

# The Great Lakes Entomologist

---

Volume 39

Numbers 3 & 4 - Fall/Winter 2006 *Numbers 3 & 4 -  
Fall/Winter 2006*

Article 3

---

October 2006

## Preliminary Inventory of Lepidoptera From Cook County, Minnesota: Hesperioidea, Papilionoidea, Drepanoidea, Geometroidea, Bombycoidea, Sphingoidea and Noctuoidea

David B. MacLean

Follow this and additional works at: <https://scholar.valpo.edu/tgle>

 Part of the [Entomology Commons](#)

---

### Recommended Citation

MacLean, David B. (2006) "Preliminary Inventory of Lepidoptera From Cook County, Minnesota: Hesperioidea, Papilionoidea, Drepanoidea, Geometroidea, Bombycoidea, Sphingoidea and Noctuoidea," *The Great Lakes Entomologist*: Vol. 39 : No. 2 , Article 3. Available at: <https://scholar.valpo.edu/tgle/vol39/iss2/3>

This Peer-Review Article is brought to you for free and open access by the Department of Biology at ValpoScholar. It has been accepted for inclusion in The Great Lakes Entomologist by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at [scholar@valpo.edu](mailto:scholar@valpo.edu).

**PRELIMINARY INVENTORY OF LEPIDOPTERA FROM COOK COUNTY, MINNESOTA: HESPERIOIDEA, PAPILIONOIDEA, DREPANOIDEA, GEOMETROIDEA, BOMBYCOIDEA, SPHINGOIDEA AND NOCTUOIDEA**

David B. MacLean<sup>1</sup>

**ABSTRACT**

Four hundred and sixty five species of butterflies, skippers and moths, collected from 1988 through the summer of 2007, are reported from Cook County, MN. Included are data for three butterfly species of special concern: *Lycaeides idas nabokovi* Masters, *Erebia discoidalis* (Kirby) and *Oeneis jutta* (Hübner). Numbers of species recorded for the following families were: Hesperiiidae (14), Papilionidae (2), Pieridae (7), Lycaenidae (14), Nymphalidae (24), Satyridae (6), Danaidae (1), Thyatiridae (4), Drepanidae (3), Geometridae (99), Lasiocampidae (2), Saturniidae (4), Sphingidae (16), Notodontidae (20), Arctiidae (19), Lymantriidae (5) and Noctuidae (225). *Euphydryas phaeton* (Drury) (Nymphalidae) is reported for the first time from Cook County, MN and *Pontia protodice* (Boisduval & LeConte) (Pieridae) and *Hyalophora columbia* (Smith) (Saturniidae) for the first time from northeastern Minnesota.

The purpose of this paper is to report species of butterflies, skippers and moths collected in Cook County, Minnesota (MN), from 1988 through August 2007. The author is unaware of a published list of Lepidoptera from Cook County; however, an estimate of the number of species present can be gleaned from published reports from nearby states and provinces. Ronald L. Huber (Bloomington, MN, pers. comm.) records 169 species of butterflies from Minnesota, including 89 species of butterflies from Wadena County, which is the only published county inventory of Minnesota butterflies to date (Oehlenschläger and Huber 2002). Ferge and Balogh (2000) recorded 1,209 species of moths in 13 families from Wisconsin. Rockburne and Lafontaine (1976) recorded 603 species of Noctuidae from Ontario and Quebec. Voss (1981, 1983 and 1991) reported 531 species from two northern counties of the Lower Peninsula of Michigan in the following families: Noctuidae (311 species), Thyatiridae (3), Drepanidae (4), Lasiocampidae (4), Notodontidae (38), Lymantriidae (6) and Geometridae (165). For all of Michigan, Nielsen provided preliminary lists of the state's butterflies and skippers (159 species; Nielsen 1998a), the macrolepidopteran moths (1,304 species; Nielsen 1997), and the microlepidopteran moths (1,217 species; Nielsen 1998b). Cook County, MN, lies entirely within the northern coniferous forest (Marschner 1974). Three landscape ecosystems that lie within Cook County (North Shore Highlands, Border Lakes, and Nashwauk Uplands; Albert 1994) provide varied habitats for larval host plants of butterflies and moths. The North Shore Highlands extend inland along the Lake Superior shoreline for approximately 15 km. The growing season ranges from approximately 121 to 135 days, being about 10 days longer along the Lake Superior shoreline than further inland (Albert 1994). Following logging in the late 19th and early 20th centuries, the extensive white pine (*Pinus strobus* L.) and red pine (*Pinus resinosa* Aiton) forests of the North Shore Highlands were replaced by trembling aspen (*Populus tremuloides*

<sup>1</sup>76 Walter Road, Grand Marais, MN 55604. (e-mail: birchpt@boreal.org).

Michaux) and paper birch (*Betula papyrifera* Marshall). Northern hardwood forest, upland northern white cedar (*Thuja occidentalis* L.) forest and forested bog communities occur throughout the North Shore Highland landscape. Sugar maple (*Acer saccharum* Marshall) and white ash (*Fraxinus americana* L.) occur on ridges within 13-16 km of the Lake Superior shoreline (Albert 1994).

The Border Lakes landscape ecosystem within Cook County extends inland to the Canadian border and includes the eastern portion of the Boundary Waters Canoe Area Wilderness (BWCAW). This region has a cool continental climate with short warm summers and long winters (Heinselman 1973). The growing season ranges from approximately 108 to 123 days. The vegetation of the Border Lakes consists primarily of jack pine (*Pinus banksiana* Lambert) forest, white pine-red pine forest and hardwood-conifer forest dominated by balsam fir [*Abies balsamea* (L.) Miller], white spruce [*Picea glauca* (Moench) A. Voss], paper birch and trembling aspen. Heinselman (1973) considered the vegetation to be transitional between the Great Lakes-St. Lawrence and boreal forest regions.

The easternmost portion of the Nashwauk Uplands enters the southwestern part of Cook County (Albert 1994). The vegetation consists primarily of conifer-aspen-birch forest and the growing season ranges from approximately 106 to 121 days.

## METHODS

Most of the data for this preliminary inventory of Cook County Lepidoptera were based on records in the author's personal collection dating back to 1988. Relatively few collections were made throughout the 1990s; however, more intensive collecting efforts began in 2000 and continued through the summer of 2007. Additional records of Cook County moths were based on light trap surveys conducted in 2000 and 2001 of the Grand Portage National Monument (MacLean 2002a) and the Grand Portage Indian Reservation (MacLean 2000b, 2001b, 2002b, 2003). Moths were collected by means of netting, picking specimens from a sheet illuminated by a 15-watt black light placed at the author's residence and operated on 2 nights in 2001, 24 in 2002, 56 in 2003, 51 in 2004, 59 in 2005, 61 in 2006, and 14 in 2007. Depending on the year and weather conditions, collections were made from mid April to late October or early November. In addition, one or more 22-watt portable blacklight traps were operated at 36 locations throughout Cook County. Fourteen blacklight trap collections were made in 2000, 6 in 2001, 1 in 2002 and 2003, 16 in 2004, 8 in 2005, 13 in 2006 and 8 in 2007. In 2000 and 2001 the author conducted a survey of butterflies of special concern of the Superior National Forest for the United States Forest Service (MacLean 2000a, 2001a).

The following references were used to identify butterflies and skippers: Brock and Kaufman (2003), Layberry et al. (1998), Nielsen (1999), and Scott (1986). The following references were used to identify moths: Bolte (1990), Covell (2005), Ferguson (1972, 1978), Forbes (1948, 1954), Franclemont (1973), Hodges (1971), Lafontaine (1987, 1998, 2004), Lafontaine and Poole (1991), Poole (1995), Rockburne and Lafontaine (1976), and Wagner et al. (2001). Identification of *Euxoa messoria* (Harris) and *Euxoa comosa altera* McDunnough was based on genitalia preparations. Specimens of some species were sent to Leslie A. Ferge (Madison, WI) for identification.

I categorized the relative abundance of each species based on the number of specimens that I collected from 1988 to 2007 within Cook County. The five categories I used were: rare (represented by a single specimen), uncommon (2-5 specimens), common (6-10 specimens), very common (11-20), and abundant (> 20 specimens). I recognize that these categories no doubt underestimate the true population size of many species.

