

LEPIDOPTERA OF THE J.J. COLLETT PROVINCIAL NATURAL AREA, 2002-2009

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The present paper incorporates the information in previous reports along with that gathered in 2009. It also includes a number of redeterminations and additions to the information in the earlier reports.



Some of the participants on the May 30, 2004, J.J. Collett Natural Area Spring Walk. Left to right: Jack Surbey, Bob Delong, Gail Hughes, Sylvia Glass, Ann Bird, Claudia Cameron, Ron Kruger.

THE AREA

The J.J. Collett Natural Area is made up of a section of land located near Morningside, 11 km NNE of Lacombe and 11 km south of Ponoka. The coordinates at the parking area are 52.53N, 113.65W and the elevation is around 870 m. The land was originally purchased by the Alberta Government from J.J. Collett in 1974. An elementary study of the natural resources and ecology of the area was carried out in that year by staff of the Alberta Department of the Environment and the Alberta Wildlife Foundation

(Bienek 1974). Further studies carried out in 1980 resulted in a map of the trails and vegetation units of the area as well as data sheets of the major communities (Munsell 1980); this was followed by a management plan for the Natural Areas Program, Alberta Forestry, Lands and Wildlife (Leszczynski 1987). The area is currently managed by volunteer members of the J.J. Collett Foundation, the Parks and Protected Areas Division of Alberta Community Development and the Public Lands Division of Alberta Sustainable Resource Development.



Trail through mixed woods, 30 May 2004

Ecologically, the area is made up of sandy, rolling, morainal aspen parkland. The vegetation of the area is quite diverse with aspen, balsam poplar, white spruce and paper birch all being common. There are open meadows, heavy woods, low wetlands, dry south-facing slopes and steep north-facing slopes. Though appearing at first glance to be undisturbed, the area was used many years ago for grazing cattle and, at one time, a small sawmill processed timber from the area. At present, the only agricultural use is that of limited late fall and early winter horse grazing to help lower the risk of fire by reducing the grass cover.

BACKGROUND

Provincial Parks and other areas where natural vegetation is protected are of great value as their flora and fauna is typical of what was in Alberta before widespread agricultural activities which resulted in a replacement of many native species by weedy species associated with cultivated grains and hay crops. As a result, many of Alberta's "rare and endangered" species are now found only, or mainly, in such protected areas.

The author, now retired and living in Erskine, Alberta, has had a long-time interest in the natural flora and fauna of the province. In the spring of 2000, he commenced an examination of the moths of south-central Alberta, the purpose of which was to document the species present in various natural areas. He has been in the area every year or so for over ten years. Dates and details of times when studies have been made are in the Appendix. No attempts have been made to sample moths by sugaring. Obviously, many additions can be made to the following checklist, and further studies are needed.

Reports have been prepared on research carried out each year from 2002 onwards (Bird 2003-2009). The present paper incorporates the information in the previous reports along with that gathered in 2009. It also includes a number of redeterminations and additions to the information in the earlier reports.

There is still much to be learned about the distribution and status of lepidopteran (moth and butterfly) species in south-central Alberta. Baseline studies of this sort provide information that helps characterize the species associated with various ecoregions, in the present case Aspen Parkland; determine the status designations (abundant, common, rare, endangered) of various species; show the effects of grazing on species composition and abundance; and allow the examination of many other parameters, including phenology, dry vs. wet years, and outbreaks of various species such as by forest tent caterpillars.

The author is a member of the Alberta Lepidopterist's Guild, the purpose of which is to encourage the study of Alberta's moths and butterflies.

SPECIMEN DISPOSITION

All specimens collected by the writer presently reside in his collection but they will eventually be donated to one or more of the University of Alberta Strickland Museum, the Northern Forest Research Centre in Edmonton, and the Canadian National Collection in Ottawa.

THE FOLLOWING CHECKLIST

The order and terminology, is that of R.W. Hodges (1983) except where recent changes in taxonomy have occurred. While most of the larger (macromoths) are relatively well known, the same cannot be said for many of the smaller ones (micromoths). Identifications, especially of the latter, can be difficult or are at present impossible, until such time as revisionary studies are made. Also, genitalic dissection and examination is necessary for positive identification in some groups. For these reasons, some of the determinations found herein should be regarded as tentative. The scientific names of the species are followed by the day-month-year of the collection and the number of individuals mounted; an "SR" indicates a sight record. Common names are mentioned in those cases where such names exist.

Kenneth Bowman's (1951) list of the Lepidoptera of Alberta presents all species known at that time and gives the distribution of each according to 21 Areas. His areas 5, 8 and 10 essentially cover all of south-central Alberta, with the J.J. Collett Natural Area

being in Area 8. Most of Bowman's records are from Area 10, which includes Edmonton, so most of the species found in the following list would be additions to his Area 8.

Pohl et al (2010) have put together an up-to-date annotated list of the Lepidoptera of Alberta. They include 2367 species, many more than those mentioned by Bowman (1951). The list incorporates recent changes in taxonomy of all groups according to various literature sources, including those listed for the Noctuoidea by Lafontaine & Schmidt (2010).

HEPIALIDAE – Ghost Moths and Swifts

19. *Sthenopsis purpurascens* (Pack.) (Large Ghost Moth) – 29B-VII-2009 1.
29. *Gazoryctra noviganna* (B. & Benj.) (Novigannus Ghost Moth) – 27-VIII-2002 2.



Korscheltellus gracilis image from Moth Photographers Group web site.

31. *Korscheltellus gracilis* (Grt.) (Conifer Swift Moth) – 29A-VII-2009 1. The larvae of this moth are root borers in coniferous trees.

TINEIDAE – Clothes Moths and others

399. *Tinea irrepta* Braun – 6-VII-2004 1, 29A-VII-2009 1.
nn. *Monopis laevigella* (D. & S.) – 6-VII-2004 1.
421. *Monopis spilotella* Tengström – 29A-VII-2009 1.

GRACILLARIIDAE – Gracilariid Moths

587. *Caloptilia alnivorella* (Cham.) – 28-V-2002 1.
639. *Caloptilia stigmatella* (F.) – 28-V-2002 1.
669. *Parornix conspicuella* (Dietz) – 6-VII-2004 1.
Phyllonorycter sp. – 29C-VII-2009 1.

OECOPHORIDAE – Oecophorid Moths

876. *Agonopterix rosaciliella* (Bsk.) – 26-V-2002 1 and 19B-IV-2005 1.
889. *Agonopterix argillacea* (Wlsm.) – 28-V-2002 6.

908. *Depressariodes ciniflonella* (Lienig & Zell.) – 28-V-2002 1, 27-VIII-2002 1 and 19A-IV-2005 1.
 910. *Martyrhilda fulva* (Wlsm.) – 27-VIII-2002 1. Can be confused with 2127 *Filatima abactella*, however the latter flies in the spring and early summer.
 913. *Semioscopis merricella* Dyar – 19B-IV-2005 1.
 914. *Semioscopis inornata* Wlsm. – 19A-IV-2005 1.
 915. *Semioscopis megamicrella* Dyar – 19A-IV-2005 1.
 916. *Semioscopis aurorella* Dyar – 19A-IV-2005 1, 19B-IV-2005 7 and 3-V-2008 1.
 922. *Depressaria pastinacella* (Dup.) (Parsnip Webworm Moth) – 28-V-2002 1.

