

**Mardon Skipper Monitoring-Middle Fork and McKenzie River Ranger Districts  
 Mckenzie River Ranger District  
 Willamette National Forest  
 USDA Forest Service, Pacific Northwest Region  
 TES Project for Fiscal Year 2008**

The purpose of this project was to continue surveys for Mardon Skipper on the Willamette National Forest. Suitable habitat was surveyed on the Middle Fork and McKenzie River Ranger Districts.

Orthophoto maps were prepared for the contractor and Willamette National Forest wildlife biologists. Time was also spent verifying road conditions with district personnel or checking access due to the unusually high snow levels in the spring of 2008. The Mardon Skipper Protocol was used to conduct surveys, however 3 survey visits were not conducted to all sites. Surveys at 14 sites (662 acres) were conducted by a lepidoperist contractor and Willamette National Forest wildlife biologists. A survey completion report was written by the contractor and a two-year summary report is in progress for all surveys conducted on the Willamette National Forest within the past two years.

No Mardon Skippers were found. 2008 was a high snow year and surveys occurred much later than initially projected, even into August due to access issues. No mardon skippers were found in 2008 nor have they been documented on the Willamette National Forest. The 2007 and 2008 survey efforts however have been inadequate to recommend that Mardon Skipper be removed from the Willamette National Forest sensitive species list. Negative survey polygons will be entered into NRIS in FY2009.

Ruby Seitz, Wildlife Biologist, McKenzie Bridge, OR.

Category	# Miles Stream Restore	# Acres Lake Restore	# Ac. TES Habitat Restore	# Struct. Accomp	# Miles Inven.	# Acres Inven.	# Ac. TES Habitat Inventoried	# Monitor Plans	# Admin Studies	(a) NFWF Program Management Dollars	(b) NFWF Overhead Dollars	(c) NFWF Project Dollars	(d) Total NFWF Dollars (a)+(b)+(c)	(e) FS Other Resource (Non-NFWF) Dollars
Totals	0	0	0	0	0	0	662	0	0	100	0	0	100	5,513
Mardon Skipper	0	0	0	0	0	0	662	0	0	100	0	0	100	5,513

# **2008 Surveys for Mardon Skipper on the Willamette National Forest**

A Summary Report to the  
U.S. Forest Service,  
Willamette National Forest,  
McKenzie River Ranger District

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## SUMMARY

Surveys for Mardon Skipper were conducted at 11 sites on the Willamette National Forest during July and early August, 2008. While the calendar dates surveyed would normally be considered too late, heavy snowpack and frequent poor weather conditions required earlier target dates to be postponed multiple times. Although most sites appeared to have at least some suitable habitat for Mardon Skipper, it was never documented. Within the Willamette National Forest, the highest priority sites for Mardon Skipper have now been adequately surveyed.

## INTRODUCTION

Mardon Skipper (*Polites mardon*) is a rare grass-feeding skipper (Lepidoptera:Hesperiidae) known from four distinct areas of the Pacific Northwest: the Puget Trough, the southern Washington Cascades, the southern Oregon Cascades and coastal northern California/southern Oregon. It is currently a candidate for federal protection under the Endangered Species Act.

Habitats for Mardon Skipper include a wide variety of wet to dry prairie communities at elevations from sea level to over 5,000 feet. Most populations are associated with grassland habitats that include a strong native bunchgrass component, ample nectar sources and a seasonal or permanent water source.

The Willamette National Forest (WNF) is located on the west slope of the Oregon Cascades within a large “distribution gap” for Mardon Skipper. Surveys for potentially undiscovered populations have followed a broad approach that includes the entire array of habitats and flight periods known for Mardon Skipper populations to the north and south of the WNF.

Survey protocol has been followed - whenever possible and appropriate - for all Mardon Skipper surveys to provide consistency and thoroughness. Careful attention has been given to local conditions, given that Mardon Skipper populations can be small and localized and local flight periods may last no more than two weeks. The actual timing of Mardon Skipper surveys on a site-by-site basis (generally determined by elevation) was adjusted to coincide with the desired plant-butterfly phenology.

## METHODS

Surveys for Mardon Skipper were conducted at various grassland sites throughout the WNF during July and early August, 2007. All surveys were performed to the best of the surveyor’s abilities within the established Mardon Skipper protocol. Priority survey sites were submitted by district biologists to coordinator Ruby Seitz (wildlife biologist, USFS, McKenzie Bridge) who was responsible for the final survey itinerary followed herein. Survey flexibility was maximized as to actual survey dates and the order in which surveys were conducted due to heavy snowpack and delayed spring-summer conditions for virtually all sites visited.