## RESULTS AND DISCUSSION

This report lists 465 species of butterflies, skippers and moths from Cook County, MN, for the following families: Hesperidae (14), Papilionidae (2), Pieridae (7), Lycaenidae (14), Nymphalidae (24), Satyridae (6), Danaidae (1), Thyatiridae (4), Drepanidae (3), Geometridae (99), Lasiocampidae (2), Saturniidae (4), Sphingidae (16), Notodontidae (20), Arctiidae (19), Lymantriidae (5) and Noctuidae (225). The majority of butterflies, skippers and moths recorded from Cook County are widespread and common across the northern United States and southern Canada. Uncommon species of butterflies with localized distributions in extreme northeastern Minnesota included *Pontia protodice* (Boisduval & LeConte), *Euchloe ausonides* (Lucas), *Lycaena dorcas* Kirby, *Lycaena epixanthe* (Boisduval & LeConte), *Chlosyne harrisii* (Scudder), and *Euphydryas phaeton* (Drury). The list also includes three species of special concern (MN DNR 2007), *Lycaeides idas nabokovi* Masters, *Erebia discoidalis* (Kirby) and *Oeneis jutta* (Hübner). *Euphydryas phaeton* (Drury) (Nymphalidae) is reported for the first time from Cook County, MN.

Butterflies and skippers recorded from Cook County, MN (Opler et al. 2006) but not recorded in this inventory were: *Atalopedes campestris* (Boisduval), *Amblyscirtes hegon* (Scudder) (Hesperidae); *Nathalis iole* Boisduval (Pieridae); *Satyrus edwardsii* (Grote & Robinson), *Incisalia polia* Cook & Watson, *Hemiarctus isola* (Reakirt) (Lycaenidae); *Polygonia interrogationis* (Fabricius), *Euptoieta claudia* (Cramer) and *Boloria eunomia* (Esper) (Nymphalidae).

Overall, 28% of moth species were represented by a single specimen and were judged to be rare. Similarly, 38% were categorized as uncommon, 29% common, 4% very common, and 1% abundant.

Table 1 lists the number of species recorded for all years (1998-2007) by month from April to October for the five most abundant moth families. The total number of species recorded for each month increased dramatically from 20 in April, to a peak of 171 in July, and then declining to 14 in October (Table 1). The number of species of Noctuidae collected each month far surpassed the number collected for the other most common moth families (Table 1). While most species of Geometridae, Sphingidae, Notodontidae, and Arctiidae were recorded in early to mid summer, species richness of the Noctuidae remained high into late summer and early fall.

Species of *Abagrotis*, *Agrotis*, *Amphipoea*, *Apamea*, *Autographa*, *Euxoa*, *Papaipema*, *Syngrapha*, *Xestia* and others were most abundant in late summer and fall. Some species were more common than indicated by their ranking here as not all individuals attracted to the blacklight sheet were collected. Thus, the results no doubt underestimate the relative abundance of species such as *Enargia decolor* (Walker), *Helicoverpa zea* (Boddie), *Nephelodes minians* Guenée, and *Pseudaletia unipuncta* (Haworth), which were very common in late summer and

Table 1. Number of Geometridae, Sphingidae, Notodontidae, Arctiidae and Noctuidae species collected in Cook County, MN, during 1988-2007 by month.

|              | April | May | June | July | Aug. | Sept. | Oct. |
|--------------|-------|-----|------|------|------|-------|------|
| Geometridae  | 5     | 23  | 48   | 40   | 28   | 7     | 5    |
| Sphingidae   | 0     | 1   | 13   | 10   | 4    | 1     | 0    |
| Notodontidae | 1     | 8   | 14   | 14   | 5    | 0     | 0    |
| Arctiidae    | 0     | 0   | 9    | 14   | 9    | 2     | 0    |
| Noctuidae    | 14    | 22  | 64   | 93   | 90   | 68    | 9    |
| Totals       | 20    | 54  | 148  | 171  | 136  | 78    | 14   |

early fall. Also, *Malacosoma disstria* Hübner was extremely abundant during a population outbreak in the early 2000s.

The majority of moths recorded from Cook County are generalists that are widespread across the eastern United States and southern Canada. Most species were collected at a variety of sites; however *Caripeta divisata* Walker, *C. angustiorata* Walker, and *Panthea pallescens* McDunnough occurred only at sites dominated by conifers. *Sthenopis argenteomaculatus* (Harris), *Ematurga amitaria* (Guenée), *Bellura gortynoides* Walker, *Bellura obliqua* (Walker), *Phlogophora iris* Guenée, *Phlogophora periculosa* Guenée, *Epiglaea decliva* (Grote), *Epiglaea apiata* (Grote), *Polia nimbose* (Guenée), *Polia imbrifera* (Guenée) and *Euxoa velleripennis* (Grote) occurred at wetlands or near lakeshores with alder (*Alnus*). *Hypoprepia miniata* (Kirby), *Apamea impulsiva* (Guenée), *Athetis mendosa* McDunnough, *Leucania commoides* Guenée, *Leucania pseudargyria* Guenée and *Pseudohermonassa tenuicula* (Morrison) were collected along the Lake Superior shoreline with cutworms that were common in late summer and early fall. Adults of *Megalographa biloba* (Stephens) were obtained from larvae reared on a *Delphinium* species cultivar.

Ferge (1983) recorded *Hyalophora columbia* (Smith), a tamarack specialist, from 12 Wisconsin counties, however *H. columbia* has rarely been reported from Minnesota. Specimens have been recorded from Beltrami, Lake of the Woods (Tuskes et al. 1996) and Clearwater (Itasca State Park) counties in northwestern Minnesota and Aitkin County in northcentral Minnesota (Ronald L. Huber, pers. comm.). The specimen collected from Cook County represents the first published record of *H. columbia* from northeastern Minnesota.

In Table 2, I have listed the 465 species of Lepidoptera collected in Cook County, MN, by family and provided for each its Hodges number (Hodges et al. 1983), and comments on relative abundance and seasonal distribution.. A more detailed list of species with collection dates, numbers collected or observed, and the collection methods is available from the author upon request. While no specimens of either *Papilio polyxenes* Fabricius or *Hyalophora cecropia* (Linnaeus) were collected or observed by the author, these two species were reported from Cook County based on reliable observations of the former and photographs of the latter. A third species reported from Cook County, *Lymantria dispar* (Linnaeus), for which no specimens were taken, has been well documented by pheromone traps operated by the Minnesota DNR. (Cremers 2006).

Table 2. Annotated checklist of Lepidoptera collected from Cook County, MN, during 1988-2007, including the Hodges species number (Hodges et al. 1983) and notes on relative abundance and seasonal distribution. Except where noted, all species are in the author's personal collection. Scientific names of moths follow that of Ferge and Balogh (2000), those of butterflies follow Nielsen (1999).