ELACHISTIDAE – Elachistid Moths

Elachista sp. – 29A-VII-2009 1.

BLASTOBASIDAE – Blastobasid Moths

Species unknown – 27-VIII-2002 1. It has been sent to David Adamski for identification.

COLEOPHORIDAE – Coleophorid Moths

1271. *Coleophora pruniella* Clem. (Cherry Case-bearer) – 6-VII-2004 3.
 1352. *Coleophora sparsipulvella* Cham. – 6-VII-2004 6.
 1388. *Coleophora trifolii* (Curt.) (Large Clover Case-bearer Moth) – 6-VII-2004 1.

GELECHIIDAE – Gelechiid Moths

Species unknown – 26-V-2002 1, 28-V-2002 3, 21-VI-2002 1, 27-VIII-2002 1, 9A-VIII-2003 3, 9B-VIII-2003 4, 6-VII-2004 10, 19A-IV-2005 2, 7C-V-2007 1, 7D-V-2007 2, 29A-VII-2009 3 and 29C-VII-2009 2. Little is known about many of the species in this family and it may be many years before some of these specimens are determined or described.

1792. *Coleotechnites atrupictella* (Dietz) – 9B-VIII-2003 2.
 1796. *Coleotechnites blastovora* (McLeod) – 28-V-2002 2, 7C-V-2007 1 and 7D-V-2007 1.
 1880. *Xenolechia velatella* (Bsk.) – 6-VII-2004 1.
 1898. *Lita sexpunctella* (F.) – 30-V-2004 1. The specimen was found during the day flying over bearberry, which is the larval food plant.
 1946. *Gelechia lynceella* Zell. – 6-VII-2004 3.
 2093. *Chionodes mediofuscella* (Clem.) – 21-VI-2002 1.
 2111. *Chionodes psilopterus* (B. & Bsk.) – 6-VII-2004 3, 29A-VII-2009 1 and 29B-VII-2009 1.
 2117. *Chionodes terminimaculella* (Kft.) – 21-VI-2002 1.
 2127. *Filatima abactella* (Clarke) – 28-V-2002 1, 21-VI-2002 1, 27-VIII-2002 1 and 30-V-2004 1.
 2235. *Anacampsis fragariella* Bsk. – 10-VIII-2003 1.
 2243. *Anacampsis niveopulvella* (Cham.) – 9A-VIII-2003 3 and 9B-VIII-2003 1.

2267. *Helcystogramma fernaldella* (Bsk.) – 21-VI-2002 1.
 2302. *Dichomeris setosella* Clem. – 27-VIII-2002 1 and 29A-VII-2009 1.

PLUTELLIDAE – Plutellid Moths

2365. *Plutella vanella* (Wlsm.) – 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
 2366. *Plutella xylostella* (L.) (Diamondback Moth) – 28-V-2002 1, 9A-VIII-2003 1 and 9B-VIII-2003 1.
 2371. *Ypsolopha canariella* (Wlsm.) – 27-VIII-2002 1.
 2376. *Ypsolopha dentiferella* (Wlsm.) – 9A-VIII-2003 1.
 2380. *Ypsolopha falciferella* (Wlsm.) – 28-V-2002 1.

YPONOMEUTIDAE – Yponomeutid Moths

2426. *Euhyponomeutoides gracilariella* (Bsk.) – 28-V-2002 1?

CHOREUTIDAE – Choreutid Moths

2651. *Choreutis diana* (Hbn.) – 10-VIII-2003 3.

ARGYRESTHIIDAE – Argyresthiid Moths

2467. *Argyresthia oreasella* (Clem.) – 29A-VII-2009 1.

TORTRICIDAE – Tortricid Moths

- Olethreutinae* indet. – 12-VIII-2002 2 and 6-VII-2004 3.
 2755. *Apotomis funerea* (Meyr) (Funereal Apotomis Moth) – 27-VIII-2002 1 and 29A-VII-2009 1.
 2765. *Apotomis deceptana* (Kft.) (Deceptive Apotomis Moth) – 9B-VIII-2003 1.
 2766. *Apotomis dextrana* (McD.) (Green Aspen Leafroller) – 28-V-2002 1 and 29A-VII-2009 1.
 2769. *Pseudosciaphila duplex* (Wlsm.) (Spotted Leaf Roller or Poplar Leafroller Moth) – 6-VII-2004 2.
 2770. *Orthotaenia undulana* (D. & S.) (Dusky Leafroller) – 6-VII-2004 2 and 29C-VII-2009 1.
 2774/2859. *Olethreutes* sp. – 6-VII-2004 10, 29A-VII-2009 2, 29B-VII-2009 1 and 29C-VII-2009 2.
 2794. *Olethreutes quadrifidus* (Zell.) – 6-VII-2004 2.
 2839. *Olethreutes puncticostana* (Wlk.) – 6-VII-2004 12 and 10-VI-2006 7.
 2861. *Hedya ochroleucana* (Frölich) (Off-white Hedya Moth) – 6-VII-2004 3, 29A-VII-2009 1 and 29B-VII-2009 1.
 2862. *Hedya nubiferana* (Haw.) (Marbled Orchard Tortrix Moth) – 29A-VII-2009 1 and 29B-VII-2009 1.
 2969. *Phaneta indagatricana* (Heinr.) – 9B-VIII-2003 1.

