

2010 Surveys for Mardon Skipper (*Polites mardon*) on the
Rogue River National Forest



Report Submitted by

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SUMMARY

A total of 18 surveys for Mardon skipper were conducted at 13 sites on the Rogue River National Forest and adjacent BLM lands during June and July of 2010. Some sites were surveyed for the first time while others were revisited due to the past presence of Mardon skipper there, an overall survey effort that had not been completed to protocol, or was otherwise deemed reasonable. Mardon skipper was documented at two new sites in 2010. The first was a small moist meadow with a strong serpentine and bunchgrass component near Signal Buttes where a single male was observed. The second was in remote Windy Valley Meadow where a population estimated at well over 100 individuals was discovered, based on two visits. There are now five coastal Oregon sites where Mardon skipper has been documented over the past several years. Three of these are on Rogue River National Forest lands, one is on BLM land and one is on Oregon State Park property.

INTRODUCTION

Mardon skipper (*Polites mardon*) is a federal Candidate for protection under the Endangered Species Act. It is endemic to the Pacific Northwest where it occupies a highly disjunct distribution in four discrete areas (Mattoon et al 1998, Pyle 2002): the 1) Puget Trough and 2) Mount Adams regions of Washington State (Hinchliff 1996, Potter et al 1999), 3) the southern Oregon Cascades (Hinchliff 1994, Warren 2005) and 4) coastal portions of northern California (Mattoon et al 1998) and southern Oregon (Andrew Warren communication 2006, Ross 2007, 2008, 2009a). This spotty distribution illustrates the relict nature of Mardon populations within the region, and, when combined with the scarcity of formerly more widespread Pacific Northwest prairies, suggests that there may be a significant threat to the species due to habitat loss.

Coastal Oregon Mardon skipper populations are closely associated with serpentine-based soils supporting wet-dry transitional prairie habitats that include plentiful bunchgrasses and varied and abundant nectar sources. Indeed, each coastal Mardon record to date has been from this basic habitat type. Specimens of *Polites mardon* from coastal Oregon were first discovered at The McGuire Center for Lepidoptera and Biodiversity (Gainesville, Florida) by Andrew Warren with the label data “2 miles N of Gold Beach”, suggesting the locality of collection to be the serpentine-bunchgrass hillsides to the north of the Rogue River near Wedderburn. Ross (2007) found a single male Mardon skipper at the base of a bunchgrass hillside at Lone Ranch State Beach near Cape Ferrello and discovered a larger population on BLM lands on serpentine meadow habitat at Hunter Creek ACEC the following year (Ross 2008). In 2009, a single male was observed in a small moist meadow at a new location on the Rogue River National Forest, east of Gold Beach (Ross 2009b).

While many coastal serpentine meadows have been surveyed for Mardon skipper, some locations have been overlooked and others have not been surveyed to protocol. This study builds on previous ones and should help to focus future Mardon skipper work.

METHODS

A list of priority sites for Mardon skipper surveys was obtained from Rogue River-Siskiyou National Forest biologists and was the primary focus of this study (see Table).

The published survey protocol for Mardon skipper (Seitz et al 2006) was largely followed although a more rapid assessment of some sites was made when deemed reasonable. For each survey conducted, the site was visited within the known or suspected flight period for Mardon skipper. The Hunter Creek ACEC population (BLM lands) - where Mardon skipper was documented flying in 2008 and 2009 - was included as a reference site for this purpose. Surveys were conducted under conditions suitable for butterfly activity with mid-survey pauses as warranted when rain showers or clouds temporarily prevailed – a not uncommon spring occurrence. Each site was carefully inspected on foot for the presence of Mardon skipper and site characteristics (habitat size, habitat suitability, larval and adult plant resources, butterfly species present) were noted along with date, time and weather conditions encountered. The data was then transferred to BLM GeoBOB forms which are summarized below.

SUMMARY OF SURVEY RESULTS

A total of 13 Rogue River National Forest sites were surveyed for Mardon skipper during 2010. **Mardon skipper was observed for the first time at two sites: Signal Buttes and Windy Valley Meadow. Both sites are on Rogue River National Forest lands.** A cool spring delayed the flight period typical of most area butterfly species by as much as one month and made timing of these surveys more challenging than usual. Sites and survey results are summarized below in the order in which they were first visited in 2010.