---

## Family

### Hodges number, species, relative abundance, and seasonal distribution

---

#### HESPERIDAE - duskywings and skippers

- 3910 *Thorybes pylades* (Scudder): common, June.  
 3945 *Erynnis icelus* (Scudder & Burgess): common most years, late May, June and early July.  
 3982 *Carterocephalus palaemon* (Pallas): common, mid - late June.  
 4012 *Thymelicus lineola* (Ochsenheimer): widespread invader colonizing north-eastern Minnesota, extremely abundant during late 1990s, numbers declined in early 2000s, June - July.  
 4020 *Hesperia comma* (Linnaeus): common, August.  
 4033 *Hesperia sassacus* Harris: common, June.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 4036 *Polites peckius* (Kirby): common, July - August.  
 4041 *Polites themistocles* (Latreille): common most years, late June - July.  
 4043 *Polites mystic* (Edwards): uncommon, local, late June - July.  
 4047 *Wallengrenia egeremet* (Scudder): uncommon, July - August.  
 4058 *Poanes massasoit* (Scudder): uncommon, August.  
 4059 *Poanes hobomok* (Harris): common most years, June - mid July.  
 4078 *Euphyes vestris* (Boisduval): common, late June - July.  
 4105 *Amblyscirtes vialis* (Edwards): common, June - mid July.
- PAPILIONIDAE - swallowtails
- 4159 *Papilio polyxenes* Fabricius: not seen but reliable sight records from extreme southwestern Cook County.  
 4176a *Papilio canadensis* Rothschild & Jordan: abundant most years, however numbers declined in early 2000s, late May - early July.
- PIERIDAE - whites and sulphurs
- 4193 *Pontia protodice* (Boisduval & LeConte): stray, first northeastern Minnesota record (Ronald L. Huber pers. comm.) 08 Aug 2006.  
 4195 *Pieris napi oleracea* (Harris): common, late May - August.  
 4197 *Pieris rapae* (Linnaeus): common most years, abundant in 2006, June - late August.  
 4200 *Euchloe ausonides* (Lucas): very local, occurs only in extreme northern Cook County where its host plant *Arabis glabra* (Linnaeus): grows, mid - late May.  
 4209 *Colias philodice* Godart: common most years, uncommon in 2006, May - late September.  
 4210 *Colias eurytheme* Boisduval: uncommon most years, not seen in 2006, often not seen until late summer or early fall, June - September.  
 4220 *Colias interior* Scudder: common to abundant, late June - early August.
- LYCAENIDAE - harvesters, coppers, hairstreaks and blues
- 4260 *Lycaena epixanthe* (Boisduval & LeConte): local, rare, early July.  
 4261 *Lycaena dorcas* (W. Kirby): local, rare, July.  
 4285 *Satyrium liparops* (LeConte): uncommon, July.  
 4322 *Incisalia augustinus* (W. Kirby): common most years, rare in 2005, 2006 and 2007, late May - mid June.  
 4328 *Incisalia niphon* (Hübner): local, uncommon, mid May - early June.  
 4329 *Incisalia eryphon* (Boisduval): local, uncommon, mid May - early June.  
 4336 *Strymon melinus* Hübner: rare, late July.  
 4361 *Everes comyntas* (Godart): uncommon, August.  
 4362 *Everes amyntula* (Boisduval): uncommon, June.  
 4363 *Celastrina ladon* (Cramer): common most years, uncommon in 2006, May - June.  
 4363.1 *Celastrina neglecta* (W. H. Edwards): uncommon but may be overlooked, June and August.  
 4372 *Glaucopsyche lygdamus* (Doubleday): common most years, June - early July.  
 4374 *Lycaeides idas nabokovi* Masters: a Minnesota DNR species of special concern, very local, occurs only where its host plant *Vaccinium cespitosum* Michx. grows, mid June - mid July.  
 4376 *Plebejus saepiolus* (Boisduval): common - most years, abundant in 2005 & 2006, June - mid July.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

## NYMPHALIDAE - brush-footed butterflies

- 4421 *Polygonia comma* (Harris): common most years, May - mid July.  
 4423 *Polygonia faunus* (W. H. Edwards): common some years, June and August.  
 4427 *Polygonia gracilis* (Grote & Robinson): local, uncommon, early June & August.  
 4429 *Polygonia progne* (Cramer): local, uncommon, July.  
 4430 *Nymphalis vau-album* (Denis & Schiffermüller): common most years, uncommon - rare in 2004 - 2007, late April - May, August, September - October.  
 4432 *Nymphalis antiopa* (Linnaeus): common most years, abundant in 2001, scarce 2002 - 2004, common 2007, May - September.  
 4433 *Nymphalis milberti* (Godart): common most years, May, July - August.  
 4434 *Vanessa virginiensis* (Drury): common some years, absent others, abundant in 2005, May - July.  
 4435 *Vanessa cardui* (Linnaeus): migrant, common - abundant some years, absent in others, June - September.  
 4437 *Vanessa atalanta* (Linnaeus): migrant, scarce or absent most years, common in 2001, 2007, May - June.  
 4440 *Junonia coenia* Hübner: migrant, absent - uncommon most years, common 2007, June - July.  
 4450 *Speyeria cybele* (Fabricius): more common in the southwestern part of Cook County along the Lake Superior shoreline, July.  
 4451 *Speyeria aphrodite* (Fabricius): common most years, July.  
 4459 *Speyeria atlantis* (W. H. Edwards): common - abundant most years, late June July.  
 4464 *Boloria selene* (Denis & Schiffermüller): local, common most years, June - August.  
 4465 *Boloria bellona* (Fabricius): common most years, June - August.  
 4471 *Boloria freija* Thunberg: locally common, May - early June.  
 4475 *Boloria chariclea* (Schneider): very local, uncommon, August.  
 4481 *Phyciodes selenis* (W. Kirby): common - abundant, June - mid July.  
 4482 *Phyciodes batesii* (Reakirt): common, June - early August.  
 4490 *Chlosyne nycteis* (Doubleday & Hewitson): common - abundant most years, June - mid July.  
 4491 *Chlosyne harrisii* (Scudder): very local, uncommon, June.  
 4516 *Euphydryas phaeton* (Drury): new Cook Co. MN record, very local, known from one location in Cook County where its primary host plant *Chelone glabra* L. grows, larvae in May, adults in mid - late June.  
 4522 *Limenitis arthemis* (Drury): common - abundant most years, June - August.

## SATYRIDAE - Satyrs, wood nymphs, alpiners and arctics

- 4568.1 *Enodia anthedon* A. H. Clark: common most years, June - mid July.  
 4583 *Coenonympha tullia inornata* W. H. Edwards: uncommon most years, late June - mid July.  
 4587 *Cercyonis pegala* (Fabricius): uncommon, July - August.  
 4596 *Erebia discoidalis* (W. Kirby): a Minnesota DNR species of special concern, very local near bog edges and grassy wetlands, locally uncommon - common, late May - early June.  
 4605 *Oeneis macounii* (W. H. Edwards): local, uncommon, only observed in even numbered years, mid June - mid July.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 4611 *Oeneis jutta* (Hübner): a Minnesota DNR species of special concern, very local, black spruce bogs with *Eriophorum* spp., the larval host plant, uncommon, June.

## DANAIDAE - Milkweed butterflies

- 4614 *Danaus plexippus* (Linnaeus): numbers fluctuate widely, common to abundant in 2001, 2005, 2006 and 2007, scarce other years, noncultivated patches, the larval host plant *Asclepias syriaca* L. is very rare and local in Cook County, late May - September.

## FAMILY THYATIRIDAE - false owlet moths

- 6235 *Habrosyne scripta* (Gosse): common, June - August.  
 6236 *Habrosyne gloriosa* (Guenée): rare, early July.  
 6237 *Pseudothyatira cymatophoroides* (Guenée): uncommon, late June- July.  
 6240 *Euthyatira pudens* (Guenée): uncommon, late May - June.

## FAMILY DREPANIDAE - hooktip moths

- 6251 *Drepana arcuata* Walker: common, May - July.  
 6252 *Drepana bilineata* (Packard): common, May - June.  
 6255 *Oreta rosea* (Walker): rare, early July.

## FAMILY GEOMETRIDAE - Geometer moths

- 6256 *Archicaris infans* (Möschler): rare, April.  
 6290 *Macaria loricaria julia* (Hulst): uncommon July.  
 6303 *Macaria subcessaria* (Walker): uncommon, July - August.  
 6330 *Macaria ulsterata* (Pearsall): uncommon, June - July.  
 6342 *Macaria bisignata* Walker: rare, August.  
 6344a *Macaria signaria dispuncta* Walker: uncommon, June - July.  
 6347 *Macaria pinistrobata* Ferguson: local, June, July.  
 6436 *Ematurga amitaria* (Guenée): uncommon, late May - June.  
 6570 *Aethalura intertexta* (Walker): fairly common, mid May - June, August.  
 6583 *Iridopsis ephyraria* (Walker): common, late July - August.  
 6588 *Iridopsis larvaria* (Guenée): fairly common, July - mid August.  
 6590 *Anavitrinella pampinaria* (Guenée): uncommon, mid June.  
 6597.1 *Hypagyrtis unipunctata* (Haworth): common, mid July - August.  
 6598 *Protoboarmia porcelaria indicataria* (Walker): common, mid June, August.  
 6621 *Melanolophia signataria* (Walker): rare, May.  
 6639 *Eufidonia discospilata* (Walker): rare, June.  
 6640a *Biston betularia cognataria* (Guenée): common, June - July.  
 6658 *Phigalia titea* (Cramer): rare, April.  
 6665 *Erannis tiliaria* (Harris): common, October.  
 6666 *Lomographa semiclarata* (Walker): common, mid-late May.  
 6668 *Lomographa glomeraria* (Grote): uncommon, mid May.  
 6677 *Cabera erythemaria* Guenée: uncommon, July.  
 6678 *Cabera variolaria* (Guenée): uncommon, July - August.  
 6726 *Euchlaena obtusaria* (Hübner): uncommon, June - July.  
 6729 *Euchlaena johnsonaria* (Fitch): common, July.  
 6734 *Euchlaena marginaria* (Minot): uncommon, June.  
 6737 *Euchlaena tigrinaria* (Guenée): uncommon, mid July.  
 6740 *Xanthotype urticaria* Swett: uncommon, late June - July.  
 6743 *Xanthotype sospeta* (Drury): common, July.



Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**


---

|       |   |
|-------|---|
| 6754  | <i>Pero ancetaria</i> (Hübner): common, mid June - July.  |
| 6763  | <i>Phaeoura quernaria</i> (J. E. Smith): uncommon, June.  |
| 6796  | <i>Campaea perlata</i> (Guenée): common, June - August.   |
| 6797  | <i>Ennomos magnaria</i> Guenée: common, August - September.                                       |
| 6804  | <i>Petrophora subaequaria</i> (Walker): common, late May - June.                                  |
| 6807  | <i>Tacparia detersata</i> (Guenée): common, late May - June.                                      |
| 6812  | <i>Homochlodes fritillaria</i> (Guenée): uncommon, June, August.                                  |
| 6818  | <i>Selenia kentaria</i> (Grote & Robinson): common, late May - June.                              |
| 6819  | <i>Metanema inatomaria</i> Guenée: uncommon, May - June.  |
| 6820  | <i>Metanema determinata</i> Walker: uncommon, June - July.  |
| 6822  | <i>Metarranthis duaria</i> (Guenée): uncommon, June.  |
| 6826  | <i>Metarranthis hypochraria</i> (Herrich-Schäffer): rare, late June.                              |
| 6837  | <i>Probole alienaria</i> Herrich-Schäffer: uncommon, May, July.                                   |
| 6838  | <i>Probole amicaria</i> Herrich-Schäffer <sup>1</sup> : rare, July.                               |
| 6841  | <i>Plagodis kuetzingi</i> (Grote): uncommon, May - June.  |
| 6842  | <i>Plagodis phlogosaria</i> (Guenée): uncommon, May - June, August.                               |
| 6844  | <i>Plagodis alcoalaria</i> (Guenée): rare, late June.   |
| 6863  | <i>Caripeta divisata</i> Walker: local, common, June - July.                                      |
| 6867  | <i>Caripeta angustiorata</i> Walker: local, uncommon, early July.                                 |
| 6884  | <i>Besma endropiaria</i> (Grote & Robinson) <sup>1</sup> : uncommon, late June.                   |
| 6885  | <i>Besma quercivoraria</i> (Guenée): rare, July.  |
| 6888  | <i>Lambdina fiscellaria</i> (Guenée): common, August.   |
| 6906  | <i>Nepytia canosaria</i> (Walker): common, August - September.                                    |
| 6912  | <i>Sicya macularia</i> (Harris): common, July - September.  |
| 6963  | <i>Tetracis crocallata</i> Guenée: common, June.  |
| 6964  | <i>Tetracis cachexiata</i> Guenée: common, June.  |
| 6966  | <i>Eutrapela clemataria</i> (J. E. Smith): common, June, August.                                  |
| 6982  | <i>Prochoerodes transversata</i> (Drury): common, August - September.                             |
| 7009  | <i>Nematocampa resistaria</i> (Herrich-Schäffer): common, June - August.                          |
| 7048  | <i>Nemoria mimosaria</i> (Guenée): rare, June.  |
| 7139  | <i>Cyclophora pendulinaria</i> (Guenée): uncommon, June, August.                                  |
| 7159  | <i>Scopula limboundata</i> (Haworth): uncommon, July.   |
| 7182  | <i>Dysstroma citrata</i> (Linnaeus): very common, June - August.                                  |
| 7189  | <i>Dysstroma hersiliata</i> (Guenée): uncommon, late June - July.                                 |
| 7201  | <i>Eulithis testata</i> (Linnaeus): uncommon, August.   |
| 7206  | <i>Eulithis explanata</i> (Walker): very common, July - August.                                   |
| 7216  | <i>Plemyria georgii</i> Hulst: uncommon, August.  |
| 7235  | <i>Hydriomena divisaria</i> (Walker): uncommon, May - June, August.                               |
| 7236  | <i>Hydriomena renunciata</i> (Walker): common, June - August.                                     |
| 7257  | <i>Hydriomena furcata</i> Thunberg: rare, August.   |
| 7290  | <i>Coryphista meadii</i> (Packard): common, April - June, September - October.                    |
| 7291  | <i>Rheumaptera undulata</i> (Linnaeus): uncommon July.  |
| 7293a | <i>Rheumaptera hastata gothicata</i> (Guenée): diurnal, common most years uncommon in 2006, June. |
| 7294  | <i>Rheumaptera subhastata</i> (Nolcken): uncommon, June.  |
| 7307  | <i>Mesoleuca ruficillata</i> (Guenée): rare, mid-June.  |
| 7312  | <i>Spargania magnoliata</i> Guenée: uncommon, July - August.                                      |
| 7316  | <i>Perizoma basaliata</i> (Walker): uncommon, July - August.                                      |
| 7329  | <i>Anticlea vasiliata</i> Guenée: rare, mid May <sup>1</sup>                                      |
| 7368  | <i>Xanthorhoe labradorensis</i> (Packard): uncommon, July.  |

---

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 7388 *Xanthorhoe ferrugata* (Clerck): uncommon, June - July.  
 7390 *Xanthorhoe lacustrata* (Guenée): common, June - August.  
 7394 *Epirrhoe alternata* (Müller): uncommon, June, August.  
 7399a *Euphyia intermedia* (Guenée): uncommon, early July.  
 7414 *Orthonama obstipata* (Fabricius): uncommon, October.  
 7416 *Costaconvexa centrostrigaria* (Wollaston): uncommon, October.  
 7425 *Venusia cambrica* Curtis: rare, July.  
 7428 *Venusia comptaria* (Walker): uncommon, May.  
 7433a *Epirrita autumnata henshawi* (Swett): common, September.  
 7437a *Operophtera bruceata* (Hulst): uncommon most years, October.  
 7445 *Horisme intestinata* (Guenée): uncommon, early July.  
 7449 *Eupithecia palpata* Packard: uncommon, May.  
 7474 *Eupithecia miserulata* Grote: uncommon, September.  
 7492 *Eupithecia casloata* (Dyar): uncommon, June.  
 7520c *Eupithecia* near *satyrata dodata* Taylor: rare, June.  
 7543 *Eupithecia annulata* (Hulst): uncommon, May.  
 7605 *Eupithecia ravocostaliata* Packard: uncommon, May.  
 7635 *Acasis viridata* (Packard): rare, May.  
 7637 *Cladara limitaria* (Walker): common, April - June.  
 7639 *Cladara atroliturata* (Walker): common, April - May.  
 7640 *Lobophora nivigerata* Walker: common, May - early July.

## FAMILY LASIOCAMPIDAE - tent caterpillar &amp; lappet moths

- 7687 *Phylodesma americana* (Harris): abundant, May - July.  
 7698 *Malacosoma dissτρια* Hübner: population outbreaks every 10-12 years with massive defoliation mainly of *Populus* spp., huge population in 2000-2003, late June - August.

## FAMILY SATURNIIDAE - giant silkworm moths

- 7757 *Antheraea polyphemus* (Cramer): common - very common most years, mid June - early July.  
 7758 *Actias luna* (Linnaeus): common - very common most years, late May - mid July.  
 7767 *Hyalophora cecropia* (Linnaeus): uncommon and apparently local, not collected but verifiable photos seen from May 2000.  
 7768 *Hyalophora columbia* (Smith): very local (black spruce bogs) and rare, early June; first published record from northeastern Minnesota.