2972. *Phaneta dorsiatomana* (Kft.) – 26-V-2002 1.
2980. *Phaneta pallidicostana* (Wlsm.) – 29A-VII-2009 1 and 29B-VII-2009 1.
2985. *Phaneta infimbriana* (Dyar) – 9A-VIII-2003 1.
3211. *Notocelia culminana* (Wlsm.) – 27-VIII-2002 2, 9B-VIII-2003 1 and 29A-VII-2009 1.
3223. *Gypsonoma fasciolana* (Clem.) – 21-VI-2002 2.
3227. *Gypsonoma substitutionis* Heinr. – 6-VII-2004 1.
3228. *Gypsonoma salicolana* (Clem.) - 7A-V-2007 1.
3248. *Pseudexentera oregonana* (Wlsm.) (Early Aspen Leafroller Moth) – 28-V-2002 7 SR, 21-VI-2002 2 SR, 19A-IV-2005 1, 7A-V-2007 1, 7C-V-2007 4, 7D-V-2007 1 and 3-V-2008 5.
3306. *Epinotia nisella* (Cl.) (Variable Tortrix Moth) – 27-VIII-2002 5, 9A-VIII-2003 3 and 6-VII-2004 1.
3307. *Epinotia criddleana* (Kft.) – 27-VIII-2002 3.
3382. *Ancylic unguicella* (L.) – 28-V-2002 7, 21-VI-2002 2. 30-V-2004 4 and 30-V-2005 1.
3384. *Ancylic mediofasciana* (Clem.) – 28-V-2002 2 and 21-VI-2002 3.
3437. *Grapholita lunatana* Wlsm. – 26-V-2002 1.
3460. *Cydia ingrata* (Heinr.) – 28-V-2002 1.
3502. *Croesia albicomana* (Clem.) – 29A-VII-2009 1 and 29C-VII-2009 1.
Acleris spp. - 7D-V-2007 2 and 7C-V-2007 1.
3514. *Acleris cervinana* (Fern.) – 19A-IV-2005 1.
3531. *Acleris hastiana* (L.) – 28-V-2002 1.
3536. *Acleris robinsoniana* (Forbes) – 26-V-2002 1 and 28-V-2002 2.
3548. *Acleris variana* (Fern.) (Black-headed Budworm Moth) – 9A-VIII-2003 1, 9B-VIII-2003 4 and 29A-VII-2009 1.
3549. *Acleris maccana* (Tr.) – 19B-IV-2005 1.
3556. *Acleris nigrolinea* (Rob.) – 28-V-2002 2.
3557. *Acleris maximana* (B. & Bsk.) – 28-V-2002 1 and 25-IX-2005 1.
3561. *Acleris hudsoniana* (Wlk.) – 28-V-2002 1.
3568. *Eana argentana* (Cl.) – 6-VII-2004 2.
3589. *Anopina wellingtoniana* (Kft.) - 7A-V-2007 1.
3595. *Pandemis canadana* Kft. (Green Aspen Leaf-tier Moth) – 29A-VII-2009 1.
3635. *Choristoneura rosaceana* (Harr.) (Oblique-banded Leafroller Moth) – 6-VII-2004 1.
3637. *Choristoneura conflictana* (Wlk.) (Large Aspen Tortrix) – 6-VII-2004 1.
3638. *Choristoneura fumiferana* (Clem.) (Spruce Budworm Moth) – 29A-VII-2009 1.
3658. *Archips purpurana* (Clem.) – 29A-VII-2009 1.
3667. *Archips packardiana* (Fern.) (Spring Spruce-needle Moth) – 6-VII-2004 1.
3672. *Syndemis afflictana* (Wlk.) (Gray Leafroller Moth or Black-and-Gray Banded Leafroller Moth) - 28-V-2006 1.
3682. *Clepsia persicana* (Fitch) (White-triangle Tortrix) – 6-VII-2004 3.
3684. *Clepsia clemensiana* (Fern.) (Clemen's Clepsia Moth) – 9A-VIII-2003 1, 29A-VII-2009 1 and 29B-VII-2009 1.
3686. *Clepsia melaleucana* (Wlk.) – 6-VII-2004 1.
3689. *Ptocholoma virescana* (Clem.) – 27-VIII-2002 1, 9B-VIII-2003 2, 29A-VII-2009 1 and 29C-VII-2009 1.

3706. *Sparganothis xanthoides* (Mosaic Sparganothis Moth) – 29A-VII-2009 1.
 3720. *Sparganothis reticulatana* (Clem.) (Reticulated Fruitworm Moth) – 29A-VII-2009 1.
 3740. *Platynota idaeusalis* (Wlk.) (Tufted Apple Bud Moth) – 9B-VIII-2003 1 and 29A-VII-2009 1.

COCHYLIDAE – Cochylid Moths

The members of this family are currently being revised by Dr. Eric Metzler and Dr. John Brown. The following specimen is presently being examined by them.

3796. *Phtheochroa waracana* (Kft.) – 6-VII-2004 2.

HESPERIIDAE – Skippers

3910. *Thorybes pylades* (Scudder) (Northern Cloudywing) – 30-VI-2004 Adam Blake photo.
 3945. *Erynnis icelus* Scudder & Burgess (Dreamy Duskywing) – 28-V-2005 1.
 3961. *Erynnis persius* (Scudder) (Persius Duskywing) – 28-V-2005 1.
 4020. *Hesperia comma assiniboia* (Lyman) (Assiniboine Skipper) – 10-VIII-2003 adult photographed nectaring on *Hieracium* by Sylvia Glass.

PAPILIONIDAE – Swallowtail Butterflies

- 4176a. *Papilio glaucus canadensis* R. & J. (Canadian Tiger Swallowtail) - 28-V-2005 3 SR and 10-VI-2006 2 SR

PIERIDAE – White and Sulphur Butterflies

4194. *Pontia occidentalis* (Reak.) (Western Checkered White) – 26-V-2002 1 SR and 10-VIII-2003 1.
 4195d. *Pieris napi oleracea* (Harr.) (Mustard White) – 12-VIII-2002 1, 28-V-2005 1 SR and 10-VI-2006 1.
 4209. *Colias philodice* Godt. (Clouded Sulphur) – 12-VIII-2002 SR, 10-VIII-2003 1 SR and 28-V-2005 4 SR.

LYCAENIDAE – Blues and Coppers

4262. *Lycaena helloides* (Bd.) (Purplish Copper) – 4-IX-2004 Adam Blake photo.
 4275. *Harkenclenus titus* (F.) (Coral Hairstreak) – 30-VII-2004 Adam Blake photo.
 4285. *Satyrium liparops* (Leconte) (Striped Hairstreak) – 26-VII-2004 Adam Blake photo.
 4324. *Incisalia polia* Cook & Watson (Hoary Elfin) – 26-V-2002 1.
 4362b. *Everes amyntula* (Bdv.) (Western Tailed Blue) - 10-VI-2006 1.
 4363. *Celastrina ladon* (Cram.) (Spring Azure) – 26-V-2002 1 and 28-V-2005 2.

4372a. *Glaucopsyche lygdamus couperi* Grt. (Silvery Blue) - 28-V-2005 2 SR.

NYMPHALIDAE - Fritillaries

4423. *Polygonia faunus* (Edw.) (Green Comma) – 26-V-2002 2 and 27-IX-2008 1.
 4432. *Nymphalis antiopa* (L.) (Mourning Cloak) – 26-V-2002 4 SR and 10-VIII-2003 1 SR.
 4433. *Aglais milberti* (Godt.) (Milbert's Tortoiseshell) – 26-IX-2004 1 SR.
 4450c. *Speyeria cybele pseudocarpenteri* (F. & R. Chermock) (Great Spangled Fritillary) – 12-VIII-2002 1.
 4459b. *Speyeria atlantis hollandi* (F. & R. Chermock) – 10-VIII-2003 1.
 4459s. *Speyeria atlantis lais* (Edw.) (Northwestern Fritillary) – 12-VIII-2002 1.
 4463. *Clossiana eunomia* (Esper) (Bog Fritillary) – 10-VI-2006 1.
 4465b. *Boloria bellona* (Fabr.) (Meadow Fritillary) – 28-V-2005 1.
 4475. *Boloria chariclea* (Schneider) (Purple Fritillary) – 12-VIII-2002 1 and 10-VIII-2003 1; also a photograph by Sylvia Glass.
 4481.1. *Phyciodes cocyta* (Cram.) (Northern Pearl Crescent) – 22-VIII-2002 2.

SATYRIDAE – Browns and Alpines

4587. *Cercyonis pegala* (F.) (Common Wood Nymph) – 12-VIII-2002 1 and 10-VIII-2003 1 SR.
 4599. *Erebia epiroidea* Butler (Common Alpine) – 26-V-2002 200+ SR, 28-V-2005 1 and 10-VI-2006 30 SR.
 4605. *Oeneis macounii* (Edw.) (Macoun's Arctic) – 30-VI-2004 Adam Blake photo and 28-V-2005 2.



