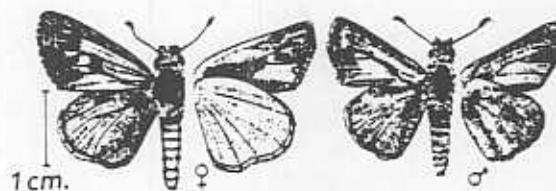


THE BUTTERFLIES OF KITTSOON AND  
ROSEAU COUNTIES, MINNESOTA, WITH  
SPECIAL EMPHASIS ON THE DAKOTA SKIPPER  
HESPERIA DACOTAE (Skinner)

Final Report  
submitted to the Minnesota Nongame Wildlife Program  
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Title page drawings of the Dakota skippers reproduced from Coffin and Pfannmuller (1988).

**ABSTRACT:** During the summer of 1991 a survey of Kittson and Roseau Counties of Minnesota was conducted to search for butterfly species listed by the Department of Natural Resources (DNR) as endangered, threatened, or of special concern, within the state of Minnesota. Fieldwork was conducted every day weather permitted from 14 May to 11 August, 1991. Special attention was given to the Dakota skipper, Hesperia dacotae (Skinner); a butterfly being considered for listing as a threatened species under the Federal Endangered Species Act by the U.S. Fish and Wildlife Service. In addition to this butterfly, 13 other species were targeted in the survey.

A total of 88 species were recorded for the two counties, 66 from Kittson County and 71 from Roseau County. Some significant finds included three new locations for Hesperia dacotae in Kittson County, and two new locations for the Assiniboia skipper, Hesperia comma assiniboia (Lyman), also in Kittson County. The latter species is listed as "endangered" within the state of Minnesota by the DNR.

Seven species of butterflies listed as "of special concern" within the state of Minnesota by the DNR were either recorded for the first time from the survey area, or from additional sites within the survey area. These records include: Poweshiek skipperling, Oarisma poweshiek (Parker), first records for Roseau County--two sites, nine new sites in Kittson County; Bog copper, Epidemia epixanthe michiganensis (Rawson), first records for Roseau County--four sites; Dorcas copper, Epidemia dorcas dorcas (W. Kirby), first records for Kittson County--eight sites, twelve new sites in Roseau County; Frigga fritillary, Clossiana frigga saga (Staudinger), five new Roseau County sites; Bog fritillary, Clossiana eunomia dawsoni (Barnes & McDunnough), first records for Roseau County--seven sites; Red-disked alpine, Erebia discoidalis discoidalis (W. Kirby), six new Roseau County sites; Jutta arctic, Oeneis jutta ascerta Masters & Sorenson, first records for Roseau County--four sites.

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## INTRODUCTION

The Dakota skipper, Hesperia dacotae (Skinner) is a small butterfly that is restricted to northern Great Plains prairies. Since its description in 1911, it has been taken in five states (South Dakota, Iowa, Illinois, Minnesota, North Dakota) and one Canadian province (Manitoba) (Royer, 1988). Since then, however, it has become extinct in both Iowa and Illinois and has become a species that is watched very carefully by the U.S. Fish and Wildlife Service. Some of the threats this skipper faces are the use of herbicides and the alteration of habitat due to gravel mining and livestock grazing. However, the overwhelming reason for its decline is the loss of habitat due to cropland conversion (Dana, 1983; McCabe, 1981). Because of increased development pressures, many of the smaller unprotected sites that at present support skipper populations may not harbor populations in the near future. It is imperative that we search for new sites and continue to monitor populations on existing sites.

Minnesota and North Dakota now appear to be the "strongholds" for this species. Collection records exist for 16 Minnesota counties, although several represent a single collection site and a number of these are decades old (Coffin and Pfannmuller, 1988). North Dakota boasts 16 separate locations for the Dakota skipper although many sites are less than a section in size (Royer, 1988).

Until this past summer, much of the Dakota skipper survey work in Minnesota was concentrated in the southwest or west-central part of the state. Because of some large, fairly undisturbed prairie and brush prairie areas in the northwestern part of the state (i.e.: Caribou WMA, Lake Bronson State Park) survey emphasis was focused on Kittson and Roseau counties.

In 1991, funded by a section 15 grant to the section of Wildlife, Minnesota Department of Natural Resources (MDNR), a field plan was prepared and implemented to survey Kittson and Roseau Counties for the Dakota skipper and other rare butterflies. The major emphasis of this work was directed toward identification of additional populations of the Dakota skipper.

### OBJECTIVES:

1. Prepare a written work plan for surveying for the Dakota skipper and other rare butterflies in Kittson and Roseau counties during the 1991 field season.
2. Prepare all necessary field maps and field data forms (see Methods section).
3. Implement field plan (see Methods section).
4. Collect voucher specimens of rare butterflies at each survey site locality (Appendix II).
5. Prepare a final report and documentation that summarizes the results of the butterfly surveys.

## METHODS

The survey of Kittson and Roseau counties for rare butterflies was conducted from May through August, 1991, during various butterfly flight periods. The survey was coordinated by the Minnesota County Biological Survey (MCBS) of the Minnesota Department of Natural Resources. The principal surveyor was David Cuthrell, an experienced collector of Lepidoptera in Iowa and Minnesota and presently a graduate student at North Dakota State University.

In addition to the Dakota skipper, a total of 13 butterflies were chosen as survey species (Table 1). These butterflies were selected because of their current state status or because we are trying to assess their habitat requirements and distribution within Minnesota. Since many of these butterflies are confined to narrowly defined plant community types, sites were selected in such a way as to match specific habitats with associated butterflies (Table 2).

TABLE 1. 1991 survey target species for Kittson and Roseau counties.

Common Name	Scientific Name	MN Status
Uhler's arctic	<u>Oeneis uhleri</u>	Endangered
Assiniboia skipper	<u>Hesperia comma assiniboia</u>	Endangered
Dakota skipper	<u>Hesperia dacotae</u>	Threatened
Poweshiek skipperling	<u>Oarisma poweshiek</u>	Special Concern
Bog copper	<u>Epidemia epixanthe</u>	Special Concern
Dorcas copper	<u>Epidemia dorcas</u>	Special Concern
Frigga fritillary	<u>Clossiana frigga</u>	Special Concern
Bog fritillary	<u>Clossiana eunomia</u>	Special Concern
Freija fritillary	<u>Clossiana freija</u>	Special Concern
Red-disked alpine	<u>Erebia discoidalis</u>	Special Concern
Disa alpine	<u>Erebia disa</u>	Special Concern
Jutta arctic	<u>Oeneis jutta</u>	Special Concern
Garita skipperling	<u>Oarisma garita</u>	Not ranked
Purple lesser fritillary	<u>Clossiana titania</u>	Not ranked

Survey sites were selected by using several different sources of information. These included: aerial photo interpretation, soil surveys, historic butterfly records, discussions with MDNR staff including MCBS staff, area wildlife managers, and state park naturalists. In addition roadside reconnaissance was used to evaluate sites selected by the above methods and to identify new sites. Once sites were selected they were delineated on 7.5' topographic maps and also on county road maps. These maps are on file with the Minnesota County Biological Survey, MDNR.



TABLE 2. 1991 target species and associated habitats.

Species	Habitat
<u>O. uhleri</u>	Dry sandy shortgrass and mixed-grass prairies.
<u>H. c. assiniboia</u>	Sandy mixed-grass prairies.
<u>H. dacotae</u>	Open undisturbed prairie, mesic to dry.
<u>O. poweshiek</u>	Prairies ranging from wet-mesic to dry.
<u>E. epixanthe</u>	Tamarack and spruce bogs where <u>Vaccinium</u> occurs.
<u>E. dorcas</u>	Bogs or wet meadows with <u>Potentilla fruticosa</u> .
<u>C. frigga</u>	Peatlands, wet sphagnum and willow bogs.
<u>C. eunomia</u>	Spruce and tamarack bogs, or along bog margins.
<u>C. freiija</u>	Peatlands, poor fen areas, and willow bogs.
<u>E. discoidalis</u>	Moist meadows, clearings in bogs, forest edges.
<u>E. disa</u>	Thick moist black spruce swamps.
<u>O. jutta</u>	Black spruce and tamarack sphagnum bogs.
<u>O. garita</u>	Dry virgin prairies.
<u>C. titania</u>	Openings near spruce, tamarack, and willow bogs.