## RESULTS & DISCUSSION

A total of 11 surveys were conducted for Mardon Skipper within the McKenzie and Middle Fork districts of the WNF. Surveys were performed July 6-7, July 28-29 and August 3-5. While some locations appeared to include good potential habitat, **no Mardon Skippers were documented anywhere**. Given the extent to which the WNF has been surveyed for Mardon Skipper over the past two years, it is my opinion that additional searches for this butterfly are optional for those sites that have been covered to date. A Bureau of Land Management GeoBOB Fauna Survey Form was created for each survey conducted and will be submitted separately once reviewed and amended as needed by Ruby Seitz. A checklist of butterflies encountered during this series of surveys is included in this report as an Appendix. Summary results for sites surveyed are presented below.

### July 6

#### **1. Bunchgrass Ridge** (McKenzie River District; 128 acres; elevation 4200-4500 ft.).

The large meadow at the east end of this meadow complex was surveyed in some detail followed by more cursory observations within smaller prairie openings. Bunchgrasses and nectar sources were locally plentiful. Butterflies were present throughout in moderate numbers. Survey timing was relatively soon after a late snowpack had receded and can be considered fairly early within the presumed Mardon Skipper flight period. Mardon Skipper was not observed.

**2. Upper Foley Ridge** (McKenzie River District; 37 & 13 acre portions and adjacent roadside; 3550 ft.). The seed orchard and east side of the adjacent road were without appropriate potential habitat and were only briefly searched. Small portions of the 13 acre portion of the site N of the seed orchard had low potential for Mardon and none were observed. The uncommonly observed skipper *Erynnis pacuvius* was found at this site.

### July 7

#### **1. Box Canyon Meadow** (McKenzie River District; 14 acres; elevation 3800 ft.).

The entire meadow complex was well searched. Bunchgrasses and nectar sources were adequate and overall butterfly abundance was moderate. Water was present within and adjacent to the site. Some grassy portions of the meadow appeared suitable for Mardon Skipper. This site supported a population of *Polites sonora* in 2007, although it was not observed during this 2008 survey.

#### **2. Brock Meadow** (Middle Fork District; 25 acres; elevation 2500 ft.).

This meadow is dominated by grasses that are relatively high in stature, although some areas do contain lower profile vegetation with bunchgrasses and nectar sources that include *Prunella*. Water was present nearby. Butterfly abundance was moderate. The better-looking potential Mardon Skipper habitat here was thoroughly searched.

#### **3. Major Prairie** (Middle Fork District; 13 acres; elevation 2200 ft.).

Potential Mardon Skipper habitat was not extensive at this small and somewhat isolated site, amounting to small stringers and patches within an acre or two of shrubby

vegetation. Nectar sources were available and adjacent moisture was present in a roadside seep/ditch. Butterfly abundance was moderate. In contrast to 2007 surveys there, neither the Persius Duskywing Skipper nor the California Sister was observed. Two dragonfly species – Tanypteryx hageni and Cordulegaster dorsalis – were observed.

NOTE: No additional surveys are required for the above three sites.

July 28

**1. Loletta Lakes Meadows** (Middle Fork District; 4 areas totaling 101 acres; elevation 4800-5300 ft.). Surveys were conducted with Cheron Ferland from the Middle Fork District office. Only small areas within any single site could be considered potential habitat for Mardon Skipper. While butterflies were moderately abundant throughout the general area, no Mardon Skippers were observed. Brief notes for each sub-area follow:

a. 7 acre area at west end – Extremely wet. Essentially a marsh or swamp with a narrow border that was somewhat drier. Moderate nectar sources, but little if any bunchgrass, although some bunchgrasses were observed across the road in the vicinity of a small seasonal pond.

b. 6 acre area east of the above – The site was omitted from actual surveys based on roadside observations. It appeared to be extremely wet throughout and offered no area of appropriate potential habitat for the target species.

c. Main 75 acre area – The southern half of this large complex of wet meadows and drier areas with shrubs was surveyed from Rd.5851 whereas the northern portion was accessed via Rd.5850 and a short hike in via Rd.151. Southern areas were very wet due to the seep-spring nature of the associated soils and run-off. The largest northern meadow was entered by “bushwhacking” through thick willows. Once there, the meadow appeared to be almost entirely composed of chest-high *Senecio* with some lower profile forbs and grasses on the northwest uphill edge. No Mardon Skippers were encountered.