Purple Fritillary and Assiniboine Skipper (10 Aug 2003) and Monarch (30 Jun 2007) photographs by Sylvia Glass.

DANAIDAE - Monarchs

4614. *Danaus plexippus* (L.) (Monarch) – on 25 Jul 1998, the author photographed a Monarch caterpillar on Low Milkweed (*Asclepias ovalifolia*) in the J.J. Collett Natural Area. On 30 Jun 2007, an adult was photographed on Low Milkweed by

Sylvia Glass. This species is uncommon in Alberta, especially as its preferred foodplant, Showy Milkweed, primarily occurs in eastern North America. The species has not been seen in the area since that time.

PYRALIDAE – Snout or Pyralid Moths

4716. *Scoparia biplagiata* (Wlk.) (Double-striped Scoparia Moth) – 6-VII-2004 1, 29A-VII-2009 1 and 29C-VII-2009 1.
4773. *Petrophila kearfottalis* (B. & McD.) – 9A-VIII-2003 1.
4951. *Perispasta caeculalis* Zell. (Titian Peale's Pyralid Moth) – 6-VII-2004 1.
4953. *Phlyctaenia coronata* (Hufn.) (Crowned Phlyctaenia Moth) – 21-VI-2001 2, 6-VII-2004 2.
5004. *Loxostege sticticalis* (L.) (Beet Webworm) – 9A-VIII-2003 1 and 6-VII-2004 1.
5017. *Loxostege cereralis* (Zell.) (Alfalfa Webworm Moth) – 28-VI-2002 1.
5074. *Pyrausta fodinalis* (Led.) – 9A-VIII-2003 1 and 9B-VIII-2003 1.
5099. *Udea itysalis* (Wlk.) – 9B-VIII-2003 1.
5128. *Choristostigma plumbosignalis* (Fern.) – 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
5135. *Mecyna submedialis* (Grt.) (Orange-toned Mecyna Moth) – 12-VIII-2002 2.
5299. *Acentria ephemerella* (Denis & Schiffermüller) (Water Veneer Moth) – 9A-VIII-2003 1, 9B-VIII-2003 1 and 29C-VII-2009 1. A new species for Alberta (Pohl et al. 2005), though it has now been found in numerous places in the province.
- 5343a. *Crambus perlellus innotatellus* Wlk. (Immaculate Grass-veneer Moth) – 27-VIII-2002 1 and 29A-VII-2009 1.
5379. *Neodactria luteolella* Clem. (Mottled Grass-veneer Moth) – 6-VII-2004 1.
5391. *Chyroseeuchia topiaria* (Zell.) (Cranberry Girdler) – 21-VI-2002 1, 9B-VIII-2003 1, 6-VII-2004 4 and 10-VI-2006 1.
5399. *Agriphila ruricolella* (Zell.) (Lesser Vagabond Sod Webworm Moth) – 12-VIII-2002 2, 9A-VIII-2003 1, 9B-VIII-2003 1 and 29B-VII-2009 1.
- 5410-5417. *Pediasia* sp. – 27-VIII-2002 1 and 6-VII-2004 2.
5416. *Pediasia abnaki* Klots – 27-VIII-2002 1, 29A-VII-2009 1 and 29B-VII-2009 1.
5417. *Pediasia dorsipunctella* (Kft.) – 12-VIII-2002 2, 6-VII-2004 2, 29A-VII-2009 2 and 29B-VII-2009 1.
5606. *Tetralopha asperatella* (Clem.) (Maple Webworm Moth) – 6-VII-2004 2.
5718. *Myelopsis subtetricella* (Rag.) – 21-VI-2002 5.
5721. *Apomyeloides bistriatella* (Hulst) – 6-VII-2004 2.
5787. *Meroptera pravella* (Grt.) (Lesser Aspen Webworm) – 6-VII-2004 9.
5799. *Nephoterix basilaris* Zell. – 6-VII-2004 1.
5812. *Telethusia ovalis* (Pack.) – 29A-VII-2009 1.
5827. *Pyla aenigmatica* Heinr. – 6-VII-2004 1.
5829. *Pyla fusca* (Haw.) (Speckled Black Pyla Moth) – 6-VII-2004 1.
- Dioryctria* sp. – 29A-VII-2009 2.
5968. *Zophodia convolutella* (Hbn.) (Gooseberry Fruitworm) – 28-V-2002 4, 21-VI-2002 1 and 7D-V-2007 1.
5999. *Eulogia ochrifrontella* (Zell.) (Broad-banded Eulogia Moth) – 29A-VII-2009 1.
6038. *Anerastia lotella* (Hbn.) – 27-VIII-2002 1.

PTEROPHORIDAE – Plume Moths

6107. Gillmeria pallidactyla (Haw.) – 29A-VII-2009 1.
 6118. Amblyptilia pica (Wlsm.) (Geranium Plume Moth) – 28-V-2002 1.

THYATIRIDAE – Thyatirid Moths

6235. Habrosyne scripta (Gosse) (The Scribe or Lettered Habrosyne)– 21-VI-2002 1 and 6-VII-2004 1.
 6240. Euthyatira pudens (Gn.) (Dogwood Thyatira) - 7B-V-2007 1.
 6248. Ceranemota albertae Clarke (Alberta Lutestring) – 27-VIII-2002 2.

DREPANIDAE – Drepanid Moths

6251. Drepana arcuata Wlk. (Arched Hooktip) – 6-VII-2004 1.
 6252. Drepana bilineata (Pack.) (Scalloped Hook-tip) – 28-V-2002 1.

GEOMETRIDAE – Inchworm or Geometrid Moths

6270. Protitame virginalis (Hulst) (Virgin Moth) – 21-VI-2002 1 and 30-V-2004 1.
 6290. Macaria loricaria (Evers.) (False Bruce Spanworm) – 6-VII-2004 4 and 29A-VII-2009 1.
 6344. Macaria (Semiiothisa) signaria (Hbn.) (Pale Marked Angle) – 6-VII-2004 2, 26-V-2005 1, 28-V-2006 1 and 10-VI-2006 2.
 6373. Digrammia (Semiiothisa) denticulata Grt. (Striped Granite) - 27-V-2007 1.
 6597. Ectropis crepuscularia (D. & S.) (Saddleback Looper) – 26-V-2002 1, 28-V-2002 4 and 7C-V-2007 1.
 6598. Protoboarmia porcelaria (Gn.) (Speckled Carpet) – 6-VII-2004 1 and 29C-VII-2009 1.
 6651. Lycia ursaria (Wlk.) (The Bear or Stout Spanworm Moth) - 19A-IV-2000 1 and 7C-V-2007 1.
 6666. Lomographa semiclarata (Wlk.) (Bluish Spring Moth) – 26-V-2002 1, 30-V-2004 1, 27-V-2007 1 and 30-V-2009 1.
 6677. Cabera erythemaria Gn. (Yellow-dusted Cream Moth) – 9A-VIII-2003 1, 9B-VIII-2003 1, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
 6678. Cabera variolaria Gn. (Pale-striped Willow Spanworm) – 29A-VII-2009 1.
 6729. Euchlaena johnsonaria (Fitch) (Johnson's Euchlaena) – 6-VII-2004 2.
 6737. Euchlaena tigrinaria (Gn.) (Mottled Euchlaena) – 6-VII-2004 3.
 6743. Xanthotype sospeta (Drury) (Crocus Geometer) – 6-VII-2004 3.
 6755. Pero morrisonaria (Hy. Edw.) (Lesser Umber) – 21-VI-2002 1, 6-VII-2004 2.
 6796. Campaea perlata (Gn.) (Pale Beauty or Fringed Looper Moth) – 9B-VIII-2003 1, 29A-VII-2009 1 and 29C-VII-2009 1.
 6799. Spodolepis substriaria (Hulst) - 7B-V-2007 1 and 7C-V-2007 1.
 6817. Selenia alciphearia Wlk. (Brown-tipped Thorn or Northern Selenia) – 28-V-2002 1.
 6818. Selenia kentaria (G. & R.) (Kent's Geometer) – 28-V-2002 1.