At each site, the surveyor recorded the number of state listed butterflies seen, reproductive or other behaviors observed, and a list of other habitat-associated Lepidoptera observed. The butterfly nomenclature follows Miller and Brown (1981) and Ferris (1989). Butterfly information was recorded on a standard Minnesota butterfly checklist form developed by the author (Appendix I). In addition, a general habitat description was recorded at most sites, and wherever possible the surveyor listed dominant and/or significant plant species. The plant nomenclature follows that of Almendinger (1991). Habitat photographs were taken at some sites. The amount of time spent at a site varied from ten minutes to over six hours, with the average site visit lasting 1-2 hours.

Three survey methods were used in the field. One method consisted of searching the site for butterflies, with stops where the author felt the insects would most likely be found (nectar sources, sunny areas, mud puddles, rotting fruit or flesh). A second technique which was most useful on the prairie or in open areas, included a systematic pacing back and forth 2-3 meters apart through areas of appropriate habitat. The final technique was a line transect method. This method proved very useful in the bogs or in other thick vegetated areas.

Butterflies were identified on the wing where possible, captured if necessary, and collected if field identification was uncertain or if the species was a significant find (state-listed or county record). The voucher specimens (Appendix II) are currently in the author's private collection and will eventually be deposited in the University of Minnesota entomology collection, St. Paul, Minnesota.

## RESULTS

Dakota skipper populations were located at only three of the 37 sites surveyed between 18 June and 15 July 1991. For a complete listing of sites surveyed see Table 3. The skipper was not seen at the historic site (T161N R46W NWNE34) during 1991 despite five visits to the area. It must be noted, however, that the weather at the suspected peak of adult activity was extremely cloudy and wet, with July 1991 being one of the wettest Julys on record for Kittson County. The largest population of the skipper was found within Lake Bronson State Park. On 18 June, eight male and four female skippers were seen here. Then on 22 June, four females and 11 males were seen in this same area.

Two new sites for the state endangered Assiniboia skipper, Hesperia comma assiniboia, were recorded during the 1991 survey. A large breeding population was found at Norway Dunes, a Nature Conservancy preserve in Kittson County. The Poweshiek skipperling, Oarisma poweshiek, another prairie-restricted skipper, was recorded from Roseau County for the first time at two sites. In addition, this state listed special concern butterfly was found at nine new Kittson County sites.

The results of the other state-listed special concern butterflies follows. The tiny Bog copper, Epidemia epixanthe michiganensis, was recorded in Roseau County for the first time, at four different locations. This butterfly was observed in 1991 for only seven days. Five new Roseau County sites were recorded for the bog-restricted Frigga fritillary, Clossiana frigga saga. This species was last recorded in Roseau County in 1967. The range of the Bog fritillary, Clossiana eunomia dawsoni, in Minnesota was extended westerly as it was recorded at seven Roseau County sites in just six short days. The Jutta arctic, Oeneis jutta ascerta, another bog associated butterfly was found at four Roseau County sites in 1991. This also extended the western range in Minnesota for this butterfly. The secretive, early-season-flying Red-disked alpine, Erebia discoidalis, was discovered at six new sites in Roseau County during the 1991 butterfly survey. The Dorcas copper, Epidemia dorcas, was recorded at 20 new sites throughout the survey counties from 9 July to 4 August 1991.

Three other target species were not found in the survey counties during 1991 including the Freija fritillary, Clossiana freija, the Disa alpine, Erebia disa mancinus, and the Uhler's arctic, Oeneis uhleri. A complete summary of butterflies found in 1991 appears later in the species accounts section. In addition, all voucher specimens are listed in Appendix II. Finally, a butterfly checklist was developed for both Kittson and Roseau counties and can be found in Appendix III.



TABLE 3. Sites surveyed for the Dakota skipper during 1991.

County	Twp	Rng	Section	1991 Dates Surveyed	
				June	July
* Kittson	T164N	R49W	NW36	21, 26	15
Roseau	T163N	R44W	NW30	24	
Kittson	T163N	R45W	NENE18	27	
Kittson	T163N	R45W	NW17	27	
Kittson	T163N	R46W	NW11		13
Kittson	T163N	R47W	NESE26		14
Kittson	T163N	R47W	WSE & ENW26		07
Kittson	T163N	R48W	SENE32	26	
Kittson	T163N	R48W	NWNW28	26	
Kittson	T163N	R49W	SE08		07
Kittson	T162N	R45W	NE25	24	
Kittson	T162N	R45W	SE24	24	
Kittson	T162N	R49W	SENE21		06
Kittson	T161N	R45W	NW07	21	
* Kittson	T161N	R46W	SE33	18, 22	01
Kittson	T161N	R46W	NE & SW27	19	
Kittson	T161N	R46W	SE35	21	09
Kittson	T161N	R46W	ENW35		09
Kittson	T161N	R46W	NENE33	24	
Kittson	T161N	R46W	NWNW34	24	
Kittson	T161N	R46W	34	18, 24, 26	05
Roseau	T160N	R44W	SW19		06
Roseau	T160N	R44W	19	23	
Roseau	T160N	R44W	NE20 & 20	23, 27	13
* Kittson	T160N	R45W	NENE22		04, 09
Kittson	T160N	R45W	SE & NW15		04
Kittson	T160N	R46W	SE18		04
Kittson	T160N	R46W	SE10	22	
Kittson	T160N	R47W	13	19	
Kittson	T159N	R45W	NWNW15		06
Kittson	T159N	R45W	ENE16		06
Kittson	T159N	R45W	SW12	23	
Kittson	T159N	R45W	ESW29		08
Kittson	T159N	R46W	NENE24		13
Kittson	T159N	R46W	SW01		05
Kittson	T159N	R46W	SESW33		01
Kittson	T159N	R46W	NWNW23		01

\* = Site contained the Dakota skipper in 1991.

## DISCUSSION

Most of Kittson and the eastern part of Roseau County during pre-settlement times consisted of prairie, oak savanna, and aspen parkland (Wendt, 1984). This may suggest that the two survey counties in the extreme northwestern corner of the state once supported a large population of the skipper.

Three sites contained the skipper in 1991. The first site was located within Lake Bronson State Park (T161N R46W SE33). This mesic to dry-mesic prairie supports a fair sized population although the actual area that contained the skipper was small (<5 acres). The second site on private land (T164N R49W NW36) is a mesic prairie with such floral components as big bluestem (Andropogon gerardii), Indian grass (Sorghastrum nutans), Stipa spp., prairie cordgrass (Spartina pectinata), prairie clovers (Petalostemon spp.), camas (Zigadenus elegans), and the wood lily (Lilium philadelphicum). Only two skippers, one male and one female, were seen during three visits to the site. Again this site is small (5-10 acres). The third site, again located on private land, is part of a large brush prairie/aspen parkland complex in Pelan township (T160N R45W NENE22). One male skipper was recorded here on 4 July but a second visit on 9 July came up empty.

Again, however, it should be noted that the weather may have come into play on the low number of sites as well as the low number of skippers seen. During the 28 day survey period (18 June - 15 July) ten days were lost due to rain, four more days were partly to mostly cloudy, and ten more days contained wind speeds in excess of ten mph. Thus 24 out of 28 days were less than ideal for conducting butterfly surveys as anyone who has ever tried to follow a skipper flitting through a moving sea of tall grasses can attest.

Resurvey is needed at some sites which were insufficiently covered due to both weather and time constraints. Resurvey along with population monitoring is also recommended within Lake Bronson State Park and at the other two newly discovered sites. Most larger prairie tracts were at least partially surveyed during the 1991 field season. Although the potential exists that more populations will be discovered in the future in these two counties, it is very unlikely that any will be large enough to sustain themselves for very long. One reason is because of the vast habitat alteration due to land conversion for either cropland or pastureland. Secondly much of the area is becoming overgrown by shrubs and trees due to fire suppression, decreasing habitat even more. A final reason is the fact that recolonization of adequate prairie habitat by the skipper is not likely. Most remnant restricted insect species tend to be very limited in their dispersal abilities (Panzer, 1988). Therefore, survey work should now focus on counties to the south and on projects mentioned previously.

Management for the Dakota skipper is a challenge. Although we all know the importance of fire in maintaining the floral integrity of a prairie, we also should be aware that inappropriately timed or conducted fires can have a detrimental impact on the Dakota skipper and other prairie invertebrates (Dana, 1985). "Late spring or early summer burns will probably cause considerable mortality as late instar larvae and pupal shelters are generally on the soil surface" (pg. 33, Dana, 1983). McCabe (1981) favors mowing or haying after the adult flight period. One must be careful, however, as mowing before or during the adult flight will have a negative impact, depriving adults of nectar resources and perching sites causing early death, reproductive failure, and/or emigration (Dana, 1983).

One other thing that is especially important for prairie managers to consider is that no matter when burning is done, the area where larval development occurs should not be burned (Dana, 1983; Panzer, 1988). This is especially important at sites where populations are small or isolated such as the ones found this summer in Kittson County.