**2. Upper Coal Creek Meadows** – (Middle Fork District; 19 acres; elevation 4700 ft.). Survey was conducted with Cheron Ferland. Site was accessed from the east side (Rd. 5850) and all open portions with low vegetation were searched. Vegetation was largely thick and tall with some patches of lower quality potential Mardon habitat. Butterflies were fairly abundant overall.

July 29

While the intention was to continue surveying, cloudy conditions and the onset of rain by mid-morning made surveys impossible on this date. Additional fieldwork was delayed until the next available sample period (August 3-5).

August 3

**1. Holland Meadows Complex** (Middle Fork District; 32 acres; about 4800 ft.). Only the Willamette National Forest portion of the complex was surveyed in order to achieve WNF Mardon Skipper survey objectives within the available time. This site offered a good example of the late peak for Cascadian wildflowers and butterflies during

the summer of 2008, with both groups in conspicuous abundance. Unfortunately, little potential habitat for Mardon Skipper was present and no individuals were observed.

**2. Johnson Meadows Complex** (Middle Fork District; 7 areas totaling 63 acres; elevation 4500-4800 feet). Butterflies were fairly abundant even during the late afternoon when the area was surveyed amidst growing shadows. Sub-groupings of these meadows are treated below:

a. NE Subgroup (9 & 2 acres) – These 2 contiguous meadows were almost entirely represented as monocultures of bracken fern (*Pteridium aquilinum*) during these surveys. No suitable Mardon habitat was in evidence.

b. Central 3 acre meadow – Site was accessed via a cross-country hike through mature forest from Rd.5850. Meadow (portion on WNF land) was largely composed of thick forbs, with little potential for Mardon Skipper and none were observed.

c. SW Subgroup (4, 8, 12 & 25 acres) – These 4 meadows were surveyed all together. Lower portions contained dense forbs. Only the upland area of the 12 acre meadow had ample bunchgrasses, but Mardon Skipper was not observed there. Nectar sources were in ample supply.

#### August 5

**1. Joe's Prairie** (Middle Fork District; 32 acres in 2 adjacent areas; elevation about 5,000 ft.). A relatively large portion of this meadow complex contained grassy areas that appeared suitable for Mardon Skipper. Nectar sources were locally abundant and diverse. Butterfly abundance was high throughout much of the site. Skippers were encountered and included the orange-brown patterned species *Hesperia colorado* and *Ochlodes sylvanoides*. The phenology of both plant and butterfly communities suggested that this date was functionally later than when I surveyed the site in 2007. No additional surveys for Mardon Skipper are needed here.

**2. Groundhog Meadows Area** (Middle Fork District; Waterdog Lake plus 3 other sites that totaled 40 acres; elevation 5,450-5,800 ft.).

a. Waterdog Lakes – I surveyed the best potential habitat at the north end of the lake. Ample bunchgrasses were present and cinquefoil was in bloom. A moderate number of butterflies were seen in the area. No Mardon Skippers were present.

b. “North” Groundhog Meadow (19 acres) – A lush meadow with extensive bunchgrasses and plenty of diverse nectar sources in and adjacent to it. Butterflies were abundant, but there was no sign of Mardon Skipper.

c. Unnamed 5 acre meadow – A small amount of potential habitat at the lower (west) end, although that portion of the meadow was largely inappropriate. Vegetation became too tall and dense upslope to the east. Butterflies were moderately abundant, but no Mardon Skippers were encountered.

d. Unnamed 16 acre meadow – Downslope and to the west of the largest Groundhog meadow (surveyed 8/6). Low-profile bunchgrass habitat was very scarce, with most grassy areas tall and dense. Nectar sources and associated butterflies were reasonably abundant. No Mardon Skippers were observed.

August 6

**Groundhog Meadow – largest of this complex of meadows** (Middle Fork District; 93 acres; elevation 5,500-5,800 ft.). This large meadow harbored a diversity of habitat types and offered a variety of nectar sources in patchy, but relatively high abundance. Butterflies were moderately abundant overall. Although bunchgrasses were most prevalent upslope, the best potential Mardon Skipper habitat was at the southern base of this site. There, a small headwater stream meandered through a lush, relatively flat meadow with fairly abundant nectar sources and patchy bunchgrasses within reasonably low-profile vegetation. Sonora skipper was present, but no Mardon Skippers were observed.