## FAMILY SPHINGIDAE - sphinx moths

- 7787 *Ceratomia undulosa* (Walker): common, June - mid July.  
 7809 *Sphinx kalmiae* J. E. Smith: common some years, June - early August.  
 7810 *Sphinx gordius* Cramer: common, late May - early August.  
 7811 *Sphinx luscitiosa* Clemens: rare, early June.  
 7812 *Sphinx drupiferarum* J. E. Smith: rare, July.  
 7821 *Smerinthus jamaicensis* (Drury): very common, June, August.  
 7822 *Smerinthus cerisyi* Kirby: common - very common, late May - mid July.  
 7824 *Paonias excaecatus* (J. E. Smith): very common, mid June - early July.  
 7825 *Paonias myops* (J. E. Smith): uncommon, July.  
 7827 *Laotloe juglandis* (J. E. Smith): rare, early June.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 7828 *Pachysphinx modesta* (Harris): common - very common most years, late June - July.  
 7853 *Hemaris thysbe* (F.): uncommon, June.  
 7855 *Hemaris diffinis* (Boisduval): common most years, not observed in 2004 & 2005, June - July.  
 7873 *Amphion floridensis* B. P. Clark: uncommon, June.  
 7886 *Darapsa pholus* (Cramer): rare, August.  
 7894 *Hyles lineata* (Fabricius): common some years, late summer and early fall, August - September.

## FAMILY NOTODONTIDAE - prominents

- 7895 *Clostera albosigma* Fitch: common, May - August.  
 7901 *Clostera apicalis* (Walker): rare, May.  
 7902 *Datana ministra* (Drury): uncommon, late July.  
 7915 *Nadata gibbosa* (J. E. Smith): very common, Late May - July.  
 7919 *Peridea basitriens* (Walker): rare, June.  
 7921 *Peridea ferruginea* (Packard): common, June - August.  
 7922 *Pheosia rimosa* Packard: common, June - August.  
 7924 *Odontosia elegans* (Strecker): uncommon, June - July.  
 7928 *Notodonta simplaria* Graef: common, May - August.  
 7929 *Nerice bidentata* Walker: uncommon early July.  
 7931 *Gluphisia septentrionis* Walker: common, May - mid July.  
 7933 *Gluphisia avimacula* Hudson: uncommon, late May.  
 7934 *Gluphisia lintneri* (Grote): rare, late April.  
 7939 *Furcula occidentalis* Lintner: uncommon, late May - mid June.  
 7941 *Furcula modesta* (Hudson): uncommon, late May - July.  
 7990 *Heterocampa umbrata* Walker: uncommon, late June - July.  
 7994 *Heterocampa guttivitta* (Walker): uncommon, June - July.  
 7995 *Heterocampa biundata* Walker: uncommon, late June - July.  
 8005 *Schizura ipomoeae* Doubleday: rare, July.  
 8011 *Schizura leptinoides* (Grote): common, late June - early August.

## FAMILY ARCTIIDAE - tiger, lichen &amp; wasp moths

- 8043 *Eilema bicolor* (Grote): rare, August.  
 8089 *Hypoprepia miniata* (Kirby): rare, July.  
 8090 *Hypoprepia fucosa* Hübner: uncommon, August - September.  
 8098 *Clemensia albata* Packard: local, uncommon, July-August.  
 8112 *Haploa confusa* (Lyman): common, June - July.  
 8114 *Holomelina laeta* (Guérin & Méneville): rare, July.  
 8121 *Holomelina aurantiaca* (Hübner): common, June, August.  
 8129 *Pyrrharctia isabella* (J. E. Smith): rare, June.  
 8134 *Spilosoma congrua* Walker: uncommon, late June - July.  
 8137 *Spilosoma virginica* (Fabricius): common, June - August.  
 8140 *Hyphantria cunea* (Drury): uncommon, adults June, larvae late July.  
 8158 *Phragmatobia assimilians* Walker: uncommon, June.  
 8162 *Platarctia parthenos* (Harris): common, late June, July.  
 8166a *Arctia caja americana* Harris: common some years, late summer and early fall.  
 8186 *Grammia williamsii* (Dodge): uncommon, mid July - August.  
 8196 *Grammia parthenice* (Kirby): common, July - early August.  
 8197 *Grammia virgo* (Linnaeus): common, mid July - August.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 8214 *Lophocampa maculata* Harris: very common, June - July.  
 8262 *Ctenucha virginica* (Esper): common, late June - mid July.

## FAMILY LYMANTRIIDAE - tussock moths

- 8293 *Dasychira dorsipennata* (Barnes & McDunnough): uncommon, early August.  
 8305 *Dasychira pinicola* (Dyar): local, July.  
 8308a *Orgyia antiqua nova* Fitch: uncommon, September.  
 8316 *Orgyia leucostigma intermedia* Fitch: common, mid August - September.  
 8318 *Lymantria dispar* (Linnaeus): abundant based on MN DNR 2000 - 2005 annual pheromone trap records, but as of 2006 it occurred only locally on the Grand Portage Reservation in extreme northeastern Cook County.

## FAMILY NOCTUIDAE - noctuids

- 8322 *Idia americalis* (Guenée): common, July - mid September.  
 8323 *Idia aemula* Hübner: rare, mid August.  
 8334 *Idia lubricalis* (Geyer): uncommon, August.  
 8338 *Phalaenophana pyramusalis* (Walker)<sup>1</sup>: rare, late June.  
 8341 *Zanclognatha theralis* (Walker): rare, July.  
 8351 *Zanclognatha cruralis* (Guenée): rare, June.  
 8352 *Zanclognatha jacchusalis* (Walker): uncommon, August.  
 8353 *Zanclognatha ochreipennis* (Grote): rare, July.  
 8356 *Chytolita petrealis* Grote: rare, July.  
 8357 *Macrochilo absorptalis* Walker: rare, July.  
 8365 *Phalaenostola hanhami* (J. B. Smith): rare, mid August.  
 8442 *Bomolocha baltimoralis* (Guenée): rare, late May.  
 8443 *Bomolocha bijugalis* (Walker): uncommon, June, August.  
 8452 *Bomolocha edictalis* (Walker): rare, early August.  
 8455 *Lomanaltes eductalis* (Walker): uncommon, June - July.  
 8461 *Hypena humuli* Harris: rare, mid May.  
 8465 *Plathypena scabra* (Fabricius): rare, September.  
 8479 *Spargaloma sexpunctata* Grote: uncommon, June - July.  
 8536 *Calyptra canadensis* (Bethune): uncommon, July - August.  
 8555 *Scoliopteryx libatrix* (Linnaeus): uncommon, June - July, September.  
 8689 *Zale lunata* (Drury): uncommon, late May - mid June.  
 8697 *Zale minerea* (Guenée): very common, late May - mid July.  
 8702 *Zale submediana* Strand: rare, mid June.  
 8727 *Parallelia bistriaris* Hübner: rare, mid July.  
 8738 *Caenurgina crassiuscula* (Haworth): uncommon, late July - August.  
 8739 *Caenurgina erechtea* (Cramer): uncommon, late August - September.  
 8803 *Catocala relicta* Walker: common some years, mid August - late September.  
 8805 *Catocala unijuga* Walker: common, late July - mid September.  
 8817 *Catocala briseis* Edwards: absent most years, common in 2005, adults fly later in the season than other *Catocala*, late September - October.  
 8821 *Catocala semirelicta* Grote: generally uncommon, late August - September.  
 8833 *Catocala concumbens* Walker: common most years, late August - September.  
 8857 *Catocala ultronia* (Hübner): common most years, mid August - mid September.  
 8867 *Catocala blandula* Hulst: uncommon, late July - mid September.  
 8887 *Trichoplusia ni* (Hübner): uncommon, mid September - early October.  
 8890 *Pseudoplusia includens* (Walker): uncommon, September.  
 8895 *Rachiplusia ou* (Guenée): rare, October.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 8896 *Diachrysia aereoides* (Grote): uncommon, mid July - August.  
 8897 *Diachrysia balluca* Geyer: uncommon, late July - August.  
 8907 *Megalographa biloba* (Stephens): uncommon, June-July.  
 8908 *Autographa precatationis* (Guenée): uncommon, late August - September.  
 8911 *Autographa bimaculata* (Stephens): uncommon, late July - August.  
 8923 *Autographa ampla* (Walker): uncommon, June, August.  
 8924 *Anagrapha falcifera* (Kirby): uncommon, late May, July, August.  
 8926 *Syngrapha octoscripta* (Grote): uncommon, late July - August.  
 8928 *Syngrapha selecta* (Walker): uncommon, July - August.  
 8929 *Syngrapha viridisigma* Grote: uncommon, August.  
 8942 *Syngrapha rectangula* (Kirby): uncommon, July, September.  
 8950 *Plusia putnami* Grote<sup>2</sup>: rare, late June.  
 8952 *Plusia contexta* Grote: uncommon, July.  
 8969 *Baileya doubledayi* (Guenée): rare, July.  
 8971 *Baileya dormitans* (Guenée): rare, June.  
 8975 *Nycteola frigidana* (Walker): rare, September.  
 8977 *Nycteola cinerea* Neumoegen & Dyar: rare, August.  
 9047 *Lithacodia muscosula* (Guenée): rare, July.  
 9048 *Lithacodia albidula* (Guenée): uncommon, June - July.  
 9050 *Lithacodia concinnimacula* (Guenée)<sup>1</sup>: rare, late June.  
 9177 *Panthea acronyctoides* (Walker): uncommon, late May - mid July.  
 9183 *Panthea pallescens* McDunnough: rare, early July.  
 9184 *Colocasia flavicornis* (J. B. Smith): uncommon, late May - June.  
 9189 *Charadra deridens* (Guenée): common, mid June - July.  
 9193 *Raphia frater* Grote: very common, late May - early August.  
 9200 *Acrionicta americana* (Harris): very common, Mid June - July.  
 9203 *Acrionicta dactylina* Grote: uncommon, late June, August, October.  
 9205 *Acrionicta lepusculina* Guenée: rare, June.  
 9207 *Acrionicta innotata* Guenée: common, mid June - early August.  
 9209 *Acrionicta radcliffei* (Harvey): rare, late July.  
 9212 *Acrionicta grisea* Walker: very common, mid June - July.  
 9221 *Acrionicta funeralis* Grote & Robinson: rare, mid June.  
 9226 *Acrionicta superans* Guenée: common, late May - mid August.  
 9229 *Acrionicta hasta* Guenée: uncommon, late May - mid June.  
 9237 *Acrionicta interrupta* Guenée: rare, late May.  
 9241 *Acrionicta fragilis* (Guenée): common, mid June early July.  
 9259 *Acrionicta noctivaga* Grote: uncommon, June.  
 9261 *Acrionicta impressa* Walker: common, June.  
 9280 *Simyra henrici* (Grote): uncommon, August.  
 9286 *Harrisimemna trisignata* (Walker): uncommon, June.  
 9318 *Alypia langtoni* Couper: rare, late June.  
 9326 *Apamea verbascoides* (Guenée): uncommon, July - mid August.  
 9333 *Apamea lignicolora* Guenée: rare, early August.  
 9348 *Apamea amputatrix* (Fitch): rare, mid August.  
 9359 *Apamea commoda* (Walker): rare, early July.  
 9360 *Apamea impulsiva* (Guenée): uncommon, July - early August.  
 9364 *Apamea sordens* (Hufnagel): rare, late June.  
 9364.1 *Apamea ophiogramma* (Esper): uncommon, July.  
 9365 *Apamea lateritia* (Hufnagel): rare, June.  
 9367 *Apamea dubitans* (Walker): common, late July - early September.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**