#### RECOMMENDATIONS

The following is a summary of some of the recommendations the author feels should be considered.

1. Resurvey areas that contained the skipper during 1991.
2. Population monitoring studies need to be done at these sites to get a better assessment of skipper numbers.
3. Detailed vegetation studies at the sites would help determine the skipper's habitat requirements.
4. Management practices need to be coordinated between the skipper's life cycle and the particular management needs of the individual sites. Particular caution is needed within Lake Bronson State Park.
5. Survey work for other state-listed butterfly species needs to continue within the state.

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## SPECIES ACCOUNTS

The following information is a summary of field notes and field checklists completed by the author during the 1991 field season. State-listed species, and/or survey target species appear first, with all additional species following in taxonomic order. Included for each target species is a complete listing of historic survey county records (Minnesota Natural Heritage Database), 1991 survey county records (including county, township, range, section information, date observed, and voucher information), 1991 flight date extremes, and a Minnesota distribution map (revised from Coffin and Pfannmuller, 1988).

### Table symbols:

Twp = township  
Rng = range  
Sec = section  
V = voucher  
Y = contains voucher specimen  
N = no voucher collected

### Map symbols:

- = records with detailed locality records
- △ = records without specific locality information



# T A R G E T   S P E C I E S

## DAKOTA SKIPPER

Hesperia dacotae (Skinner)

State Status: Threatened

### Survey County Records Prior to 1991 Survey:

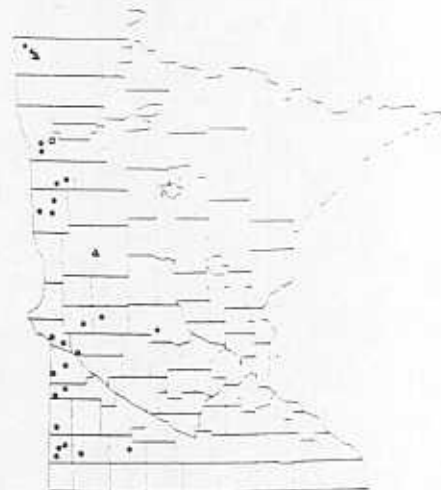
County	Twp	Rng	Sec	Date
Kittson	-	-	-	25 June 1936
Kittson	T161N	R46W	NWNE34	09 July 1989

### Survey County Records From 1991 Survey:

County	Twp	Rng	Sec	Date	V
Kittson	T161N	R46W	SE33	18 June 1991	Y
Kittson	T164N	R49W	NW36	26 June 1991	Y
Kittson	T160N	R45W	NENE22	04 July 1991	Y

1991 Flight Dates: 18 June - 4 July

MN Distribution



## ASSINIBOIA SKIPPER

Hesperia comma assiniboia (Lyman)

State Status: Endangered

### Survey County Record Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	SNE04	08 Aug. 1984

### Survey County Records From 1991 Survey:

County	Twp	Rng	Sec	Date	V
Kittson	T161N	R46W	SWNE27	05 Aug. 1991	Y
Kittson	T160N	R46W	SNE04	08 Aug. 1991	Y
Kittson	T160N	R46W	SE10	09 Aug. 1991	Y

1991 Flight Dates: 31 July - 10 August

MN Distribution



**POWESHIEK SKIPPERLING**Oarisma poweshiek (Parker)**MN Distribution**

State Status: Special Concern

Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	-	-	-	26 June 1936
Kittson	T163N	R45W	NENW17	08 July 1989

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Kittson	T161N	R46W	SESE33	22 June 1991	Y
Kittson	T163N	R48W	NENE29	26 June 1991	Y
Kittson	T163N	R48W	NWNW28	26 June 1991	N
Kittson	T163N	R48W	SENE32	26 June 1991	Y
Kittson	T164N	R49W	NW36	26 June 1991	Y
Roseau	T160N	R44W	NENW20	27 June 1991	Y
Kittson	T162N	R49W	NENE21	06 July 1991	N
Kittson	T163N	R49W	SE08	08 July 1991	Y
Kittson	T161N	R46W	NWSE35	09 July 1991	N
Kittson	T163N	R46W	SWNW11	13 July 1991	N
Roseau	T160N	R44W	SENE20	13 July 1991	N

1991 Flight Dates: 18 June - 9 July

**BOG COPPER**Epidemia epixanthe michiganensis (Rawson)**MN Distribution**

State Status: Special Concern

Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
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No records

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Roseau	T164N	R40W	S S35	17 July 1991	Y
Roseau	T163N	R40W	SENE11	17 July 1991	N
Roseau	T164N	R41W	NESW26	22 July 1991	Y
Roseau	T163N	R39W	NENE08	23 July 1991	Y

1991 Flight Dates: 17 July - 23 July

**FRIGGA FRITILLARY**Clossiana frigga saga (Staudinger)

MN Distribution

State Status: Special Concern

Survey County Record Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R40W	-	15 June 1967

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Roseau	T159N	R40W	NW29	21 May 1991	Y
Roseau	T161N	R35W	NW34& NW35	22 May 1991	N
Roseau	T162N	R38W	SWNE12	24 May 1991	Y
Roseau	T163N	R40W	SW02& NW11	24 May 1991	Y
Roseau	T164N	R37W	NE26	25 May 1991	Y

1991 Flight Dates: 21 May - 3 June

**BOG FRITILLARY**Clossiana eunomia dawsoni (Barnes & McDunnough)

MN Distribution

State Status: Special Concern

Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
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No records

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Roseau	T164N	R41W	NWSE26	30 May 1991	Y
Roseau	T164N	R37W	SENE26	03 June 1991	Y
Roseau	T162N	R38W	NW12	03 June 1991	Y
Roseau	T161N	R35W	SESE33	04 June 1991	N
Roseau	T161N	R35W	NW05	04 June 1991	Y
Roseau	T163N	R42W	NWSE02	04 June 1991	N
Roseau	T164N	R42W	SESE35	05 June 1991	Y

1991 Flight Dates: 30 May - 5 June

**JUTTA ARCTIC**Oeneis jutta ascerta Masters & Sorensen

MN Distribution

State Status: Special Concern

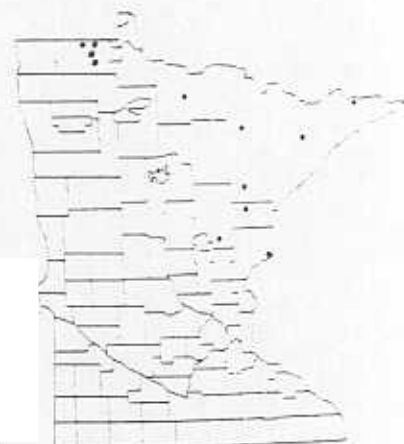
Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
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No records

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Roseau	T164N	R41W	NWSE26	26 May 1991	N
Roseau	T164N	R37W	NESE26	03 June 1991	Y
Roseau	T162N	R38W	SENW12	03 June 1991	Y
Roseau	T161N	R35W	NW05	04 June 1991	N



1991 Flight Dates: 26 May - 4 June

**RED-DISKED ALPINE**Erebia discoidalis discoidalis (W. Kirby)

MN Distribution

State Status: Special Concern

Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	-	30 May 1968
Roseau	T163N	R40W	-	04 June 1970

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Roseau	T164N	R40W	SWSE30	16 May 1991	Y
Roseau	T163N	R41W	SWSW01	16 May 1991	Y
Roseau	T163N	R40W	NENE02	18 May 1991	N
Roseau	T163N	R37W	NWNW04	19 May 1991	N
Roseau	T163N	R41W	NESE01	20 May 1991	N
Roseau	T161N	R35W	NENE34	22 May 1991	Y



1991 Flight Dates: 16 May - 22 May

**DORCAS COPPER**Epidemia dorcasc dorcasc (W. Kirby)

MN Distribution

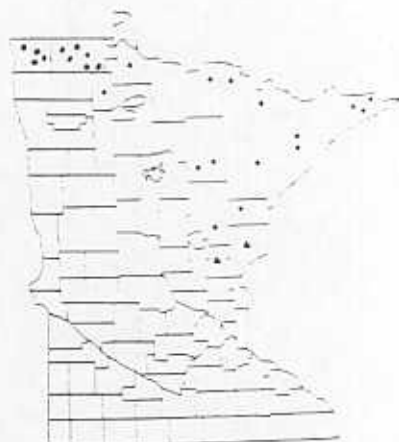
State Status: Special Concern

Survey County Records Prior to 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T162N	R40W	-	12 Aug. 1966

