriate based on the condition of flowering plants, although by the 27th most flowering plants appeared to have completed their blooming cycle.

Long Prairie-

This site was surveyed on July 6, 10, and 17. This site was also surveyed in 2008. The timing for surveys appeared to be appropriate based on the condition of flowering plants.

Based on previous observations of mardon skippers and plant phenology at known sites in Washington, we are confident that the timing of surveys were optimal and provided the best opportunity to observe mardon skippers if they were present. It should be noted that in 2009, the known sites in Washington reported a drastic reduction in the numbers of mardon skippers from previous years. If this species is present on the Mt. Hood National Forest, 2009 might have been a year with far fewer individuals than might otherwise have been expected. If they followed the same reproductive pattern as the Washington populations, they could have been more difficult to detect.

Only two site visits were made during the surveys conducted in 2008 and previous surveys were conducted at two of the sites in 2006, therefore, surveys for all sites on the Mt. Hood National forest have not been conducted to protocol in two consecutive years. Given the similarity of the sites on the Mt. Hood National forest to the occupied sites on Mt. Adams, we conclude that additional surveys are warranted.

Acknowledgements

Thanks to Vince Harke of the U.S. Fish and Wildlife Service for providing his expertise and assistance, and to Cathy Flick of The U.S. Forest Service for sharing her knowledge of the habitat in the area and information from previous surveys.

References

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Appendix A

Summary of Butterfly Species Found During Mardon Skipper Surveys 2009.

Site Name:	Bear Springs	Brooks Meadows	Camas Prairie	Gibson Prairie	Horkelia Meadows	Long Prairie
Survey Dates:	Jun 11,16, 24	Jul 14, 20, 27	Jun 12,16,24	Jul 6, 10, 17	Jul 14, 20,27	Jul 6, 10, 17
Elevation	3000 ft	4300 ft	3200 ft	3800 ft	4800 ft	3600 ft
Butterfly Species						
Skippers						
Pacuvius Duskywing		X			X	
Two-Banded Checkered Skipper						
Sonoran Skipper	X		X			
Dun Skipper						
Swallowtails and Parnassians						
Clodius Parnassian						
Pale Tiger Swallowtail	X		X		X	
Whites, Marbles, Sulphurs						
Clouded Sulphur						
Orange Sulphur						
Western Sulphur				X		X
Sulphur species		X		X	X	
Coppers						
Lilac-bordered Copper		X				
Mariposa Copper						
Copper species			X			
Blues						
Silvery Blue					X	
Anna's Blue	X			X		
Boisduval's Blue						
Blue species			X		X	X
Fritillaries & Checkerspots						
Western Meadow Fritillary		X		X	X	X
Mylitta Crescent (?)						
Chalcedona checkerspot						
checkerspot species	X				X	
Tortoiseshells, etc.						
California Tortioseshell	X	X	X		X	
Mourning Cloak			X		X	
Lorquin's Admiral			X		X	
Satyrs and Ringlets						
Ochre Ringlet						
Great Artic	X	X	X		X	X
Day Moths						
Cinnabar Moth						