

LEPIDOPTERA OF THE LOWDEN SPRINGS CONSERVATION AREA, ALBERTA, 2002-2011

Charles Durham Bird
Box 22, Erskine, AB, T0C 1G0, cdbird@xplornet.com
8 March 2012

No new collections were made in the area in 2011. The present report is essentially an update in which the up-to-date order and taxonomy of Pohl et al. (2010) is followed, rather than that of Hodges et al. (1983).



Native grasses, Prairie Crocus and Three-flowered Avenas; Lowden Springs Conservation Area, looking ENE towards Lowden Lake, June 3, 2004.

THE AREA

The Lowden Springs Conservation Area is located on the northwest side of Lowden Lake, 17 km south of Stettler. It was officially dedicated 13 June 2003. It is jointly owned by the Alberta Conservation Association (ACA), Ducks Unlimited Canada (DU) and Nature Conservancy Canada. It comprises 121 acres of native grassland, 5 acres of aspen and 4 acres of alkaline wetlands. The coordinates in the center of the area are 52.09N and 112.425W and the elevation

there is 830 m. Historically, the land was part of the Randon Ranch and was grazed for pasture. Small upland portions were broken up many years ago and the native vegetation was destroyed, however, much of the area still has the original native vegetation as indicated by the presence of plants like Prairie Crocus (*Pulsatilla ludoviciana*) and Three-flowered Avena (*Geum triflorum*).



A stand of Silver Willow and Buckbrush in the middle of the Lowden Springs Natural Area, 4 June 2004

At the dedication, the writer was encouraged to carry out an inventory of the Lepidoptera of the area. He was especially interested in doing so as he was endeavoring to document the species found in natural areas in south-central Alberta and none of the other areas being researched had as much native grassland. The area was studied six times during 2002: June 13 and 20, July 2, 6 and 23; and August 23. On all occasions, 2 ultraviolet light traps were set up at dusk and removed the following morning. In 2003, the area was studied another six times: May 1 and 30, June 15, July 7, August 14 and September 5. In 2004, traps were set out on the nights of June 3, July 31 and August 11. In 2005, the area was studied on May 18, June 9, July 8 and August 5. In 2006, the area was sampled on the nights of May 15, June 28 and August 28. Unfortunately, due to various unforeseen time commitments, no research was done in the area in 2007. In 2008, collections were made on June 28. In 2009, the area was studied on May 24 and July 22. In 2010, collections were made on April 10, May 12 and 26, and on July 17.

The present report incorporates the information in the previous seven (Bird 2003, 2004, 2005, 2006, 2007, 2008, 2009) and includes a number of redeterminations to the information in the last report.

Because of the proximity of Lowden Lake, an abundance of water beetles, corixids and midges are on the wing during the summer. As many of them are attracted to ultraviolet (UV) light, the moth traps that were set out often had a large number of sticky beetles and/or midges. This made retrieving the moth catch difficult.

BACKGROUND

Provincial Parks and other areas where natural vegetation is protected are of great value as their flora and fauna are typical of what was in Alberta before widespread agricultural activities resulted in the 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 writer, 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 is a member of the Alberta Lepidopterist's Guild, the purpose of which is to encourage the study of Alberta's moths and butterflies.

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

SPECIMEN DISPOSITION

All specimens collected by the writer presently reside in his collection but most will eventually go to the University of Alberta Strickland Museum (UASM), and some will be deposited in the Canadian National Collection (CNC) in Ottawa and the Northern Forest Research Centre (NFRC) in Edmonton. All specimens have been databased and the information on verified material can be viewed at <http://www.entomology.ualberta.ca/searching.php>.

THE FOLLOWING CHECKLIST

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). This list incorporates recent changes in taxonomy of all groups according to various literature sources, including those listed for the Noctuoidea by Lafontaine & Schmidt (2010). In previous reports, the order and terminology, were that of the "Check List of the Lepidoptera of America North of Mexico" (1983) edited by R.W. Hodges. The species order and taxonomy in this report is that of Pohl et al (2010) followed by that in Hodges (1983). Common names are mentioned in those cases where such names are known.

While most of the larger (macromoths) are relatively well known, the same cannot be said for many of the smaller (micromoths) ones. 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 Lowden Springs Conservation Area being in Area 8. Most of Bowman’s records are from his Area 10, which includes Edmonton, so many of the species found in the following list are additions to his Area 8.

HEPIALIDAE – Ghost Moths

5. *Gazoryctra novigannus* (B. & Benj.) (29. *Gazoryctra novigannus* (B. & Benj.)) (Novigannus Ghost Moth) – 28-VIII-2006 1.
 8. *Sthenopsis purpurascens* (Pack.) (19. *Sthenopsis purpurascens* (Pack.)) (Large Ghost Moth) – 22A-VII-2009 1 and 17A-VII-2010 1.