6819. *Metanema inatomaria* Gn. (Pale *Metanema*) – 6-VII-2004 1.
6820. *Metanema determinata* Wlk. (Dark *Metanema*) – 6-VII-2004 1.
6822. *Metarranthis duaria* (Gn.) (Ruddy *Metarranthis*) – 21-VI-2002 1.
6838. *Probole amicaria* (H.-S.) (Friendly *Probole*) – 21-VI-2002 1.
6842. *Plagodis phlogosaria* (Gn.) (Straight-lined *Plagodis*) – 28-V-2002 1.
6844. *Plagodis alcoolaria* (Gn.) (Hollow-spotted *Plagodis*) – 6-VII-2004 1.
6863. *Caripeta divisata* Wlk. (Gray Spruce Looper) – 6-VII-2004 4.
6912. *Sicya macularia* (Harr.) (Pink-bordered Yellow) – 9B-VIII-2003 1.
6982. *Prochoerodes transversata* (Drury) (Large Maple Spanworm Moth) – 27-VIII-2002 2, 9A-VIII-2003 1 and 9B-VIII-2003 1.
7009. *Nematocampa limbata* (Haw.) (Horned Spanworm Moth) – 27-VIII-2002 1.
7125. *Idaea rotundopennata* (Pack.) (Round-winged Wave) – 21-VI-2002 3.
7159. *Scopula limboundata* (Haw.) (Large Lace-border) – 6-VII-2004 1.
7162. *Scopula ancellata* (Hulst) (Pointed-winged Wave) – 29A-VII-2009 1.
7166. *Scopula frigidaria* Mösch. (Frigid Wave) – 6-VII-2004 3.
7182. *Dysstroma citrata* (L.) (Dark Marbled Carpet) – 9B-VIII-2003 1 and 29C-VII-2009 1.
7199. *Eulithis propulsata* (Wlk.) (Currant *Eulithis*) – 27-VIII-2002 1, 9B-VIII-2003 1 and 29A-VII-2009 1.
7201. *Eulithis testata* (L.) (Chevron Moth) – 27-VIII-2002 1 and 9A-VIII-2003 1.
7205. *Eulithis flavibrunneata* (McD.) – 27-VIII-2002 1 and 9B-VIII-2003 1.
7206. *Eulithis explanata* (Wlk.) (White *Eulithis*) – 29A-VII-2009 1.
7207. *Eulithis xylyna* (Hulst) (The Phoenix) – 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
7254. *Hydriomena ruberata* (Frey.) – 29C-VII-2009 1.
7257. *Hydriomena furcata* (Thunb.) (Common Highflyer) – 27-VIII-2002 2, 9A-VIII-2003 1 and 9B-VIII-2003 2.
7313. *Spargania luctuata* (D. & S.) (White-bordered Black) – 6-VII-2004 1.
7316. *Perizoma basaliata* (Wlk.) (Square-patched Carpet) – 12-VIII-2002 1, 29A-VII-2009 1 and 29C-VII-2009 1.
7329. *Anticlea vasiliata* Gn. (Variable Carpet) – 26-V-2002 4, 28-V-2002 4, 21-VI-2002 1, 7A-V-2007 2, 7C-V-2007 1, 7D-V-2007 1 and 3-V-2008 1.
7349. *Stamnodes topazata* (Stkr.) (Topaz Carpet) – 26-V-2002 1.
7370. *Xanthorhoe abrasaria* (H.-S.) – 1-VII-2004 2.
7384. *Xanthorhoe decoloraria* (Esper) – 29A-VII-2009 1.
7390. *Xanthorhoe lacustrata* (Gn.) (Toothed Brown Carpet) – 26-V-2002 1.
7394. *Epirrhoe alternata* (Müller) (White-banded Toothed Carpet) – 29A-VII-2009 1.
7395. *Epirrhoe plebeculata* (Orange-winged Carpet) – 3-V-3008 2.
7396. *Epirrhoe sperryi* Herbulot (Small Argent and Sable) – 28-V-2005 1.
7399. *Euphyia unangulata* (Haw.) (Sharp-angled Carpet) – 21-VI-2002 1, 6-VII-2004 1 and 29B-VII-2009 1.
7408. *Zenophleps alpinata* Cass. – 27-VIII-2002 3, 9A-VIII-2003 1, 9B-VIII-2003 1, 29A-VII-2009 1 and 29C-VII-2009 1.
7429. *Venusia pearsalli* (Dyar) (Pearsall's Wave) – 26-V-2002 1 and 7D-V-2007 2.
7445. *Horisme intestinata* (Gn.) (Brown Bark Carpet) – 6-VII-2004 1 and 29A-VII-2009 1.

- Euthithecia sp. – 29A-VII-2009 1.
 7459. Eupithecia columbiata (Dyar) – 28-V-2002 1.
 7488. Eupithecia tripunctaria H.-S. – 6-VII-2004 1.
 7489. Eupithecia lariciata – 21-VI-2002 1.
 7520c. Eupithecia satyrata dodata Tayl. – 21-VI-2002 1 and 6-VII-2004 1.
 7524. Eupithecia cimicifugata Pears. – 6-VII-2004 1.
 7605. Eupithecia ravocostaliata Pack. (Great Variegated Pug) – 28-V-2002 2.
 7637. Cladara limitaria (Wlk.) (Mottled Gray Carpet) – 28-V-2002 3, 19B-IV-2005 1,
 7A-V-2007 1 and 7C-V-2007 2.
 7639. Cladara atroliturata (Wlk.) (The Scribbler) - 7D-V-2007 2.
 7640. Lobophora nivergerata Wlk. (Two-lines Aspen Looper) – 6-VII-2004 1.

URANIIDAE – Uraniid Moths

7650. Callizia amorata (Pack.) (Gray Scoopwing) – 29A-VII-2009 1 and 29C-VII-2009 1.

LASIOCAMPIDAE – Lappet Moths

7687. Phyllodesma americana (Harr.) (Lappet Moth) – 28-V-2002 2, 7C-V-2007 1 and 7D-V-2007 1.

SATURNIDAE Large Silkworm Moths

7757. Antheraea polyphemus (Cram.) (Polyphemus Moth) – 21-VI-2002 1.

SPHINGIDAE – Sphinx Moths

7821. Smerinthus jamaicensis (Drury) (Twin-spotted Sphinx) – 21-VI-2002 1.
 7822. Smerinthis cerisyi Kby. (One-eyed Sphinx) – 28-V-2002 1 SR, 21-VI-2002 1, 6-VII-2004 17 SR and 29C-VII-2009 1.
 7824. Paonias excaecatus (J.E. Smith) (Blinded Sphinx) – 6-VII-2004 1.
 7855. Hemaris diffinis (Bdv.) (Snowberry Clearwing) – 28-V-2005 1.