- 9367.1 *Apamea cogitata* (J. B. Smith): rare, early July.  
 9382 *Apamea devastator* (Brace): common, August.  
 9396 *Eremobina claudens* (Walker): uncommon, September.  
 9415 *Oligia bridghami* (Grote & Robinson): rare, September.  
 9420 *Oligia illocata* (Walker): common, mid August - mid September.  
 9431 *Parastichtis suspecta* (Hübner): rare, late August.  
 9433 *Xylomoia chagnoni* Barnes & McDunnough: rare, mid July.  
 9437 *Chortodes inquinata* (Guenée): rare, late July.  
 9452 *Macronoctua onusta* Grote: rare, early September.  
 9453 *Celaena reniformis* (Grote): uncommon, August - September.  
 9454 *Amphipoea velata* (Walker): uncommon, late July - early September.  
 9456 *Amphipoea interoceanica* (J. B. Smith): uncommon, September.  
 9457 *Amphipoea americana* (Speyer): uncommon, late July, September.  
 9478 *Papaipema leucostigma* (Harris): common, September.  
 9480 *Papaipema pterisii* Bird: common, September.  
 9483 *Papaipema inquaesita* (Grote & Robinson): common, September.  
 9501 *Papaipema eupatorii* (Lyman): uncommon, September.  
 9509 *Papaipema unimoda* (J. B. Smith): common, late August - mid September.  
 9514 *Hydraecia micacea* (Esper): rare, mid September.  
 9523 *Bellura gortynoides* Walker: uncommon, June - early July.  
 9525 *Bellura obliqua* (Walker): common, late June - July.  
 9545 *Euplexia benesimilis* McDunnough: uncommon, mid June - mid July.  
 9546 *Phlogophora iris* Guenée: common, mid June - July.  
 9547 *Phlogophora periculosa* Guenée: common, late July - August.  
 9549 *Enargia decolor* (Walker): common, mid August - mid September.  
 9550 *Enargia infumata* (Grote): common, September.  
 9555 *Ipimorpha pleonectusa* Grote<sup>1</sup>: rare August.  
 9556 *Chytonix palliatricula* (Guenée): uncommon, mid June - July.  
 9564 *Andropolia contacta* (Walker): uncommon, August - early September.  
 9578 *Hyppa xylinoides* (Guenée): common, June, August, September.  
 9633 *Calloptistria cordata* (Ljungh): rare, mid August.  
 9638 *Amphipyra pyramidoides* Guenée: rare, September.  
 9649 *Athetis mendosa* (McDunnough): uncommon, July - early August.  
 9666 *Spodoptera frugiperda* (J. E. Smith): uncommon, early October.  
 9688 *Galgula partita* Guenée: rare, June.  
 9696 *Condica vecors* (Guenée): rare, June.  
 9873 *Xylena nupera* (Lintner): uncommon, late April - May.  
 9874 *Xylena curvimacula* (Morrison): uncommon, mid April - May.  
 9876 *Xylena cineritia* (Grote): rare, late April.  
 9878 *Lithomoia germana* (Morrison): common, late August - mid September.  
 9881 *Homoglaea hircina* (Morrison): rare, late April.  
 9884 *Litholomia napaea* (Morrison): common, May, September.  
 9891 *Lithophane amanda* (J. B. Smith): rare, late September.  
 9892 *Lithophane disposita* Morrison: rare, early September.  
 9910 *Lithophane antennata* (Walker): uncommon, late April - May.  
 9916 *Lithophane unimoda* (Lintner): rare, mid April.  
 9917 *Lithophane fagina* Morrison: uncommon, late April, September.  
 9922 *Lithophane pexata* Grote: uncommon, late April, June, September - October.  
 9928 *Lithophane thaxteri* Grote: rare, late April.  
 9936 *Eupsilia morrisoni* Grote: uncommon, April.