1. Rd #100 Meadow (off Rd.#3313) – Surveyed 15 June (with Jessie Dubuque) and 24 June 2010. The site was also surveyed 22 May 2009 (when a fresh male Mardon skipper was observed) and on 12 June 2009. **Mardon skipper was not observed in 2010.** The site contains all the components of a typical Mardon skipper meadow on a small scale and appears to be part of a larger complex of small, loosely connected serpentine-bunchgrass meadows and roadside habitats. The lower portion of the site contains wet meadow habitat (camas lily present) whereas the area just upslope is much drier and supports abundant bunchgrasses. Nectar sources were plentiful and varied and other butterflies were locally common, although somewhat less so than in 2009. The site should be monitored annually to better determine the frequency of use by Mardon skipper and to determine whether or not it is a site used for breeding.

PLEASE NOTE: Significant and very recent off-road vehicle damage to the most fragile, moist areas of the meadow was evident on 15 June (Photo 1) and builds on the ATV damage noted in 2009 to further degrade this small and “occupied” Mardon skipper site. Measures to prevent future damage of this type are strongly recommended.

Table. Mardon Skipper Survey Areas – Priority Sites for 2010 (Table sent by Jessie Dubuque, Gold Beach Ranger Station, April 2010).

<u>Priority</u>	<u>Meadow</u>	<u>MA 9 Special Wildlife Site Number</u>	<u>Location</u>	<u>Survey History</u>	<u>Who</u>	<u>Comments</u>
High	100 Meadow	Mdw # ?	FSR 3313100	2009	D.R. + force account	Occupied Site!
High	Snow Camp	Mdw #626	FSR 3680	2009	force account	Abundant habitat/Higher elevation
High	Windy Valley	Mdw # 629	FSR 1376	None	N/A	Abundant habitat/Higher elevation
High	Signal Butte's Area & Mdw#684	Mdw #684	FSR 3680210 +220	2008, 2009	D.R. + force account	Adjacent to Hunter Creek ACEC Oak meadow #684 with high quality habitat
Moderate	Lower Sorrel Meadow - "Oak Meadow"	Mdw # ?	FSR 3318304	2009	D.R.	Majority of good habitat located on private lands.
Moderate	Saunder's	Mdw #79	FSR 3313100	2008, 2009	D.R. + force account	Good habitat
Moderate	Pebble Hill	Mdw #58	FSR 3318	2008, 2009	D.R. + force account	Good habitat, lower edge of meadow wetter
Low	Woodruff/Wilson	Mdw #671	FSR 3313120	2008, 2009	D.R. + force account	Middle meadow, inside of established trail.

2. Meadow, east side of Rd #3313, about 0.5 mile S of the Rd #100 Meadow - Surveyed 15 June 2010 (with Jessie Dubuque). The site has been informally surveyed in the past as well. It includes a small area with bunchgrasses and adequate nectar sources along a seasonally moist depression. It should be considered part of the (Meadow #100) Mardon meadow complex and included in any local monitoring plan. **Mardon skipper has not been documented here to date.**

3. Rd #220 (off Rd #3680) serpentine meadows, near Signal Buttes - Surveyed 15 June 2010 (with Jessie Dubuque). The location was visited, but not formally surveyed in the past. **Mardon skipper was not observed in 2010.** The site has good potential to host Mardon and is part of the Signal Buttes serpentine meadow complex. There are several acres of serpentine-bunchgrass habitat with seasonal moisture and adequate nectar sources. The site should be included in future monitoring of the area.

4. Woodruff Meadow #671 - Surveyed 16 June, 2010 for the first time. Surveys of the surrounding Woodruff meadows have occurred over the past two years, but this relatively hidden meadow had been overlooked. The site included diverse microhabitats and adequate nectar and moisture, but contained minimal bunchgrass or true serpentine meadow (although Jeffrey pine was present). Survey conditions were less than ideal and **Mardon skipper was not observed.** Future surveys are recommended, however, given that Mardon skipper has not been observed anywhere in the Woodruff meadow complex, any additional surveys may be given a relatively low priority.

5. Lower Sorrel Meadow (Rd #304, off Rd #3318) - Surveyed 16 June, 25 June and 10 July, 2010. **Mardon skipper was not observed.** This site has now been well surveyed for Mardon skipper and may be omitted in the future. The site offers little, if any, serpentine habitat, with deep soils and a dense grass and herb species assemblage not typical of known Mardon sites. Of note is that a rare coastal population of the Large Marble (*Euchloe ausonides*) is present there.