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Kittson	T161N	R46W	SE35	09 July 1991	Y
Roseau	T160N	R44W	SENE20	13 July 1991	Y
Kittson	T163N	R46W	SWNW11	13 July 1991	Y
Kittson	T159N	R46W	NENE24	13 July 1991	Y
Kittson	T163N	R47W	NESE26	14 July 1991	Y
Kittson	T160N	R46W	SWSW08	15 July 1991	Y
Kittson	T163N	R48W	NWNW28	15 July 1991	Y
Kittson	T159N	R46W	NWSW14	16 July 1991	Y
Kittson	T160N	R46W	SWSW34	16 July 1991	Y
Roseau	T163N	R40W	SESE02	17 July 1991	Y
Roseau	T162N	R41W	SENW23	19 July 1991	Y
Roseau	T161N	R44W	NENE16	20 July 1991	Y
Roseau	T161N	R42W	NESE09	20 July 1991	Y
Roseau	T161N	R42W	NESE11	20 July 1991	Y
Roseau	T161N	R41W	NWSW06	20 July 1991	Y
Roseau	T159N	R41W	NWNW30	21 July 1991	Y
Roseau	T159N	R40W	SWNW29	21 July 1991	N
Roseau	T161N	R35W	SWNW35	25 July 1991	N
Roseau	T162N	R26W	NENE24	26 July 1991	N
Roseau	T159N	R41W	NWNE29	26 July 1991	N



1991 Flight Dates: 9 July - 4 August



**GARITA SKIPPERLING**  
Oarisma garita (Reakirt)

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	V
Kittson	T161N	R46W	SESE33	06 June 1991	Y
Kittson	T161N	R46W	SWNE27	07 June 1991	Y
Kittson	T161N	R46W	SENW34	08 June 1991	N
Kittson	T161N	R46W	NWNE34	08 June 1991	N
Kittson	T161N	R46W	SESE27	08 June 1991	Y
Kittson	T161N	R46W	NESE27	08 June 1991	N
Kittson	T163N	R47W	NWSE26	11 June 1991	Y
Kittson	T163N	R47W	NESW26	11 June 1991	N
Kittson	T163N	R47W	NENW26	11 June 1991	N
Kittson	T161N	R46W	NESE33	14 June 1991	Y

1991 Flight Dates: 6 June - 14 June

**PURPLE LESSER FRITILLARY**  
Clossiana titania (Esper)

Survey County Records from the 1991 Survey:

County	Twp	Rng	Sec	Date	
Roseau	T164N	R40W	S S35	17 July 1991	Y
Roseau	T163N	R40W	NWSW06	17 July 1991	N
Roseau	T163N	R41W	NESE01	17 July 1991	N
Roseau	T162N	R38W	NW12	18 July 1991	Y
Roseau	T164N	R40W	SE N30	19 July 1991	Y
Roseau	T164N	R41W	S N26	22 July 1991	N
Roseau	T163N	R39W	NESW08	23 July 1991	Y

1991 Flight Dates: 17 July - 23 July 1991

# A D D I T I O N A L     S P E C I E S

## HESPERIIDAE

### SILVER-SPOTTED SKIPPER

Epargyreus clarus clarus (Cramer)

#### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	N34	18 June

1991 Flight Dates: 18 June

### NORTHERN CLOUDYWING

Thorybes pylades (Scudder)

#### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R45W	NW07	21 June
Kittson	T161N	R46W	34	18 June
Kittson	T163N	R45W	NW17 & 18	17 June
Kittson	T161N	R46W	SE33	14 June
Roseau	T164N	R42W	NW36	13 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T159N	R45W	NW15 & 16	09 June
Kittson	T161N	R46W	27	08 June
Kittson	T161N	R46W	NW27	07 June
Kittson	T160N	R46W	SE10	06 June
Roseau	T163N	R42W	02 & 04	05 June
Roseau	T163N	R35W	NW05	04 June
Roseau	T162N	R38W	01 & 12	03 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T161N	R37W	26	02 June
Roseau	T163B	R39W	W17	01 June
Kittson	T163N	R47W	26 & 22	31 May
Kittson	T161N	R46W	SE33	28 May
Kittson	T160N	R46W	S10	28 May
Roseau	T164N	R42W	35	27 May
Roseau	T164N	R40W	30	26 May
Roseau	T162N	R38W	12	24 May

1991 Flight Dates: 24 May - 21 June

**DREAMY DUSKYWING**Erynnis icelus (Scudder & Burgess)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T159N	R40W	29	12 June
Roseau	T163N	R42W	02	05 June
Roseau	T163N	R42W	04	05 June
Roseau	T163N	R42W	35	05 June
Roseau	T163N	R39W	W17	01 June
Kittson	T163N	R47W	26	31 May
Kittson	T163N	R47W	22	31 May
Kittson	T163N	R47W	10	31 May
Roseau	T164N	R41W	26	30 May
Kittson	T160N	R46W	S10	28 May
Roseau	T164N	R42W	35	27 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R37W	25	25 May
Roseau	T161N	R37W	26	25 May
Roseau	T163N	R40W	02	24 May
Roseau	T161N	R35W	34	22 May
Roseau	T161N	R35W	35	22 May
Roseau	T159N	R40W	29	21 May
Roseau	T163N	R41W	NW01	21 May
Roseau	T163N	R37W	NWNW04	19 May
Roseau	T163N	R40W	N02	18 May
Roseau	T164N	R40W	S35	18 May
Kittson	T159N	R45W	NW15	14 May

1991 Flight Dates: 14 May - 12 June

**SLEEPY DUSKYWING**Erynnis brizo brizo (Boisduval & LeConte)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T159N	R45W	NW15	09 June
Kittson	T159N	R45W	NE16	09 June
Kittson	T161N	R46W	27	08 June
Kittson	T161N	R46W	34	08 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	NESE26	07 June
Kittson	T159N	R45W	NW15	14 May

1991 Flight Dates: 14 May - 9 June

**JUVENAL'S DUSKYWING**Erynnis juvenalis juvenalis (Fabricius)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	N34	18 June
Kittson	T161N	R46W	SE27	18 June
Kittson	T161N	R46W	SE33	14 June
Kittson	T161N	R46W	34	14 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	NESE26	07 June
Kittson	T161N	R46W	35	07 June
Kittson	T161N	R46W	SE33	28 May

1991 Flight Dates: 28 May - 18 June

**ARCTIC SKIPPERLING**Carterocephalus palaemon mandan (Pallas)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R42W	NW36	13 June
Roseau	T164N	R40W	SW31	13 June
Roseau	T164N	R41W	26	12 June
Roseau	T159N	R40W	29	12 June
Kittson	T159N	R45W	NW15	09 June
Kittson	T161N	R46W	34	08 June
Kittson	T161N	R46W	NE27	07 June
Roseau	T163N	R42W	02	05 June
Roseau	T163N	R35W	NW05	04 June
Roseau	T161N	R35W	SE33	04 June
Roseau	T161N	R35W	NW04	04 June
Roseau	T162N	R38W	01	03 June
Roseau	T161N	R35W	NE32	02 June
Roseau	T161N	R37W	26	02 June
Roseau	T163N	R39W	W17	01 June
Roseau	T164N	R41W	26	30 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R40W	30	26 May

1991 Flight Dates: 26 May - 13 June

**LEAST SKIPPERLING**Ancyloxypha numitor (Fabricius)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R40W	NWSW06	17 July
Kittson	T163N	R45W	NE18	27 June
Kittson	T163N	R45W	NW17	27 June
Kittson	T162N	R44W	NW30	24 June
Roseau	T162N	R45W	NE25	24 June
Roseau	T164N	R42W	NW36	13 June
Roseau	T164N	R41W	26	12 June

1991 Flight Dates: 12 June - 17 July

**EUROPEAN SKIPPER**Thymelicus lineola (Ochsenheimer)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	ENW35	09 July
Roseau	T164N	R37W	SWSE33	20 June

1991 Flight Dates: 20 June &amp; 9 July

**COMMA SKIPPER**\* Hesperia comma (Linnaeus)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T161N	R35W	NESE34	11 August
Roseau	T161N	R35W	NWNW35	04 August
Roseau	T161N	R35W	NENE34	04 August
Roseau	T160N	R38W	34	04 August
Roseau	T160N	R38W	34	26 July
Roseau	T161N	R35W	NWSW35	25 July
Roseau	T161N	R35W	NENE34	25 July

\* Both subspecies, H. comma manitoba and H. c. laurentina may be represented in authors collection.