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**


---

|         |   |
|---------|---|
| 9946    | <i>Epiglaea decliva</i> (Grote) <sup>1</sup> : uncommon, August - September.              |
| 9947    | <i>Epiglaea apiata</i> (Grote) <sup>1</sup> : rare, mid September.                        |
| 9952    | <i>Eucirroedia pampina</i> (Guenée): rare, early September.                               |
| 9957    | <i>Sunira bicolorago</i> (Guenée): uncommon, September.                                   |
| 9962    | <i>Anathix puta</i> (Grote & Robinson): rare, late August.                                |
| 9965    | <i>Xanthia</i> sp. near <i>togata</i> (Esper): uncommon, late August - early October.     |
| 9967    | <i>Hillia iris</i> (Zetterstedt): uncommon, early September.                              |
| 9974    | <i>Fishia enthea</i> Grote: uncommon, early September.                                    |
| 9989    | <i>Sutyna privata</i> (Walker): uncommon, mid September.                                  |
| 9992    | <i>Pachypolia atricornis</i> Grote: common, September.                                    |
| 10005   | <i>Feralia jocosa</i> (Guenée): rare, mid April.  |
| 10008   | <i>Feralia comstocki</i> (Grote): common some years, May.                                 |
| 10011   | <i>Brachionycha borealis</i> (J. B. Smith): rare, late April.                             |
| 10021   | <i>Copivaleria grotei</i> (Morrison): uncommon, May.                                      |
| 10199   | <i>Cucullia omissa</i> Dod: rare, mid August.   |
| 10223   | <i>Discestra trifolii</i> (Hufnagel): rare, mid July.                                     |
| 10275   | <i>Polia nimbosa</i> (Guenée): very common, late June - early August.                     |
| 10276   | <i>Polia imbifera</i> (Guenée): very common, late June - early August.                    |
| 10280   | <i>Polia purpurissata</i> (Grote): common, early July - early August.                     |
| 10288   | <i>Polia detracta</i> (Walker): rare, late June.  |
| 10292   | <i>Melanchra adjuncta</i> (Guenée): uncommon, June - early July.                          |
| 10295   | <i>Melanchra assimilis</i> (Morrison) rare, early-mid July.                               |
| 10300   | <i>Spirameter grandis</i> (Guenée): common, mid June - July.                              |
| 10303   | <i>Trichordestra tacoma</i> (Strecker): uncommon, early June.                             |
| 10370   | <i>Lacinipolia lustralis</i> (Grote): uncommon, early July.                               |
| 10397   | <i>Lacinipolia renigera</i> (Stephens): common, July - early August.                      |
| 10405   | <i>Lacinipolia lorea</i> (Guenée): common, late June - early July.                        |
| 10406   | <i>Lacinipolia olivacea</i> (Morrison): common, August - early September.                 |
| 10436   | <i>Aletia oxygala</i> (Grote): common, late July - August.                                |
| 10438   | <i>Pseudaletia unipuncta</i> (Haworth): very common, mid May, June, August - mid October. |
| 10444   | <i>Leucania phragmatidicola</i> Guenée: uncommon, late July - August.                     |
| 10446   | <i>Leucania multilinea</i> Walker: rare, mid July.  |
| 10447   | <i>Leucania commoides</i> Guenée: rare, late July.  |
| 10462   | <i>Leucania pseudargyria</i> Guenée: uncommon, July - early August.                       |
| 10471   | <i>Stretchia plusiaeformis</i> Hy. Edwards: uncommon, April.                              |
| 10490   | <i>Orthosia revicta</i> (Morrison): uncommon, May - early June.                           |
| 10495   | <i>Orthosia hibisci</i> (Guenée): rare, early May.  |
| 10513   | <i>Egira dolosa</i> (Grote): uncommon, late May.  |
| 10521.1 | <i>Morrisonia latex</i> (Guenée): uncommon, late may - June.                              |
| 10524   | <i>Nephelodes minians</i> Guenée: very common most years, August - mid September.         |
| 10563   | <i>Protorthodes oviduca</i> (Guenée): uncommon, June.                                     |
| 10585   | <i>Orthodes crenulata</i> (Butler): fairly common, mid July - early August.               |
| 10587   | <i>Orthodes cynica</i> Guenée: uncommon, late June - mid August.                          |
| 10589.1 | <i>Orthodes goodelli</i> (Grote): uncommon, June - early July.                            |
| 10641   | <i>Agrotis vetusta</i> Walker: common, August - early September.                          |
| 10651   | <i>Agrotis venerabilis</i> Walker: common, late August - mid September.                   |
| 10663   | <i>Agrotis ipsilon</i> (Hufnagel): uncommon, early August - mid September.                |
| 10670   | <i>Feltia jaculifera</i> (Guenée): uncommon, late August.                                 |
| 10674   | <i>Feltia subgothica</i> (Haworth): common, late July - August.                           |

Table 2. Continued.

**Family****Hodges number, species, relative abundance, and seasonal distribution**


---

|         |   |
|---------|---|
| 10676   | <i>Feltia herilis</i> (Grote) <sup>2</sup> : rare, late August.   |
| 10705   | <i>Euxoa messoria</i> (Harr.): rare, early September.   |
| 10738   | <i>Euxoa mimallonis</i> (Grote): rare, late August.   |
| 10780   | <i>Euxoa comosa altera</i> McDunnough: rare, mid August.<br><i>Euxoa comosa ontario</i> (Smith): rare, late July.           |
| 10801   | <i>Euxoa ochrogaster</i> (Guenée): uncommon, September.   |
| 10803   | <i>Euxoa velleripennis</i> (Grote): rare, early July.   |
| 10805   | <i>Euxoa tessellata</i> (Harris): uncommon, July - early August.  |
| 10891   | <i>Ochropleura implecta</i> Lafontaine: rare, late August.  |
| 10915   | <i>Peridroma saucia</i> (Hübner) <sup>2</sup> : rare, mid July.   |
| 10917   | <i>Diarsia rubifera</i> (Grote): rare, late June.   |
| 10921   | <i>Diarsia rosaria</i> (Grote): uncommon early July.  |
| 10926   | <i>Spaelotis clandestina</i> (Harris): uncommon, September.   |
| 10928   | <i>Graphiphora augur</i> (Fabricius): common, late July - August.   |
| 10929   | <i>Eurois occulta</i> (Linnaeus): rare, late August.  |
| 10930   | <i>Eurois stricta</i> Morrison: common, mid July - August.  |
| 10942   | <i>Xestia c-nigrum</i> (Linnaeus): common, early July- August.  |
| 10943   | <i>Xestia normaniana</i> (Grote): common, August - early September.   |
| 10944   | <i>Xestia smithii</i> (Snellen): very common, mid August - early September.   |
| 10947   | <i>Xestia oblata</i> (Morrison) uncommon, early-mid July <sup>1</sup> .   |
| 10968   | <i>Xestia badicollis</i> (Grote): uncommon, late June - July.   |
| 10988   | <i>Coenophila opacifrons</i> (Grote) <sup>1</sup> : local, uncommon, mid August.  |
| 10988.5 | <i>Pseudohermonassa bicarnea</i> (Guenée): uncommon, late July.   |
| 10988.6 | <i>Pseudohermonassa tenuicula</i> (Morrison): rare, early August.   |
| 10992   | <i>Paradiarsia littoralis</i> (Packard): uncommon, late June.   |
| 10996   | <i>Cerastis salicarum</i> (Walker): uncommon, late April - mid May.   |
| 10999   | <i>Aplectoides condita</i> (Guenée): common, mid June, early September.   |
| 11000   | <i>Anaplectoides prasina</i> (Denis & Schiffermüller): uncommon, July - August.   |
| 11001   | <i>Anaplectoides pressus</i> (Grote): common, late June - July.   |
| 11004   | <i>Protolampra rufipectus</i> (Morrison): uncommon, July - early August.  |
| 11007   | <i>Eueretagrotis sigmoides</i> (Guenée): rare, mid July.  |
| 11008   | <i>Eueretagrotis perattenta</i> (Grote): common, mid June - July.   |
| 11009   | <i>Eueretagrotis attenta</i> (Grote): uncommon, July.   |
| 11010   | <i>Lycophotia phyllophora</i> (Grote): rare, early July.  |
| 11012   | <i>Cryptocala acadensis</i> (Bethune): common, early July - early August.   |
| 11012.1 | <i>Noctua pronuba</i> (Linnaeus): introduced species first collected locally in 2002, common, early August - mid September. |
| 11029   | <i>Abagrotis alternata</i> (Grote): uncommon, early August - mid September.   |
| 11043   | <i>Abagrotis cupida</i> (Grote): common, mid August - mid September.  |
| 11051   | <i>Ufeus satyricus</i> Grote: common, September - early October.  |
| 11064   | <i>Pyrrhia exprimens</i> (Walker): uncommon, late June - late July.   |
| 11068   | <i>Helicoverpa zea</i> (Boddie): common most years, early September - mid October.  |

---

<sup>1</sup> Specimens are held in the insect collection of the Grand Portage Monument, United States Park Service, Grand Portage MN.<sup>2</sup> Specimens are held in the invertebrate collection of the Environmental Division, Grand Portage Band, Grand Portage MN.



### ACKNOWLEDGMENTS

The author wishes to express his deepest gratitude to Leslie A. Ferge for his valuable help in verifying the identity of some species of moths, Ronald L. Huber for his help with some species of butterflies, and my wife Bonnie for her support and help throughout this project.