6. Meadow #684, below road #210 (off Rd #3680), near Signal Buttes - Surveyed 16 June 2010 (access attempted 15 June 2010 with Jessie Dubuque but was unsuccessful). While offering a little high-quality upslope habitat and a small headwater stream, much of the meadow appeared to be unsuitable for Mardon skipper due to its deep-soiled and largely non-serpentine nature. **Mardon skipper was not observed in 2010.** That stated, future surveys are warranted for the site since it is part of the Mardon-occupied Hunter Creek/Signal Buttes meadow complex and the presence of the skipper there cannot be ruled out.

7. Hunter Creek ACEC (BLM) - Surveyed 24 June 2010. **Mardon skipper was not observed in 2010,** although it was recorded in 2008 and 2009. Its apparent absence in 2010 is somewhat puzzling given its strong presence there in 2008. Hunter Creek offers superb serpentine-bunchgrass habitat and should be monitored annually for this rare insect.

8. Signal Buttes meadows, from Rd #190 west towards Hunter Creek ACEC - Surveyed 24 June 2010 when **a fresh male Mardon skipper was observed for the first time** in a

small patch of wet serpentine meadow habitat (Photo 2) on the trail to Hunter Creek ACEC. The site contains seasonally wet (seep) meadow habitat within a predominantly dry serpentine-shrub community. The Signal Buttes area has been included in surveys since at least 2008. The documentation of Mardon skipper there has been much anticipated and demonstrates the value of conducting surveys over multiple years as a strategy for detection.

9. Windy Valley Meadow #629 - Surveyed 26 June and 9 July (with Mike Miller and Jessie Dubuque), 2010. The site contains several acres of prime Mardon skipper habitat (abundant bunch grasses and nectar sources) at the upper end of a large seasonally wet sedge meadow. **On 26 June, about 30 fresh male Mardon skippers were observed. On July 9, an estimated 100+ individuals of male and female skippers combined were counted by Miller, Dubuque and Ross. This site is the largest known population of coastal Oregon Mardon skipper and should be monitored for population size and trend annually.** (Cover photo, Photo 3).

10. Snow Camp Meadow #626 - Surveyed 26 June and 9 July, 2010. This site appears to have all the necessary components of a high quality Mardon skipper meadow, yet **the insect was not observed there in 2010.** Future surveys are highly recommended.

11. Roadside serpentine habitats (about 1000 feet SW of Saunder's Meadow) - Surveyed 10 July 2010. Also surveyed 23 May 2009. **Mardon skipper was not documented here,** but the site appears to have high quality habitat. Continued monitoring is recommended, but does not need to be a high level priority.

12. Saunder's Meadow #79 - Surveyed 10 July 2010 (and 23 May 2009). **Mardon skipper was not observed.** The meadow appears to lack the necessary serpentine-grass nature typical of Mardon skipper sites, but contains nectar sources that may attract Mardon skipper on occasion, given its proximity to higher quality roadside habitats nearby (see above). Continued monitoring may be considered, but should receive a low priority.

13. Upper Sorrel Meadow - Surveyed 10 July 2010. While not a priority site, the location had not been visited previously. **It did not appear to contain suitable Mardon skipper habitat and can be omitted from future surveys.**

NOTE: Pebble Hill Meadow #58 was not surveyed in 2010 as it had been adequately surveyed in past years.

CONCLUSIONS

Two new Mardon skipper sites were discovered during this study. Both are on the Rogue River National Forest. The Windy Walley Meadow site is of particular importance as it hosts the largest known Mardon skipper population in coastal Oregon. While Mardon skipper must still be considered exceedingly rare, the discovery of each new site helps to document its distribution and support its conservation.

The lack of Mardon skipper observations at Hunter Creek and the #100 Meadow in 2010 are a bit surprising, but were likely confounded by the particularly cool weather that delayed and suppressed spring butterfly activity throughout the region. Future Mardon skipper observations at these sites are expected.

While additional Mardon skipper localities may remain to be identified and surveyed, future efforts are probably best focused on monitoring known areas of Mardon skipper occupation and obtaining annual population estimates for the Hunter Creek and Windy Valley sites where populations - and not just individuals - have been documented. Future work should also include more detailed ecological and life history studies, perhaps best conducted at the Windy Valley site.

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PHOTOGRAPHS



Cover Photo. Mardon skipper at Windy Valley Meadow (26 June 2010).



Photo 1. Damage to the Rd #100 meadow Mardon skipper habitat (15 June 2010).