1991 Flight Dates: 25 July - 11 August



**LEONARDUS SKIPPER**Hesperia leonardus leonardus HarrisSurvey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T161N	R35W	NWNW 35	04 August

1991 Flight Dates: 4 August

**PECK'S SKIPPER**Polites peckius (W. Kirby)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	S S35	17 July
Roseau	T160N	R44W	NESE20	13 July
Kittson	T163N	R46W	NWSW11	13 July
Kittson	T160N	R45W	N22	09 July
Kittson	T163N	R49W	SE08	08 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T160N	R45W	NE22	04 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T163N	R45W	NW18	27 June
Kittson	T163M	R45W	NW17	27 June
Roseau	T160N	R44W	20	27 June
Kittson	T164N	R49W	W36	26 June
Kittson	T163N	R48W	NENE29	26 June
Kittson	T161N	R46W	34	24 June
Kittson	T162N	R45W	NE25	24 June
Roseau	T162N	R44W	NW30	24 June
Roseau	T160N	R44W	19	23 June
Roseau	T160N	R44W	NE20	23 June
Kittson	T161N	R46W	SE33	22 June
Kittson	T161N	R49W	W36	21 June
Kittson	T161N	R45W	NW07	21 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T161N	R46W	34	18 June
Roseau	T160N	R44W	NWNW30	17 June
Kittson	T163N	R45W	NW17	17 June

1991 Flight Dates: 17 June - 17 July

**TAWNY-EDGED SKIPPER**Polites themistocles (Latreille)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T161N	R35W	NENE34	25 July
Kittson	T160N	R45W	N22	09 July
Kittson	T161N	R46W	35	09 July
Kittson	T163N	R49W	SE08	08 July
Kittson	T163N	R47W	26	08 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T163N	R45W	NE18	27 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R48W	NENE29	26 June
Kittson	T161N	R46W	SE33	22 June
Kittson	T164N	R49W	W36	21 June
Kittson	T161N	R45W	NW07	21 June
Kittson	T161N	R46W	SE35	21 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T161N	R46W	34	18 June
Roseau	T160N	R44W	NWNW30	17 June
Kittson	T163N	R45W	17	17 June

1991 Flight Dates: 17 June - 25 July

**LONG DASH**Polites mystic (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R41W	S N26	22 July
Kittson	T161N	R46W	35	09 July
Kittson	T163N	R49W	SE08	08 July
Kittson	T163N	R47W	22	08 July
Kittson	T160N	R44W	NE36	06 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T159N	R45W	NENE15	06 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T160N	R45W	22	04 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T160N	R46W	34	01 July
Kittson	T159N	R46W	NWNW23	01 July
Kittson	T163N	R45W	NE18	27 June
Kittson	T164N	R49W	W36	26 June
Kittson	T163N	R48W	NENE29	26 June

P. mystic continued

County	Twp	Rng	Sec	Date
Roseau	T162N	R44W	NW30	24 June
Roseau	T160N	R44W	NE20	23 June
Kittson	T159N	R45W	SW12	23 June
Kittson	T161N	R46W	33	22 June
Kittson	T164N	R49W	W36	21 June
Kittson	T161N	R46W	SE35	21 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R46W	34	18 June
Kittson	T163N	R45W	NW17	17 June
Roseau	T160N	R44W	20	15 June
Kittson	T161N	R46W	34	14 June

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1991 Flight Dates: 14 June - 22 July

**NORTHERN BROKEN DASH**

Wallengrenia egeremet (Scudder)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	SWSW08	15 July
Kittson	T161N	R46W	ENW35	09 July
Kittson	T159N	R45W	NWNW15	06 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T163N	R45W	NE18	27 June

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1991 Flight Dates: 27 June - 19 July

**DELAWARE SKIPPER**

Atrytone logan (W.H. Edwards)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T160N	R38W	34	26 July
Kittson	T160N	R46W	SWSW08	15 July
Kittson	T159N	R46W	NENE04	13 July
Kittson	T160N	R45W	N22	09 July
Kittson	T161N	R46W	ENW35	09 July
Kittson	T163N	R49W	SE08	08 July
Kittson	T163N	R47W	ENW26	08 July
Kittson	T160N	R44W	NNE36	06 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T159N	R45W	NWNW15	06 July

A. logan continued

County	Twp	Rng	Sec	Date
Kittson	T159N	R46W	SW01	05 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T160N	R45W	NE22	04 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T161N	R46W	34	01 July
Kittson	T163N	R45W	SE18	27 June
Roseau	T160N	R44W	20	27 June
Kittson	T161N	R46W	33	24 June
Kittson	T161N	R46W	SE33	22 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T161N	R46W	34	18 June

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1991 Flight Dates: 18 June - 26 July

HOBOMOK SKIPPER

Poanes hobomok (Harris)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R45W	NW07	21 June
Kittson	T161N	R46W	SE35	21 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T161N	R46W	34	18 June
Roseau	T164N	R42W	NW36	13 June
Roseau	T164N	R40W	SE31	13 June
Roseau	T164N	R41W	26	12 June
Kittson	T161N	R46W	27	08 June
Kittson	T161N	R46W	35	07 June
Kittson	T161N	R46W	SE33	06 June
Kittson	T160N	R46W	SE10	06 June
Roseau	T163N	R42W	02 & 04	05 June
Roseau	T161N	R35W	NW05	04 June
Roseau	T161N	R35W	33	04 June
Roseau	T162N	R38W	01 & 12	03 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T161N	R37W	26	02 June
Roseau	T163N	R39W	W17	01 June
Kittson	T163N	R47W	26	31 May
Roseau	T164N	R42W	35	27 May

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1991 Flight Dates: 27 May - 21 June

**SACHEM**Atalopedes campestris (Boisduval)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T164N	R49W	SENW36	22 July

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1991 Flight Date: 26 June

**DUN SKIPPER**Euphyes vestris metacomet (Harris)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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Widespread, 31 sites throughout Kittson & Roseau counties.

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1991 Flight Dates: 18 June - 26 July

**DUSTED SKIPPER**Atrytonopsis hianna (Scudder)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T163N	R47W	NENW26	11 June
Kittson	T161N	R46W	27	08 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	SE33	06 June
Kittson	T160N	R46W	SE10	06 June
Kittson	T163N	R47W	26	31 May
Kittson	T161N	R46W	SE33	28 May
Kittson	T160N	R46W	S10	28 May
Kittson	T159N	R45W	NW15	14 May

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1991 Flight Dates: 14 May - 11 June



**PEPPER AND SALT SKIPPER**  
Amblyscirtes hegon (Scudder)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R41W	26	12 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T161N	R37W	26	02 June
Roseau	T163N	R39W	W17	01 June

1991 Flight Dates: 1 June - 12 June

**ROADSIDE SKIPPER**  
Amblyscirtes vialis (W.H. Edwards)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R39W	W17	01 June
Kittson	T163N	R47W	26	31 May
Roseau	T164N	R42W	35	27 May
Roseau	T164N	R40W	30	26 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T161N	R35W	NENE04	22 May
Roseau	T163N	R41W	NWNW01	20 May

1991 Flight Dates: 20 May - 01 June

# PAPILIONIDAE

## BLACK SWALLOWTAIL

Papilio polyxenes Fabricius

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R41W	26	26 May
Kittson	T161N	R46W	NE27	07 June
Kittson	T163N	R45W	NW17	17 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T160N	R46W	NE22	04 July
Kittson	T160N	R45W	NE22	04 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T159N	R45W	NWNW15	06 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T160N	R44W	NNE36	06 July
Kittson	T161N	R46W	ENW35	09 July
Kittson	T163N	R46W	NWSW11	13 July
Roseau	T160N	R44W	NESE20	13 July

1991 Flight Dates: 26 May - 13 July

## TIGER SWALLOWTAIL

Pterourus glaucus (Linnaeus)

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R37W	NWNW04	19 May
Roseau	T159N	R40W	29	21 May
Roseau	T161N	R35W	34	22 May
Roseau	T163N	R40W	02	24 May
Roseau	T163N	R38W	12	24 May
Roseau	T164N	R37W	25	25 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R42W	35	27 May
Kittson	T160N	R46W	S10	28 May
Kittson	T161N	R46W	SE33	28 May
Roseau	T164N	R41W	26	30 May
Kittson	T163N	R47W	26	31 May
Roseau	T163N	R39W	W17	01 June
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	NE32	02 June
Roseau	T164N	R37W	26	03 June
Roseau	T162N	R38W	01	03 June
Roseau	T161N	R35W	SE33	04 June