NOTODONTIDAE – Prominent Moths

7895. Clostera albosigma Fitch (Sigmoid Prominent) – 28-V-2002 1, 21-VI-2002 1 and 29A-VII-2009 1.
 7915. Nadata gibbosa (J.E. Smith) (White-dotted Prominent) – 6-VII-2004 3.
 7922. Pheosia rimosa Pack. (Black-rimmed Prominent) – 6-VII-2004 2.
 7924. Odontosia elegans (Stkr.) (Elegant Prominent) – 6-VII-2004 1.
 7931. Gluphisia septentrionis Wlk. (Small Pebble or Common Gluphisia) – 21-VI-2002 1 (19 SR) and 6-VII-2004 1.
 7940. Furcula scolopendrina (Bdv.) (Poplar Kitten) – 21-VI-2002 2, 6-VII-2004 2.

8007. *Schizura unicornis* (J.E. Smith) (Variegated Prominent) – 6-VII-2004 2.

ARCTIIDAE – Tiger Moths and others

8037. *Gnophaela vermiculata* (Grt.) (Green Lattice or Police Car Moth) – 12-VIII-2002 1.
 8043. *Eilema bicolor* (Grt.) (Bicolored Moth) – 29A-VII-2009 1.
 8089. *Hypoprepia miniata* (Kby.) (Scarlet-winged Lichen Moth) – 9A-VIII-2003 1.
 8098. *Clemensia albata* Pack. (Little White Lichen Moth) – 6-VII-2004 1 and 29A-VII-2009 1.
 8123. *Holomelina ferruginea* (Wlk.) (Rusty Holomelina) – 27-VIII-2002 1, 6-VII-2004 1, 29A-VII-2009 1 and 29B-VII-2009 1.
 8134. *Spilosoma congrua* (Wlk.) – 21-VI-2002 1 and 6-VII-2004 1.
 8136. *Spilosoma dubia* (Wlk.) (Dubious Tiger Moth) – 21-VI-2002 1.
 8137. *Spilosoma virginica* (F.) (Virginian Tiger Moth or Yellow Woolly Bear) – 21-VI-2002 1 and 26-IX-2004 last instar caterpillar.



Yellow Woolly Bear Caterpillar, September 26, 2004

8158. *Phragmatobia assimilans* Wlk. (Large Ruby Tiger Moth) – 28-V-2002 1.
 8162. *Platarctia parthenos* (Harr.) (St. Lawrence Tiger Moth)– 21-VI-2002 2 and 6-VII-2004 8.
 8196. *Grammia parthenice* (W. Kirby) (Parthenice Tiger Moth) – 9A-VIII-2003 1, 29A-VII-2009 1 and 29B-VII-2009 1.
 8197. *Grammia virgo* (L.) (Virgin Tiger Moth) – 6-VII-2004 2.
 8214. *Lophocampa maculata* Harr. (Spotted Tiger Moth) – 6-VII-2004 1.

LYMANTRIIDAE – Tussock Moths

8294. *Dasychira vagans* (B. & McD.) (Variable Tussock Moth) – 29A-VII-2009 1 and 29C-VII-2009 1.

NOCTUIDAE – Owlets or Noctuid Moths

8322. *Idia americalis* (Gn.) (American Snout) – 21-VI-2002 1, 9A-VIII-2003 1, 6-VII-2004 2, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
8356. *Chytolita petrealis* Grt. (Lesser Luteous Snout) – 21-VI-2002 4, 6-VII-2004 3 and 29A-VII-2009 1.
8362. *Phalaenostola metonalis* (Wlk.) (Pale Phalaenostola or Tufted Snout) – 12-VIII-2002 1 and 29C-VII-2009 1.
8397. *Palthis angulalis* (Hbn.) (Angulated Snout Moth) – 6-VII-2004 1.
8731. *Euclidea cuspeida* (Hbn.) (Pointed Grass Moth) – 28-V-2005 1.
8738. *Caenurgina crassiuscula* (Haw.) (Clover Looper Moth) – 28-V-2002 1, 21-VI-2002 1. 30-V-2004 3, 28-V-2005 1 and 28-V-2006 6 SR.



A mating pair of *Caenurgina crassiuscula*, May 30, 2004

8803. *Catocala relictata* Wlk. (White Underwing) – 9A-VIII-2003 1.
8805. *Catocala unijuga* Wlk. (Once-married Underwing) – 9A-VIII-2003 1.
8817. *Catocala briseis* Edw. (Briseis Underwing) – 27-VIII-2002 1.
8923. *Autographa ampla* (Wlk.) (Broken-banded Y or Large Looper Moth) – 29B-VII-2009 1.
8975. *Nycteola frigidana* (Wlk.) (Frigid Owlet or Willow Leaf-tier) - 7D-V-2007 1.
9048. *Lithacodia albidula* (Gn.) (Common Midget) – 21-VI-2002 3, 6-VII-2004 1 and 10-VI-2006 1, 29A-VII-2009 1 and 29C-VII-2009 1.
9193. *Raphia frater* Grt. (The Brother) – 6 VII-2004 1.
9207. *Acronicta innotata* Gn. (Unmarked Dagger Moth) – 6-VII-2004 1.
9212. *Acronicta grisea* (Wlk.) (Gray Dagger Moth) – 6-VII-2004 1.
9241. *Acronicta fragilis* (Gn.) (Fragile Dagger Moth) – 6 VII-2004 1.
9359. *Apamea commoda* (Wlk.) (Southern Quaker) – 6-VII-2004 3 and 29B-VII-2009 1.
9261. *Acronicta impressa* Wlk. (Willow Dagger Moth) – 28-V-2002 1.
9365. *Apamea scoparia* (Hufn.) (Red-winged Quaker) – 6-VII-2004 2 and 29B-VII-2009 1.
- 9367a. *Apamea cogitata* (Sm.) (Red-winged Quaker) – 29A-VII-2009 1.
9369. *Apamea inficita* (Wlk.) (Inficita Quaker) – 12-VIII-2002 1, 27-VIII-2002 1, 9A-VIII-2003 1, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.