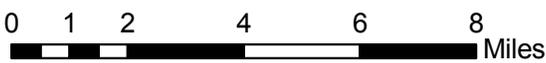
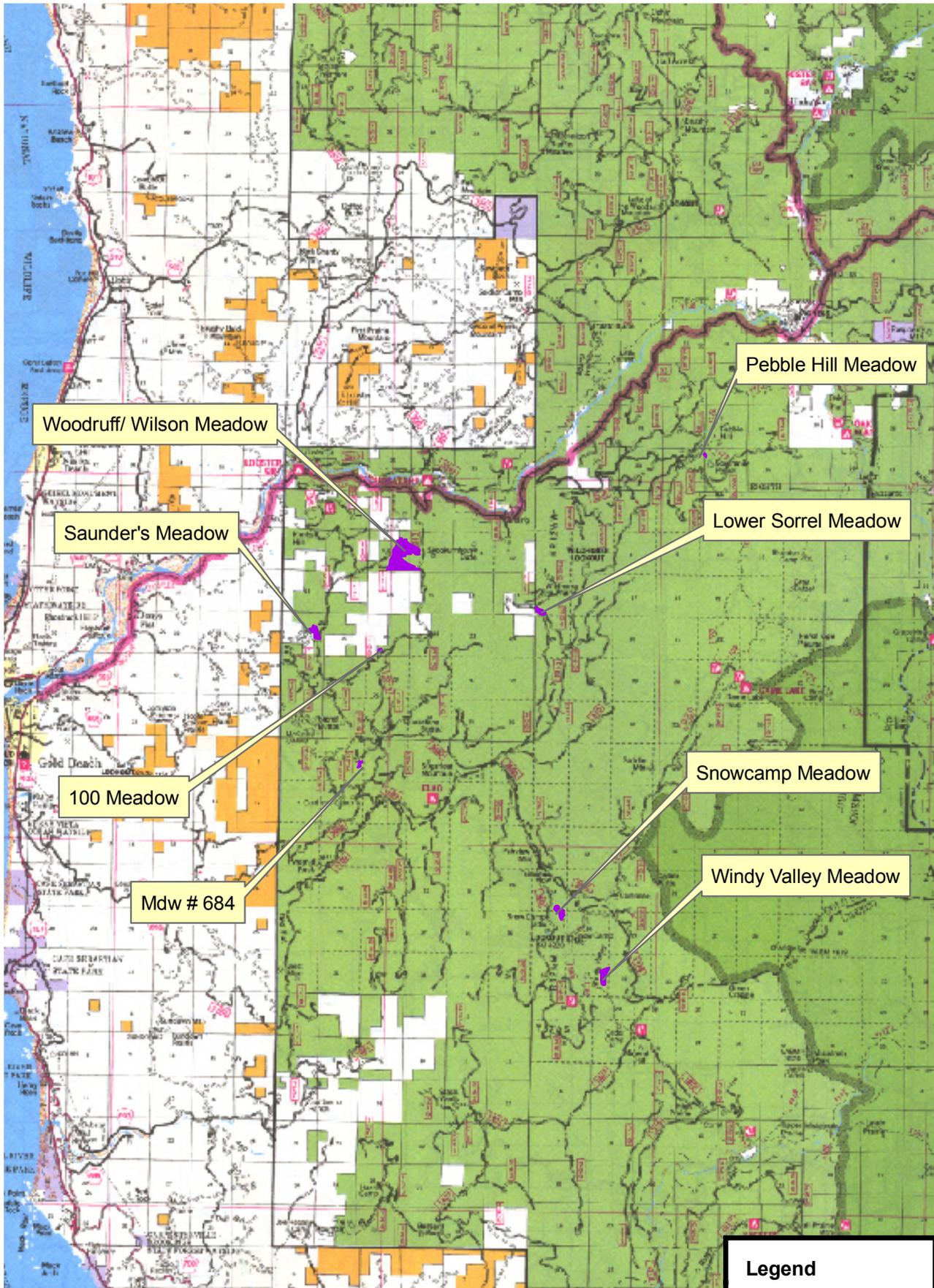
Photo 2. Signal Buttes. A small wet meadow where a male Mardon skipper was present (24 June 2010).



Photo 3. Windy Valley Meadow Mardon skipper habitat (26 June 2010).



Mardon Skipper Surveys 2010
Vicinity map
Rogue River - Siskiyou National Forest
Gold Beach Ranger District
W. M., Curry County, Oregon



Legend
Mardon_survey_2010