PRODOXIDAE – Prodoxid Moths

Prodoxidae, Lamproniinae

21. *Lampronia aenescens* (Wlsm.) (184. *Lampronia aenescens* (Wlsm.)) – 28-VI-2008 1.

TINEIDAE – Fungus Moths

Tineidae, Tineinae

44. *Tinea irrepta* Braun (399. *Tinea irrepta* Braun) – 20-VI-2002 3, 2-VII-2002 3, 14-VIII-2003 1, 11-VIII-2004 2, 9-VI-2005 1, 8-VII-2005 1, 28-VIII-2006 1 and 22C-VII-2009 1.
 49. *Monopis laevigella* (D. & S.) (Not in Hodges) – 20-VI-2002 1, 8-VII-2005 1 and 28-VI-2006 2.
 51. *Monopis spilotella* Teng. (421. *Monopis spilotella* Tengström) – 20-VI-2002 2 and 8-VII-2005 1.

ACROLOPHIDAE – Tube Moths

54. *Amydria effrentella* Clem. (334. *Amydria effrentella* Clem.) – 23-VII-2002 1, 23-VIII-2002 1 and 8-VII-2005 2.

YPSOLOPHIDAE – Falcate-winged Moths

Ypsolophidae, Ypsolophinae

104. *Ypsolopha canariella* (Wlsm.) (2371. *Ypsolopha canariella* (Wlsm.)) (Canary Ypsolopha Moth) – 5-VIII-2005 1.
 106. *Ypsolopha dentiferella* (Wlsm.) (2376. *Ypsolopha dentiferella* (Wlsm.)) – 23-VII-2002 1.

PLUTELLIDAE – Plutellid Moths

114. *Plutella xylostella* (L.) (2366. *Plutella xylostella* (L.)) (Diamondback Moth) – 14-VIII-2003 1, 9-VI-2005 1 and 5-VIII-2005 1.

ELACHISTIDAE – Concealer Moths

Elachistidae, Depressariinae

135. *Agonopterix canadensis* (Bsk.) (878. *Agonopterix canadensis* (Bsk.)) (Canadian Agonopterix Moth) – 31-VII-2004 1.
 143. *Depressariodes ciniflonella* (Lienig & Zell.) (908. *Depressariodes ciniflonella* (Lienig & Zell.)) – 20C-IV-2010 1.
 144. *Depressariodes fulva* (Wlsm.) (910. *Martyrhilda fulva* (Wlsm.)) – 23-VIII-2002 10, 14-VIII-2003 2, 11-VIII-2004 5, 9-VI-2005 2, 8-VII-2005 1 and 5-VIII-2005 1.
 149. *Semioscopis megamicrella* Dyar (915. *Semioscopis megamicrella* Dyar) – 20C-IV-2010 1.
 151. *Depressaria atrostrigella* Clarke (918. *Depressaria atrostrigella* Clarke) – 5-VIII-2005 1.

Elachistidae, Elachistinae

- Elachista* sp. – 6-VII-2002 1.

SYMMOCIDAE – Symmocid Moths

189. *Glyphidocera hurlberti* Adamski (Not in Hodges) – 13-VI-2002 1, 23-VII-2002 3, 31-VII-2004 1 and 8-VII-2005 1. Described by Adamski (2000).

COLEOPHORIDAE – Coleophorid Moths

Coleophoridae, Coleophorinae – Casebearer Moths

- Coleophora* spp. – 31-VII-2004 1, 11-VIII-2004 1, 5-VIII-2005 1, 28-VI-2006 1, 28-VIII-2006 1, 28-VI-2008 2 and 22A-VII-2009 2. The above specimens are currently with Dr. J.-F. Landry who is doing a North American monograph of the group. Some of the JFL specimens may be of species that remain to be described.
 197. *Coleophora elaeagnisella* Kft. (1260. *Coleophora elaeagnisella* Kft.) – 6-VII-2002 1 and 7-VII-2003 1.
 209.1. *Coleophora sparsipuncta* Heinr. (1323. *Coleophora sparsipuncta* Heinr.) – 31-VII-2004 1 and 11-VIII-2004 2. Reported as new for Alberta in Pohl et al 2011.
 214. *Coleophora sparsipulvella* Cham. (1352. *Coleophora sparsipulvella* Cham.) – 8-VII-2005 1.
 216. *Coleophora brunneipennis* Braun (1367. *Coleophora brunneipennis* Braun) – 8-VII-2005 2.
 222. *Coleophora trifolii* (Curt.) (1388. *Coleophora trifolii* (Curt.)) (Large Clover Case-bearer) – 8-VII-2005 1, 28-VI-2006 3, 22A-VII-2009 1 and 22B-VII-2009 1.
Coleophora duplicis-8 group – 2-VIII-2000 1.
Coleophora JFL048 – 14-VIII-2003 1.
Coleophora JFL049 – 14-VIII-2003 2.
Coleophora JFL055 – 28-VIII-2006 1.
Coleophora JFL078 – 28-VI-2006 1.
Coleophora JFL080 – 15-VI-2003 1 and 9-VII-2005 1.
Coleophora JFL084 – 11-VIII-2004 1 and 5-VIII-2005 4.