<u>P. glaucus</u>	continued				
County	Twp	Rng	Sec	Date	
Roseau	T161N	R35W	NW05	04	June
Roseau	T163N	R42W	04	05	June
Kittson	T160N	R46W	SE10	06	June
Kittson	T161N	R46W	SE33	06	June
Kittson	T161N	R46W	NE27	07	June
Kittson	T161N	R46W	34	08	June
Kittson	T159N	R45W	NW15	09	June
Kittson	T163N	R47W	26	11	June
Roseau	T159N	R40W	29	12	June
Roseau	T164N	R41W	26	12	June
Roseau	T164N	R40W	SW31	13	June
Roseau	T164N	R42W	NW36	13	June
Kittson	T163N	R45W	NW17	17	June
Kittson	T161N	R46W	SE33	22	June

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1991 Flight Dates: 19 May - 22 June

# PIERIDAE

## WESTERN CHECKERED WHITE

Pontia occidentalis occidentalis (Reakirt)

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	SE10	06 June
Kittson	T161N	R46W	SE33	06 June
Kittson	T161N	R46W	NESE26	07 June
Kittson	T161N	R46W	34	08 June
Kittson	T159N	R45W	NW15	09 June
Kittson	T163N	R47W	22 & 26	11 June
Kittson	T160N	R47W	13	19 June
Kittson	T160N	R46W	NE22	04 July
Kittson	T161N	R46W	ENW35	09 July
Kittson	T160N	R45W	N22	09 July

1991 Flight Dates: 6 June - 9 July

## VEINED WHITE

Pieris napi oleracea Harris

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	SWSE30	16 May
Roseau	T163N	R41W	SWSW01	16 May
Roseau	T163N	R40W	N02	18 May
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T161N	R35W	NENE04	22 May
Roseau	T163N	R40W	02 & 11	24 May
Kittson	T161N	R46W	SE33	28 May
Roseau	T163N	R39W	W17	01 June
Roseau	T161N	R35W	NE32	02 June
Roseau	T161N	R40W	SEN30	19 July
Roseau	T161N	R35W	NW35	25 July
Roseau	T160N	R38W	34	06 July
Roseau	T161N	R35W	NWNW35	04 August

1991 Flight Dates: 16 May - 2 June and  
19 July - 4 August

**CABBAGE WHITE**  
Pieris rapae (Linnaeus)

Survey County Records From the 1991 Survey:  
County      Twp      Rng      Sec      Date

43 sites/dates recorded throughout Kittson and Roseau counties.

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1991 Flight Dates: 14 May - 11 August

**CREAMY MARBLEWING**  
Euchloe ausonides (Lucas)

Survey County Records From the 1991 Survey:  
County      Twp      Rng      Sec      Date

Roseau	T164N	R40W	SWSE30	16 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T163N	R40W	02 & 11	24 May
Roseau	T164N	R40W	30	26 May
Roseau	T161N	R37W	26	02 June

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1991 Flight Dates: 16 May - 2 June

**COMMON SULPHUR**  
Colias philodice Godart

Survey County Records From the 1991 Survey:  
County      Twp      Rng      Sec      Date

57 sites/dates throughout Kittson and Roseau counties.

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1991 Flight Dates: 14 May - 11 August

**ALFALFA BUTTERFLY**Colias eurytheme BoisduvalSurvey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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36 sites/dates recorded throughout Roseau and Kittson counties.

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1991 Flight Dates: 24 May - 11 August

**PINK EDGED SULPHUR**Colias interior interior ScudderSurvey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R42W	NW36	13 June
Roseau	T163N	R39W	NESW08	23 July
Roseau	T161N	R35W	NENE34	25 July
Roseau	T161N	R35W	NWNW35	04 August

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1991 Flight Dates: 13 June - 4 August

**LYCAENIDAE****HARVESTER**Feniseca tarquinius tarquinius (Fabricius)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T161N	R35W	34	22 May
Roseau	T162N	R38W	12	24 May
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T162N	R38W	01	03 June
Roseau	T163N	R42W	04	05 June
Roseau	T160N	R38W	34	26 July

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1991 Flight Dates: 22 May - 26 July



**BRONZE COPPER**Hyllolycaena hyllus (Cramer)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	S S35	17 July
Roseau	T163N	R40W	NWSW06	17 July
Roseau	T164N	R40W	SEN30	19 July
Roseau	T163N	R39W	NENE08	23 July

1991 Flight Dates: 17 July - 23 July

**PURPLISH COPPER**Epidemia helleoides (Boisduval)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R47W	13	19 June

1991 Flight Dates: 19 June

**CORAL HAIRSTREAK**Harkenclenus titus titus (Fabricius)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	E10	22 June
Kittson	T161N	R46W	34	01 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T163N	R47W	26	08 July
Kittson	T160N	R45W	N22	09 July
Kittson	T164N	R49W	NW36	15 July
Roseau	T161N	R35W	34 & 35	25 July
Kittson	T161N	R46W	27	29 July
Kittson	T161N	R46W	33	29 July
Kittson	T160N	R46W	NW04	31 July
Kittson	T161N	R46W	34	30 July
Kittson	T160N	R46W	SE10	31 July
Roseau	T161N	R35W	NENE34	04 August
Kittson	T163N	R47W	26	10 August
Roseau	T161N	R35W	34 & 35	11 August

1991 Flight Dates: 22 June - 11 August

**ACADIAN HAIRSTREAK**Satyrium acadicum acadicum (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T164N	R49W	W36	21 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T160N	R45W	SE15	04 July
Roseau	T163N	R40W	SENE11	17 July
Roseau	T163N	R40W	NWSW06	17 July
Roseau	T163N	R39W	NESW08	23 July

1991 Flight Dates: 21 June - 23 July

**EDWARD'S HAIRSTREAK**Satyrium edwardsii (Grote & Robinson)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	34	18 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T160N	R46W	E10	22 June
Kittson	T161N	R46W	SE33	22 June
Kittson	T161N	R46W	34	24 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T161N	R46W	34	01 July
Kittson	T159N	R45W	NWNW15	06 July
Kittson	T160N	R45W	NNE36	06 July
Kittson	T161N	R46W	ENW35	09 July

1991 Flight Dates: 18 June - 9 July

**BANDED HAIRSTREAK**Satyrium calanus falacer (Godart)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	SWSW27	19 June

1991 Flight Dates: 19 June

**STRIPED HAIRSTREAK**Satyrium liparops fletcheri (Michener & dos Passos)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T159N	R45W	NWNW15	06 July
Kittson	T161N	R46W	35	09 July

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1991 Flight Dates: 6 July - 9 July

**BROWN ELFIN**Incisalia augustinus augustinus (W. Kirby)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R42W	35	27 May
Roseau	T164N	R41W	26	30 May

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1991 Flight Dates: 20 May - 30 May

**HOARY ELFIN**Incisalia polia Cook & WatsonSurvey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	SWSE30	16 May

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1991 Flight Dates: 16 May

**HENRY'S ELFIN**Incisalia henrici henrici (Grote & Robinson)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	SWSE30	16 May
Roseau	T163N	R40W	N02	18 May
Roseau	T159N	R40W	29	21 May
Roseau	T164N	R40W	30	26 May

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1991 Flight Dates: 16 May - 26 May

**REAKIRT'S BLUE**Hemiargus isola (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	N34	18 June
Kittson	T161N	R46W	34	01 August

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1991 Flight Dates: 18 June &amp; 1 August

**EASTERN TAILED BLUE**Everes comyntas comyntas (Godart)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	SE33	14 June
Kittson	T163N	R45W	NW17	17 June
Roseau	T160N	R44W	NENE25	17 June
Kittson	T163N	R46W	NWSW11	13 July
Kittson	T161N	R46W	27	29 July
Kittson	T161N	R46W	33	29 July
Kittson	T161N	R46W	34	30 July
Kittson	T164N	R49W	36	30 July
Kittson	T160N	R46W	NW04	31 July
Kittson	T161N	R46W	27	05 August
Kittson	T161N	R46W	33	08 August
Kittson	T160N	R46W	E10	09 August
Kittson	T164N	R49W	36	09 August

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1991 Flight Dates: 14 June - 9 August

**WESTERN TAILED BLUE**  
Everes amyntula (Boisduval)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T162N	R38W	12	24 May
Roseau	T164N	R40W	30	26 May
Kittson	T159N	R45W	NW15	09 June
Kittson	T163N	R47W	22 & 26	11 June
Kittson	T164N	R49W	NW36	11 June
Kittson	T161N	R46W	33	14 June
Kittson	T161N	R46W	34	18 June
Kittson	T161N	R46W	27	19 June
Kittson	T160N	R47W	13	19 June
Kittson	T164N	R49W	36	21 June
Kittson	T161N	R46W	SE33	22 June
Roseau	T160N	R44W	NE20	23 June
Kittson	T161N	R46W	34	24 June
Kittson	T161N	R46W	27	29 July
Kittson	T160N	R46W	04	08 August