- 9412.1. *Oligia subjuncta* (Sm.) (Short-cloaked Quaker) – 6-VII-2004 1 and 29A-VII-2009 1.
9419. *Oligia mactata* (Gn.) (Prairie Quaker) – 27-VIII-2002 1.
9420. *Oligia illocata* (Wlk.) (Wandering Quaker) – 27-VIII-2002 1.
9437. *Chortodes inquinata* (Gn.) (Sordid Wainscot) – 29A-VII-2009 1.
9457. *Amphipoea* prob. *americana* (Speyer) (American Ear-moth) – 27-VIII-2002 2 and 9A-VIII-2003 1.
9549. *Enargia decolor* (Wlk.) (Angle-striped Sallow) – 27-VIII-2002 2 and 9A-VIII-2003 1.
9550. *Enargia infumata* (Grt.) (Lesser Angle-striped Sallow) – 9B-VIII-2003 1 and 29A-VII-2009 1.
9555. *Ipimorpha pleonectusa* Grt. (Even-lined Sallow) – 9A-VIII-2003 2.
9578. *Hyppa contrasta* McD. (was *Hyppa* nr. *xylinoides*) (Common Hyppa or Cranberry Cutworm) – 6-VII-2004 1 and 29A-VII-2009 1.
9647. *Proxenus miranda* (Grt.) (Glistening Rustic) – 6-VII-2004 1.
9649. *Proxenus mendosa* McD. – 27-VIII-2002 1.
9656. *Platyperigea montana* (Bremer) (Civil Rustic) – 27-VIII-2002 1.
9874. *Xylena curvimacula* (Morr.) (Dot and Dash Swordgrass Moth) – 28-V-2002 2, 19A-IV-2005 1, 19B-IV-2005 2, 7C-V-2007 1 and 7D-V-2007 1.
9876. *Xylena cineritia* (Grt.) (Western Swordgrass Moth) – 19A-IV-2005 2, 19B-IV-2005 1 and 7D-V-2007 1.
9881. *Homoglaea hircina* Morr. (Goat Sallow) – 19A-IV-2005 2 and 19B-IV-2005 1.
9884. *Litholomia napaea* (Morr.) (Dark Gray Peasant) - 7C-V-2007 1 and 7D-V-2007 1.
9909. *Lithophane tepida* Grt. (Dowdy Pinion) - 7D-V-2007 1.
9917. *Lithophane fagina* Morr. (Beech Pinion) – 19A-IV-2005 1.
9952. *Eucirroedia pampina* (Gn.) (Scalloped Sallow) – 27-VIII-2002 1.
9962. *Anathix puta* (Grt. & Rob.) (Putta Sallow) – 27-VIII-2002 1, 9A-VIII-2003 1 and 9B-VIII-2003 1.
9993. *Brachylomia populi* (Stkr.) (Cloaked Peasant) – 9A-VIII-2003 1.
10008. *Feralia comstocki* (Grt.) Comstock's Sallow) - 7C-V-2007 1 and 7D-V-2007 2.
10027. *Pleromelloida obliquata* (Sm.) (Oblique Rover) – 28-V-2002 1, 7C-V-2007 2 and 7D-V-2007 1.
10035. *Noctua pronuba* (B. & McD.) (Large Yellow Underwing) – 29C-VII-2009 1.
10067. *Adita chionanthi* (J. E. Sm.) (Fringed Tree Sallow) – 9A-VIII-2003 1.
10275. *Polia nimbosa* (Gn.) (Stormy Arches) – 6-VII-2004 3
10276. *Polia imbrifera* (Gn.) (Cloudy Arches) – 21-VI-2002 1 and 6-VII-2004 2.
10280. *Polia purpurissata* (Grt.) (Purple Arches) – 27-VIII-2002 1, 29A-VII-2009 1, 29B-VII-2009 1, and 29C-VII-2009 1.
10288. *Polia detracta* (Wlk.) (Disparaged Arches) – 6-VII-2004 1.
10297. *Lacanobia atlantica* (Grt.) (Atlanta Arches) – 21-VI-2002 1.
10298. *Lacanobia radix* (Wlk.) (Garden Arches) – 21-VI-2002 1.
10305. *Trichordestra dodii* (Sm.) (Dod's Arches) – 29A-VII-2009 1.
10310. *Papestra quadrata* (Sm.) (Quadrate Arches) – 28-V-2002 3.
10368. *Lacinipolia meditata* (Grt.) (The Thinker or Pale-backed Cutworm Moth) – 29B-VII-2009 1.
10370. *Lacinipolia lustralis* (Grt.) (Lustrous Arches) – 6-VII-2004 3.

10372. *Lacinipolia anguina* (Grt.) (Snaky Arches) – 21-VI-2002 1.
10397. *Lacinipolia renigera* (Steph.) (Kidney-spotted Arches or Bristly Cutworm Moth) – 27-VIII-2002 1, 9B-VIII-2003 1 and 29a-VII-2009 1.
10405. *Lacinipolia lorea* (Gn.) (Bridled Arches) – 6-VII-2004 1.
10406. *Lacinipolia olivacea* (Morr.) (Olive Arches) – 27-VIII-2002 1 and 29B-VII-2009 1.
10436. *Aletia oxygala* (Grt.) (Lesser Wainscot) – 27-VIII-2002 1, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
10447. *Leucania commoides* Gn. (Comma Wainscot) – 29A-VII-2009 1 and 29B-VII-2009 1.
10490. *Orthosia revicta* (Morr.) (Subdued Quaker) – 28-V-2002 1, 19A-IV-2005 3, 19B-IV-2005 1, 7C-V-2007 1 and 7D-V-2007 1.
10493. *Orthosia segregata* (Sm.) (Segregate Penman) – 28-V-2002 1, 19A-IV-2005 1, 7B-V-2007 1 and 7D-V-2007 1.
10495. *Orthosia hibisci* (Gn.) (Variable Penman or Speckled Green Fruitworm Moth) – 19A-IV-2005 1, 7C-V-2007 1 and 7D-V-2007 2.
10513. *Egira dolosa* (Grt.) (Greater Black-letter Dart) – 28-V-2002 4, 7C-V-2007 1 and 7D-V-2007 2.
10524. *Nephelodes minians* Gn. (Bronzed Cutworm Moth) – 27-VIII-2002 3 and 9A-VIII-2003 1.
10563. *Protorthodes oviduca* (Gn.) (Ruddy Quaker or Island Stylus) – 21-VI-2002 7 SR.
10651. *Agrotis venerabilis* Wlk. (Venerable Dart) – 27-VIII-2002 2.
10676. *Feltia herilis* (Grt.) (Master's Dart) – 27-VIII-2002 1, 9B-VIII-2003 1, 29A-VII-2009 1 and 29B-VII-2009 1.
- Euxoa* sp. – 29A-VII-2009 1.
10702. *Euxoa divergens* (Wlk.) (Divergent Dart) – 6-VII-2004 3.
10723. *Euxoa tristicula* (Morr.) (Three-marked Dart) – 6-VII-2004 1.
10755. *Euxoa declarata* (Wlk.) (Clear Dart) – 27-VIII-2002 1.
10798. *Euxoa basalis* (Grt.) (Pale-based Dart) – 29A-VII-2009 1.
10801. *Euxoa ochrogaster* (Gn.) (Red-backed Cutworm Moth) – 12-VIII-2002 1, 27-VIII-2002 2, 9A-VIII-2003 1, 9B-VIII-2003 1, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
10804. *Euxoa plagigera* (Morr.) (Plaited Dart) – 9A-VIII-2003 1.
10861. *Euxoa ridingsiana* (Grt.) (Riding's Dart) – 27-VIII-2002 1 and 9A-VIII-2003 2.
10917. *Diarsia rubifera* (Grt.) (Rubifera Dart) – 27-VIII-2002 1.
10926. *Spaelotis clandestina* (Harr.) (Clandestine Dart) – 9A-VIII-2003 1 and 6-VII-2004 4.
10928. *Graphiphora augur* (Grt.) (Soothsayer Dart) – 29A-VII-2009 1 and 29C-VII-2009 1.
10929. *Eurois occulta* (L.) (Soothsayer Dart) – 27-VIII-2002 2, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
10930. *Eurois astricta* Morr. (Great Brown Dart) – 9A-VIII-2003 1, 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
10944. *Xestia smithii* (Snellen) (Smith's Dart or Spotted Clay Dart) – 9B-VIII-2003 1, 29A-VII-2009 1 and 29C-VII-2009 1.