### LITERATURE CITED

- Albert, D. A. 1994. Regional landscape ecosystems of Michigan, Minnesota, and Wisconsin: a working map and classification. U.S. Dept. of Agric., For. Serv., Gen. Tech. Rep. NC-178. 250 pp.
- Bolte, K. B. 1990. Guide to the Geometridae of Canada (Lepidoptera). VI. Subfamily Larentiinae 1. revision of the genus *Eupithecia*. Mem. Entomol. Soc. Canada 151: 1-253.
- Brock, J. P., and K. Kaufman. 2003. Butterflies of North America. Houghton Mifflin, New York. 383 pp.
- Covell, C. V. 2005. A field guide to moths of eastern North America. Virginia Mus. Nat. Hist. Spec. Pub. 12. 496 pp.
- Cremers, K. T. 2006. 2006 gypsy moth state report (abridged), pp. 10-14. *In* Forest Insect & Disease Newsletter, Minnesota Department of Natural Resources, Division of Forestry, Grand rapids, MN. 17 November 2006.
- Opler, P. A., H. Pavulaan, R. E. Stanford, and M. Pogue. 2006. Butterflies and moths of North America. <http://www.butterfliesandmoths.org>
- Ferge L. A. 1983. Distribution and hybridization of *Hyalophora columbia* (Lepidoptera: Saturniidae) in Wisconsin. Great Lakes Entomol. 16: 67-71.
- Ferge, L. A., and G. J. Balogh. 2000. Checklist of Wisconsin moths (superfamilies Drepanoidea, Geometroidea, Mimallonoidea, Bombycoidea, Sphingoidea and Noctuoidea) Milwaukee Pub. Mus. Contr. Biol. Geol. No. 93, 55 pp.
- Ferguson, D. C. 1972. Bombycoidea, Saturniidae (part), pp. 155-275. *In* The Moths of America North of Mexico. Fascicle 20.2. E. W. Classey Ltd., London, England.
- Ferguson, D. C. 1978. Noctuoidea, Lymantriidae, pp. 110. *In* The Moths of America North of Mexico. Fascicle 22.2. E. W. Classey Ltd., London, England.
- Forbes, W. T. M. 1948. Lepidoptera of New York and neighboring states. Part II. Geometridae, Sphingidae, Notodontidae, Lymantriidae. Cornell Agr. Exper. Sta. Mem. 274. 263 pp.
- Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states. Part III. Noctuidae Cornell Agr. Exper. Sta. Mem. 329. 433 pp.
- Franclemont J. G. 1973.. Mimallonoidea: Mimallonidae and Bombycoidea Apatelodidae, Bombycidae, Lasiocampidae, pp. 86. *In* The Moths of America North of Mexico, Fascicle 20.1. E. W. Classey Ltd. and R. B. D. Publ. Inc., London, England
- Heinselman, M. L. 1973. Fire in the virgin forests of the Boundary Waters Canoe Area, Minnesota. Quat. Res. 3:329-82.
- Hodges, R. W. 1971. Sphingoidea, pp. 158. *In* The Moths of America North of Mexico, Fascicle 21. E. W. Classey Ltd and R. B. D. Publ. Inc., London, England. 158 pp.
- Hodges, R. W., T. Dominick, D. R. Davis, D. C. Ferguson, J. G. Franclemont, E. G. Munroe, and J. A. Powell, eds. 1983. Check List of the Lepidoptera of America North of Mexico. E. W. Classey Ltd., London, England. 284 pp.
- Lafontaine, J. D. 1987. Noctuoidea, Noctuidae (part) *Euxoa*, pp. 237. *In* The Moths of America North of Mexico. Fascicle 27.2. The Wedge Entomological Research Foundation, Washington, D.C.

- Lafontaine, J. D. 1998. Noctuoidea, Noctuidae (part), Noctuinae, (part) Noctuini. *In: The Moths of America North of Mexico*. Fascicle 27.3. The Wedge Entomological Research Foundation, Washington, D.C. 348 pp.
- Lafontaine, J. D. 2004. Noctuoidea, Noctuidae (part), Noctuinae, (part –Agrotini), pp. 385. *In The Moths of America North of Mexico*. Fascicle 27.1. The Wedge Entomological Research Foundation, Washington, D.C.
- Lafontaine, J. D., and R. W. Poole. 1991. The moths of America north of Mexico. Noctuoidea Noctuidae (part) Fascicle 25.1. The Wedge Entomol. Res. Foun. 182 pp.
- Layberry, R. A., P. W. Hall and J. D. Lafontaine. 1998. *The Butterflies of Canada*. University of Toronto Press. 280 pp.
- MacLean, D. B. 2000a. Status of butterflies of special concern within the Superior National Forest, Minnesota. Report submitted to the United States Forest Service, Duluth, MN. 13 pp.
- MacLean, D. B. 2000b. Insects identified from light trap collections made in 2000, Grand Portage Indian Reservation. Report submitted to the Grand Portage Band, Grand Portage, MN. 3 pp.
- MacLean, D. B. 2001a. Status of butterflies of special concern within the Superior National Forest, Minnesota 2001. Report submitted to the United States Forest Service, Duluth, MN. 34 pp.
- MacLean, D. B. 2001b. Insects identified from light trap collections made in 2001, Grand Portage Indian Reservation. Report submitted to the Grand Portage Band, Grand Portage, MN. 4 pp.
- MacLean, D. B. 2002a. Initial Inventory of the moths of the Grand Portage National Monument, Cook County, Minnesota. Report submitted to the United States Park Service, Grand Portage, MN. 25 pp.
- MacLean, D. B. 2002b. Insects identified from light trap collections made in 2001, Grand Portage Indian Reservation. Report submitted to the Grand Portage Band, Grand Portage, MN. 8 pp.
- MacLean, D. B. 2003. Insects identified from light trap collections made in 2001, Grand Portage Indian Reservation. Report submitted to the Grand Portage Band, Grand Portage, MN. 9 pp.
- Marschner, F. J. 1974. The original vegetation of Minnesota (map). USDA Forest Service, North Central Forest Experiment Station, St. Paul, Minnesota.
- MN DNR (Minnesota Department of Natural Resources). 2007. Endangered, threatened & special concern species. Online at: <http://www.dnr.state.mn.us/ets/index.html>.
- Nielsen, M. C. 1997. Preliminary checklist of Michigan moths (Superfamilies Bombycoidea, Drepanoidea, Geometroidea, Mimallonoidea, Noctuoidea, Sphingoidea). *Newsletter Mich. Entomol. Soc.* 42 (2-4): 16-26.
- Nielsen, M. C. 1998a. Checklist of Michigan butterflies and skippers. *Newsletter Mich. Entomol. Soc.* 43 (1): 8-10.
- Nielsen, M. C. 1998b. Preliminary list of Michigan moths: the microlepidoptera. *Newsletter Mich. Entomol. Soc.* 43 (4): 1, 4-14.
- Nielsen, M. C. 1999. Michigan butterflies and skippers: a field guide and reference. *Michigan State Univ Extension Bull.* E-2675. 252 pp.
- Oehlenschläger, R., and R. Huber. 2002. The Flora and Fauna of Wadena County, Minnesota Part I: The Butterflies (Lepidoptera: Hesperioidea and Papilionoidea) of Wadena County, Minnesota. *Science Publications of the Science Museum of Minnesota New Series* 8(1): 1-26.
- Poole, R. W. 1995. Noctuoidea, Noctuidae (part), Cuculliinae, Stiriinae, Psaphidinae (part), 249 pp. *In The Moths of America North of Mexico*. Fascicle 26.1. The Wedge Entomological Research Foundation, Washington, D.C.

- Rockburne, E. W., and J. D. Lafontaine. 1976. The cutworm moths of Ontario and Quebec. Canada Dept. Agr. Publ. 1593. 164 pp.
- Scott, J. A. 1986. The butterflies of North America: a natural history and field guide. Stanford Univ. Press, Standford, California. 583 pp.
- Tuskes, P. M., J. P. Tuttle and M. M. Collins. 1996. The Wild Silk Moths of North America. A Natural History of the Saturniidae of the United States and Canada. Cornell Univ. Press. 250 pp.
- Voss E. G. 1981. Moths of the Douglas Lake region (Emmet and Cheboygan Counties), Michigan: II. Noctuidae (Lepidoptera). Gt. Lakes Entomol. 14: 87-101.
- Voss E. G. 1983. Moths of the Douglas Lake region (Emmet and Cheboygan Counties) Michigan: III. Thyatiridae, Drepanidae, Lasiocampidae, Notodontidae, Lymantridae (Lepidoptera) Gt. Lakes Entomol. 16:131-137.
- Voss E. G. 1991. Moths of the Douglas Lake region (Emmet and Cheboygan Counties), Michigan: IV. Geometridae (Lepidoptera). Gt. Lakes Entomol. 24:187-201.
- Wagner, D. L., D. C. Ferguson, T. L. McCabe, and R. C. Reardon. 2001. Geometrid caterpillars of Northeastern and Appalachian forests. USDA For. Ser. FHTET-2001-10. 239 pp.