1991 Flight Dates: 20 May - 8 August

**SPRING AZURE**  
Celastrina argiolus lucia (W. Kirby)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	SWSE30	16 May
Roseau	T163N	R41W	SWSW01	16 May
Roseau	T163N	R40W	N02	18 May
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T162N	R38W	12	24 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R41W	26	30 May
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	SESE34	02 June
Kittson	T161N	R46W	SE33	14 June
Kittson	T161N	R46W	34	22 June
Kittson	T161N	R35W	NENE34	25 July
Kittson	T160N	R46W	04	08 August

1991 Flight Dates: 16 May - 22 June & 25 July - 8 August

**SILVERY BLUE**Glaucopsyche lygdamus couperi GroteSurvey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T159N	R45W	NW15	14 May
Roseau	T164N	R40W	SWSE30	16 May
Roseau	T163N	R37W	NWNW04	19 May
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T159N	R40W	29	21 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T163N	R40W	02 & 11	24 May
Roseau	T162N	R38W	12	24 May
Roseau	T164N	R37W	25 & 26	25 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R42W	35	27 May
Kittson	T160N	R46W	S10	28 May
Kittson	T161N	R46W	SE33	28 May
Roseau	T164N	R41W	26	30 May
Kittson	T163N	R47W	26	31 May
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T162N	R38W	10 & 12	03 June
Roseau	T163N	R42W	02 & 04	05 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	34	08 June
Roseau	T159N	R40W	29	12 June
Roseau	T164N	R40W	SW31	13 June

1991 Flight Dates: 14 May - 13 June

**ORANGE BORDERED BLUE**Lycaeides melissa melissa (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	SE33	28 May
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	34	08 June
Kittson	T159N	R45W	NW15	09 June
Kittson	T161N	R46W	SE33	14 June
Kittson	T163N	R45W	NW17	17 June
Kittson	T161N	R46W	N34	18 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T161N	R46W	SE33	22 June
Kittson	T161N	R46W	33	08 August
Kittson	T160N	R46W	04	08 August

1991 Flight Dates: 28 May - 22 June & 8 August  
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# NYMPHALIDAE

## VARIEGATED FRITILLARY

Euptoieta claudia (Cramer)

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T161N	R46W	SE33	14 June
Roseau	T160N	R44W	20	15 June
Kittson	T163N	R45W	NW17	17 June
Kittson	T161N	R46W	N34	18 June
Kittson	T161N	R46W	SWSW27	19 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R45W	NW07	21 June
Kittson	T164N	R49W	W36	21 June
Kittson	T160N	R45W	SE15	04 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T163N	R46W	NWSW11	13 July
Kittson	T164N	R49W	36	30 July
Roseau	T161N	R35W	NENE34	04 August
Kittson	T161N	R46W	27	05 August
Roseau	T161N	R35W	34 & 35	11 August

1991 Flight Dates: 14 June - 11 August

## GREAT SPANGLED FRITILLARY

Speyeria cybele pseudocarpenteri (F. & R. Chermock)

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T161N	R46W	34	01 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T160N	R45W	NE22	04 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T159N	R45W	NWNW15	06 July
Roseau	T160N	R44W	SW19	06 July
Roseau	T160N	R44W	NNE36	06 July
Kittson	T163N	R47W	ENW26	08 July
Kittson	T161N	R46W	35	09 July
Kittson	T160N	R45W	N22	09 July
Roseau	T164N	R40W	S S35	17 July
Roseau	T161N	R35W	NENE34	25 July
Kittson	T161N	R46W	27	29 July
Kittson	T161N	R46W	33	30 July
Kittson	T161N	R46W	34	30 July
Roseau	T161N	R35W	34	11 August

1991 Flight Dates: 27 June - 11 August

**APHRODITE**Speyeria aphrodite (Fabricius)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T159N	R46W	SW01	05 July
Kittson	T159N	R45W	NWNW15	06 July
Kittson	T160N	R45W	N22	09 July
Roseau	T160N	R44W	NESE20	13 July
Kittson	T160N	R46W	SWSW08	15 July
Kittson	T164N	R49W	NW36	15 July
Roseau	T162N	R38W	NW12	18 July
Roseau	T159N	R41W	NWNW30	21 July
Kittson	T161N	R46W	27	29 July
Kittson	T161N	R46W	33	29 July
Kittson	T161N	R46W	34	30 July
Kittson	T159N	R46W	SW14	30 July
Kittson	T164N	R46W	36	30 July
Kittson	T160N	R46W	NW04	31 July
Kittson	T160N	R46W	SE10	31 July
Roseau	T161N	R35W	34	04 August
Kittson	T161N	R46W	27	05 August
Kittson	T164N	R45W	N N17	07 August
Kittson	T163N	R47W	26	07 August
Kittson	T161N	R46W	33	08 August
Kittson	T160N	R46W	04	08 August
Kittson	T160N	R46W	E10	09 August
Kittson	T164N	R49W	36	09 August
Kittson	T161N	R46W	27	10 August
Kittson	T163N	R47W	23	10 August
Roseau	T161N	R35W	34	11 August

1991 Flight Dates: 5 July - 11 August

**ATLANTIS FRITILLARY**Speyeria atlantis (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R42W	NW36	13 June
Roseau	T164N	R40W	S S35	17 July
Roseau	T163N	R40W	NWSW06	17 July
Roseau	T163N	R41W	NESE01	17 July
Roseau	T164N	R40W	SEN30	19 July
Roseau	T163N	R39W	NESW08	23 July
Roseau	T161N	R35W	NENE34	25 July

1991 Flight Dates: 13 June - 25 July

**SILVER BORDERED FRITILLARY**  
Clossiana selene atrocotalis (Huard)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R40W	02 & 11	24 May
Roseau	T164N	R41W	26	30 May
Roseau	T163N	R39W	W17	01 June
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T163N	R42W	02 & 04	05 June
Kittson	T161N	R46W	NE27	07 June
Roseau	T159N	R40W	29	12 June
Roseau	T164N	R41W	26	12 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T163N	R45W	NW17	17 June
Kittson	T162N	R45W	NE25	24 June
Roseau	T164N	R40W	S S35	17 July
Roseau	T163N	R40W	NWSW06	17 July
Roseau	T164N	R40W	SEN30	19 July
Roseau	T162N	R41W	NWSE23	19 July
Roseau	T163N	R39W	NESW08	23 July

1991 Flight Dates: 24 May - 23 July

**MEADOW FRITILLARY**  
Clossiana bellona toddi (Holland)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T163N	R40W	02	24 May
Roseau	T162M	R38W	12	24 May
Roseau	T164N	R40W	30	26 May
Roseau	T164N	R42W	35	27 May
Kittson	T161N	R46W	SE33	28 May
Roseau	T161N	R37W	26	02 June
Roseau	T161N	R35W	SESE34	02 June
Roseau	T162N	R38W	01 & 12	03 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	34	08 June
Roseau	T164N	R42W	NW36	13 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T161N	R46W	34	01 July
Kittson	T160N	R46W	NE22	04 July
Kittson	T160N	R45W	NE22	04 July

C. bellona continued

County	Twp	Rng	Sec	Date
Kittson	T160N	R45W	SE15	04 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T159N	R45W	NWNW15	06 July
Roseau	T160N	R44W	SW19	06 July
Roseau	T160N	R44W	NE36	06 July
Kittson	T163N	R47W	ENW26	08 July
Kittson	T161N	R46W	ENW35	09 July
Kittson	T160N	R45W	N22	09 July
Kittson	T163N	R46W	NWSW11	13 July
Kittson	T159N	R46W	NENE11	13 July
Roseau	T160N	R44W	NESE20	13 July
Roseau	T164N	R40W	S S35	17 July
Roseau	T164N	R40W	SEN30	19 July
Roseau	T162N	R41W	NWSE23	19 July
Roseau	T159N	R41W	NWNW30	21 July
Roseau	T161N	R35W	NENE34	25 July
Kittson	T161N	R46W	33	29 July
Kittson	T161N	R46W	34	30 July
Kittson	T159N	R46W	SW14	30 July
Roseau	T161N	R35W	NENE34	04 August
Kittson	T161N	R46W	27	05 August
Kittson	T163N	R47W	26	10 August
Roseau	T161N	R35W	34	11 August

1991 Flight Dates: 20 May - 11 August

GORGONE CHECKERSPOT

Charidryas gorgone carlota (Reakirt)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	S10	28 May
Kittson	T161N	R46W	SE33	28 May
Kittson	T163N	R47W	26	31 May
Kittson	T161N	R46W	SE33	06 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	34	08 June
Kittson	T163N	R47W	22 & 26	11 June
Kittson	T161N	R46W	SE33	14 June

1991 Flight Dates: 28 May - 14 June

**SILVERY CHECKERSPOT**Charidryas nycteis nycteis (Doubleday & Hewitson)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R42W	02 & 04	05 June
Kittson	T161N	R46W	N34	18 June
Kittson	T160N	R47W	13	19 June

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1991 Flight Dates: 5 June - 19 June

**HARRIS CHECKERSPOT**Charidryas harrisii (Scudder)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T159N	R45W	NW15	09 June
Roseau	T159N	R40W	29	12 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T160N	R47W	13	15 June
Roseau	T160N	R44W	20	15 June
Kittson	T163N	R45W	NW17	17 June
Kittson	T161N	R46W	N34	18 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T159N	R45W	SW12	23 June

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1991 Flight Dates: 9 June - 23 June

**PEARL CRESCENT**Phyciodes tharos pascoensis (W.G. Wright)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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67 site/date records throughout Kittson and Roseau counties.