10951. *Pseudohermionassa tenuicula* (Morr.) (Hairpin Dart) – 29A-VII-2009 1 and 29C-VII-2009 1.
10954. *Agnorisma bugrai* (Koçak) (Collared Dart) – 27-VIII-2002 3 and 9A-VIII-2003 1.
10992. *Paradiarsia littoralis* (Pack.) (Labrador Dart) – 21-VI-2002 2 and 6-VII-2004 2.
10996. *Cerastis salicarum* (Wlk.) (Willow Dart) – 28-V-2002 2, 19A-IV-2005 2, 19B-IV-2005 2, 7B-V-2007 1, 7C-V-2007 1 and 7D-V-2007 1.
11000. *Anaplectoides prasina* (D. & S.) (Green-winged Dart) – 29A-VII-2009 1 and 29B-VII-2009 1.
11001. *Anaplectoides pressus* (Grt.) (Dappled Dart or Broad-winged Dart) – 29A-VII-2009 1.
11004. *Protolampra rufipectus* (Morr.) (Red-breasted Dart) – 9A-VIII-2003 1, 9B-VIII-2003 1, 29A-VII-2009 1 and 29C-VII-2009 1.
11012. *Cryptocala acadiensis* (Bethune) (Catocaline Dart) – 29A-VII-2009 1, 29B-VII-2009 1 and 29C-VII-2009 1.
11041. *Abagrotis placida* (Grt.) group – 9A-VIII-2003 1.

DISCUSSION

An analysis of the data from the present study of the moths encountered in twelve major study areas in south-central Alberta, reveals that the present area (JC) has less than 43% similarity to the other areas. This is probably due in large part to inadequate sampling. Clearly more research is needed.

SUMMARY

Not counting undetermined species, varieties, and forms, the list for 2002 contained 151 species of moths. The 2003 report brought the total up to 181, that for 2004 had 255, the 2008 report had 283 species, while the present report has 310. Twenty nine species of skippers and butterflies are listed for the area. While these may seem like impressive numbers, it is felt that, with further study, the total can be easily doubled. To put things into perspective, Pohl et al (2010) document 2367 species of Lepidoptera for Alberta.

Of the 14 major areas involved in the present study, four species of moths were found only in the J.J. Collett Natural Area - *Korscheltellus gracilis* (Grt.), *Lita sexpunctella* (F.), *Spodolepis substriaria* (Hulst) and *Hemaris diffinis* (Bdv.).

Moths were found on all visits but peak numbers occurred during the summer months. As most species fly for only a few days, sampling should be carried out every week or so. As time commitments have not allowed this, attempts have been made to bracket time periods so that various species will not be missed. It is important that further work be conducted.

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USEFUL ONLINE INFORMATION SOURCES ON MOTHS

Information on many of our Alberta moths can be found at the Entomology Collection Search site of the E.H. Strickland Entomological Museum of the Department of Biological Sciences at the University of Alberta: <http://www.entomology.ualberta.ca/>.

Illustrations of Alberta macromoths can be found at a site put together by D. Lafontaine and J. Troubridge called "The Moths of Canada": http://www.cbif.gc.ca/spp_pages/misc_moths/phps/mothindex_e.php.

Illustrations on many of the western American macromoths can also be found on a site put together by The Moth Photographers Group: <http://www.origins.tv/MothPhotographersGroup/WestPlates.htm>.

D. Lynn Scott has a web site with natural photos of over 400 species of moths that she has found in Ottawa, Ontario (<http://www.hei.ca/dls/mothindex.html>). As many of the species also occur in Alberta, these images can be quite helpful

USEFUL BOOKS ON MOTHS

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APPENDIX

Collection dates, sites and other details

- 25 July 1998 – hike on which a *Danaus plexippus* caterpillar was seen on *Asclepias ovalifolia*.
- 26 May 2002 – Diurnal, annual spring hike, 52.53, 113.65, 850 m.
- 28 May 2002 – 2 UV traps and a MV light and sheet, 52.53, 113.65, 850 m.
- 21 June 2002 – 2 UV traps, 52.53, 113.65, 850 m.
- 12 August 2002 – Diurnal, annual fall walk, 52.53, 113.65, 850 m.
- 27 August 2002 – 2 UV traps plus MV light and sheet, 52.53, 113.65, 850 m; UV traps stolen and parts found near gate.

- 9A August 2003 – 1 UV trap, aspen woods, 52.552, 113.640, 895 m.
9B August 2003 – 1 UV trap, *Picea glauca* woods, 52.551, 113.640, 866 m.
30 May 2004 – Diurnal, annual spring hike, mixed woods, 52.53, 113.65, 875 m.
6 July 2004 – Diurnal, 52.55, 113.64, 850-880 m.
6 July 2004 – UV, S-facing *Stipa* meadow in mixed woods, 52.552, 113.640, 888 m.
6 July 2004 – UV, small clearing in mixed woods, 52.552, 113.640, 852 m.
26 September 2004 – Diurnal, annual fall hike.
19 April 2005 – UV, S-facing *Stipa* meadow in mixed woods, 52.552, 113.640, 888 m.
28 May 2005 – Diurnal, annual spring hike, 52.55, 113.64, 890 m.
25 September 2005 – annual fall hike, 52.55, 113.64, 890 m.
28 May 2006 – Diurnal, annual spring hike, 52.55, 113.64, 890 m.
10 June 2006 – diurnal, hiking, mixed woods, 52.55, 113.64, 890 m.
7A May 2007 – Crepuscular, annual spring hike, mixed woods, 52.55, 113.64, 860-900 m.
7B May 2007 – UV, *Picea glauca* woods, 52.551, 113.640, 866 m.
7C May 2007 – UV, aspen woods, 52.552, 113.640, 895 m.
7D May 2007 – UV, *Picea glauca* woods, 52.553, 113.639, 900 m.
27 May 2007 – Diurnal, annual spring hike, 52.55, 113.64, 890 m.
27 September 2007 – Diurnal, annual fall hike, 52.55, 113.64, 890 m.
3 May 2008 – Diurnal, annual spring hike, 52.55, 113.64, 890 m.
27 September 2008 – Diurnal, annual fall hike, 52.55, 122.64, 890 m.
31 May 2009 – Diurnal, annual spring hike, 52.55, 113.64, 860-900 m.
29A July 2009 – UV, N-facing slope with *Picea glauca*, 835 m.
29B July 2009 – UV, small S-facing meadow, 52.553, 113.641, 835 m.
29C July 2009 – UV, wet *Picea glauca* woods, 52.552, 113.641, 820 m.
27 September 2009 – Diurnal, annual fall hike, 52.553, 113.641, 835 m.

PLATE 1. Some J.J. Collett Natural Area Lepidoptera.