## CONCLUSIONS

After two seasons of focused survey effort on the Willamette National Forest, Mardon Skipper has not been documented there. This is good evidence that the “Distribution Gap” that has been observed between Mardon Skipper populations to the north and south is a real one. Barring the discovery of additional sites on the WNF which could host Mardon Skipper and would perhaps merit butterfly surveys, I feel comfortable recommending that no additional effort be expended towards documenting this species.

Take note that prairies and meadows within the Western and High Cascade Ranges are extremely important habitats and should be conserved and restored for their unique qualities and high biodiversity value. As evidence, fully 61 species of butterflies and day-active moths were documented during these 2008 surveys and are listed below (see Appendix).

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NOTE: Additional details for these surveys may be available in the associated GeoBOB Survey Forms. Also, numerous site/habitat photographs were taken during most surveys and will be made available upon request.

APPENDIX – Butterflies, day-active moths & dragonflies documented during 2008  
Mardon Skipper surveys on the Willamette National Forest.

**Butterflies (47 Species)**

(Hesperiidae) *Carterocephalus palaemon*  
(Hesperiidae) *Epargyreus clarus*  
(Hesperiidae) *Erynnis icelus*  
(Hesperiidae) *Erynnis pacuvius*  
(Hesperiidae) *Erynnis persius*  
(Hesperiidae) *Erynnis propertius*  
(Hesperiidae) *Hesperia colorado*  
(Hesperiidae) *Hesperia juba*  
(Hesperiidae) *Ochlodes sylvanoides*  
(Hesperiidae) *Polites sonora*  
(Hesperiidae) *Pyrgus communis*  
(Hesperiidae) *Pyrgus ruralis*  
(Lycaenidae) *Celastrina echo*  
(Lycaenidae) *Cupido amyntula*  
(Lycaenidae) *Cupido comyntas*  
(Lycaenidae) *Euphilotes enoptes*  
(Lycaenidae) *Glaucopsyche lygdamus*  
(Lycaenidae) *Lycaena editha*  
(Lycaenidae) *Lycaena heteronea*  
(Lycaenidae) *Lycaena mariposa*  
(Lycaenidae) *Lycaena nivalis*  
(Lycaenidae) *Plebejus anna*  
(Lycaenidae) *Plebejus icarioides*  
(Lycaenidae) *Plebejus ?lupini*  
(Lycaenidae) *Plebejus saepiolus*  
(Nymphalidae) *Boloria epithore*  
(Nymphalidae) *Cercyonis pegala*  
(Nymphalidae) *Chlosyne hoffmanni*  
(Nymphalidae) *Coenonympha tullia*  
(Nymphalidae) *Euphydryas chalcedona*  
(Nymphalidae) *Euphydryas editha*  
(Nymphalidae) *Limentis lorquini*  
(Nymphalidae) *Nymphalis californica*  
(Nymphalidae) *Oeneis nevadensis*  
(Nymphalidae) *Phyciodes pulchella*  
(Nymphalidae) *Speyeria cybele*  
(Nymphalidae) *Speyeria hesperis*  
(Nymphalidae) *Speyeria hydaspe*  
(Nymphalidae) *Vanessa annabella*  
(Nymphalidae) *Vanessa cardui*

(Nymphalidae) *Vanessa virginiensis*  
(Papilionidae) *Papilio eurymedon*  
(Papilionidae) *Papilio zelicaon*  
(Papilionidae) *Parnassius clodius*  
(Pieridae) *Anthocharis sara*  
(Pieridae) *Colias eurytheme*  
(Pieridae) *Pontia occidentalis*

**Moths (14 Species)**

(Arctiidae) *Gnophaela vermiculata*  
(Arctiidae) *Spilosoma pteridis*  
(Arctiidae) *Tyria jacobaeae*  
(Geometridae) *Lomographa semiclarata*  
(Geometridae) *Scopula sideraria*  
(Geometridae) “green species”  
(Noctuidae) *Caenurgina caerulea*  
(Noctuidae) *Drasteria divergens*  
(Noctuidae) *Euclidea arditia*  
(Noctuidae) *Heliothus oregonica*  
(Noctuidae) *Lithacodia albidula*  
(Noctuidae) *Schinia honesta*  
(Saturniidae) *Hemileuca eglanterina*  
(Sphingidae) *Hemaris diffinis*

**Dragonflies (2 Species)**

(Cordulegastridae) *Cordulegaster dorsalis*  
(Petaluridae) *Tanypteryx hageni*