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1991 Flight Dates: 18 May - 11 August

**BALTIMORE CHECKERSPOT**Euphydryas phaeton phaeton (Drury)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R40W	S S35	17 July
Roseau	T164N	R40W	SEN30	19 July
Roseau	T164N	R41W	S N26	22 July

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1991 Flight Dates: 17 July - 22 July

**COMMA**Polygonia comma (Harris)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May
Kittson	T161N	R46W	34	18 June
Kittson	T161N	R45W	NW07	21 June

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1991 Flight Dates: 20 May - 21 June

**SATYR ANGLEWING**Polygonia satyrus (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	SWSW01	16 May

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1991 Flight Dates: 16 May

**GREEN COMMA**Polygonia faunus faunus (W.H. Edwards)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May

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1991 Flight Dates: 20 May



**GRAY COMMA**Polygona progne progne (Cramer)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R40W	N02	18 May
Roseau	T161N	R35W	SESE34	02 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T159N	R46W	SW01	05 July
Roseau	T164N	R40W	S S35	17 July
Roseau	T161N	R35W	NENE34	25 July

1991 Flight Dates: 18 May - 25 July

**MOURNING CLOAK**Nymphalis antiopa antiopa (Linnaeus)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R37W	N05	19 May
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T161N	R35W	NWNW35	22 May
Roseau	T163N	R40W	02 & 11	24 May
Roseau	T164N	R41W	26	26 May
Roseau	T164N	R42W	35	27 May
Roseau	T162N	R38W	01 & 12	03 June
Roseau	T161N	R35W	NW05	04 June
Roseau	T163N	R42W	02	05 June
Kittson	T161N	R46W	27	08 June
Kittson	T163N	R47W	22	11 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T159N	R46W	NWNW23	01 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T159N	R46W	SW01	05 July
Kittson	T163N	R47W	ENW26	08 July
Kittson	T161N	R46W	ENW35	09 July
Roseau	T162N	R41W	NWSE23	19 July
Roseau	T163N	R39W	NESW08	23 July
Roseau	T161N	R35W	NENE34	25 July
Roseau	T161N	R35W	NWNW35	04 August

1991 Flight Dates: 19 May - 4 August

**MILBERT'S TORTOISE SHELL**Aglais milberti milberti (Godart)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	NWNW01	20 May
Roseau	T163N	R39W	NESW08	23 July
Roseau	T161N	R35W	NENE34	04 August
Roseau	T161N	R35W	NWNW35	11 August

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1991 Flight Dates: 20 May - 11 August**AMERICAN PAINTED LADY**Vanessa virginiensis (Drury)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T163N	R41W	SWSW01	16 May
Roseau	T163N	R40W	02	24 May
Kittson	T163N	R47W	26	31 May
Roseau	T161N	R37W	26	02 June
Roseau	T162N	R38W	01	03 June
Kittson	T161N	R46W	34	18 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T161N	R46W	27	05 August

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1991 Flight Dates: 16 May - 5 August**PAINTED LADY**Vanessa cardui (Linnaeus)Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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76 sites/dates recorded throughout Kittson and Roseau counties.

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1991 Flight Dates: 26 May - 11 August

**RED ADMIRAL**

Vanessa atalanta rubria (Fruhstorfer)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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26 sites/dates recorded throughout Kittson and Roseau counties.

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1991 Flight Dates: 24 May - 21 July

**WHITE ADMIRAL**

Basilarchia arthemis arthemis (Drury)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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42 sites/dates recorded throughout Kittson and Roseau counties.

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1991 Flight Dates: 31 May - 11 August

**RED SPOTTED PURPLE**

Basilarchia arthemis astyanax (Fabricius)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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Kittson	T161N	R46W	NE33	07 June
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1991 Flight Dates: 7 June

**VICEROY**

Basilarchia archippus archippus (Cramer)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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48 sites/dates recorded throughout Kittson and Roseau counties.

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1991 Flight Dates: 31 May - 11 August

# SATYRIDAE

## NORTHERN PEARLY EYE

Enodia anthedon A.H. Clark

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R41W	26	12 June
Roseau	T164N	R40W	SW31	13 June
Roseau	T164N	R42W	NW36	13 June
Kittson	T161N	R46W	34	18 June
Kittson	T161N	R45W	NW07	21 June
Roseau	T160N	R44W	19	23 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Roseau	T162N	R38W	NW12	18 July
Roseau	T163N	R39W	NESW08	23 July
Roseau	T161N	R35W	NW35	25 July

1991 Flight Dates: 12 June - 25 July

## EYED BROWN

Satyroides eurydice eurydice (Linnaeus)

### Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Roseau	T164N	R41W	26	12 June
Roseau	T164N	R40W	SW31	13 June
Kittson	T162N	R45W	NE25	24 June
Roseau	T160N	R44W	20	27 June
Kittson	T163N	R45W	NE18	27 June
Kittson	T160N	R45W	NE22	04 July
Kittson	T160N	R45W	SE15	04 July
Kittson	T159N	R46W	SW01	05 July
Roseau	T160N	R44W	SW19	06 July
Kittson	T160N	R45W	N22	09 July
Roseau	T164N	R40W	S S35	17 July
Roseau	T164N	R41W	S N26	22 July
Roseau	T161N	R35W	NENE34	25 July

1991 Flight Dates: 12 June - 25 July

LITTLE WOOD SATYR

Megisto cymela cymela (Cramer)

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
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27 site/date records throughout Kittson and Roseau counties.

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1991 Flight Dates: 2 June - 24 June

RINGLET

Coenonympha tullia W.H. Edwards

Survey County Records From the 1991 Survey:

County	Twp	Rng	Sec	Date
Kittson	T160N	R46W	S10	28 May
Kittson	T161N	R46W	SE33	28 May
Kittson	T163N	R47W	26	31 May
Roseau	T161N	R35W	SESE34	02 June
Roseau	T162N	R38W	01 & 12	03 June
Roseau	T163N	R42W	02 & 04	05 June
Kittson	T160N	R46W	SE10	06 June
Kittson	T161N	R46W	SE33	06 June
Kittson	T161N	R46W	NE27	07 June
Kittson	T161N	R46W	34	08 June
Kittson	T159N	R45W	NW15	09 June
Kittson	T163N	R47W	22	11 June
Kittson	T164N	R49W	NW36	11 June
Roseau	T159N	R40W	29	12 June
Roseau	T164N	R40W	SW31	13 June
Roseau	T164N	R42W	NW36	13 June
Kittson	T161N	R46W	SE33	14 June
Kittson	T160N	R47W	13	15 June
Roseau	T160N	R44W	20	15 June
Kittson	T163N	R45W	NW17	17 June
Kittson	T161N	R46W	34	18 June
Kittson	T161N	R46W	NE27	19 June
Kittson	T160N	R47W	13	19 June
Kittson	T161N	R46W	SE33	22 June

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1991 Flight Dates: 28 May - 22 June

COMMON WOOD NYMPH  
Cercyonis pegala (Fabricus)

Survey County Records From the 1991 Survey:  
County      Twp      Rng      Sec      Date

53 site/date records throughout Kittson and Roseau counties.

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1991 Flight Dates: 22 June - 11 August

DANAIDAE

MONARCH  
Danaus plexippus plexippus (Linnaeus)

Survey County Records From the 1991 Survey:  
County      Twp      Rng      Sec      Date

94 site/date records throughout Kittson and Roseau counties.

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1991 Flight Dates: 24 May - 11 August