Coleophora JFL087 – 8-VII-2005 1.
Coleophora JFL089 – 23-VII-2002 2.
Coleophora JFL092 – 23-VIII-2002 1.

COSMOPTERIGIDAE – Cosmet Moths

Cosmopterigidae, Chrysopeliinae

242. *Walshia miscecolorella* (Cham.) (1615. *Walshia miscecolorella* (Cham.)) (Sweetclover Root Borer Moth) – 28-VI-2008 1.

GELECHIIDAE – Gelechiid Moths

Species unknown – 13-VI-2002 3, 20-VI-2002 3, 6-VII-2002 5, 23-VII-2002 9, 23-VIII-2002 2, 31-VII-2004 4, 11-VIII-2004 1, 9-VI-2005 2, 8-VII-2005 7, 5-VIII-2005 6, 15C-V-2006 1, 28-VI-2006 3, 28-VI-2008 1, 22A-VII-2009 3, 22B-VII-2009 2. 22C-VII-2009 1, 20B-IV-2010 1, 17A-VII-2010 4, 17B-VII-2010 1 and 17C-VII-2010 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 even described.

Gelechiidae, Gelechiinae, Anomologini

249. *Aristotelia fungivorella* (Clem.) (1738. *Aristotelia fungivorella* (Clem.)) – 31-VII-2004 1.

Gelechiidae, Gelechiinae, Litini

267. *Xenolechia velatella* (Bsk.) (1880. *Xenolechia velatella* (Bsk.)) – 15B-V-2006 1.

Gelechiidae, Gelechiinae, Gelechiini



271. *Prolita variabilis* (Bsk.) (1902. *Lita variabilis* (Bsk.)) – 23-VIII-2002 3, 14-VIII-2003 2.

Gelechiidae, Gelechiinae, Gelechiini

292. *Chionodes mediofuscella* (Clem.) (2093. *Chionodes mediofuscella* (Clem.)) – 13-VI-2002 1, 11-VIII-2004 1, 9-VI-2005 1 and 20A-IV-2010 1.

300. *Chionodes psiloptera* (B. & Bsk.) (2111. *Chionodes psilopterus* (B. & Bsk.)) – 13-VI-2002 2, 20-VI-2002 2, 2-VII-2002 2, 6-VII-2002 1, 23-VII-2002 2, 23-VIII-2002 1, 7-VII-2003 2, 31-VII-2004 2, 11-VIII-2004 2, 9-VI-2005 1, 8-VII-2005 2, 28-VI-2006 1, 28-VI-2008 8, 22A0VII-2009 1, 22B-VII-2009 1, 17B-VII-2010 1 and 17C-VII-2010 2.
317. *Filatima abactella* (Clarke) (2127. *Filatima abactella* (Clarke)) – 15-VI-2003 1.

Gelechiidae, Gelechiinae, Gnorimoschemini

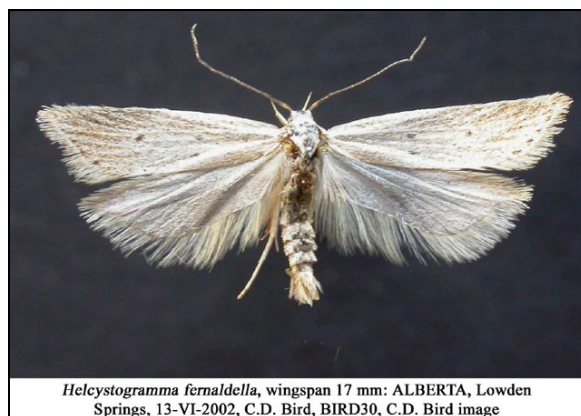
The members of this group are presently being studied by Vazrick Nazari, now at the Canadian National Collection. New species will be described and the following determinations may be revised.

Gnorimoschema indet. – 28-VIII-2006 7.

332. *Gnorimoschema septentrionella* Fyles (2000. *Gnorimoschema septentrionella* Fyles) – 11-VIII-2004 1.

334. *Gnorimoschema* nr *vastificum* Braun (2008. *Gnorimoschema* nr *vastificum* Braun) – 14-VIII-2003 1.

Gelechiidae, Dichomeridinae



354. *Helcystogramma fernaldella* (Bsk.) (2267. *Brachmia fernaldella* (Bsk.)) – 13-VI-2002 3, 15A-V-2006 1, 15B-V-2006 2 and 15C-V-2006 3.



358. *Dichomeris purpureofusca* (Wlsm.) (2308. *Dichomeris purpureofusca* (Wlsm.)) – 2-VII-2002 1.

LIMACODIDAE – Slug Caterpillar Moths

Limacodidae, Limacodinae

364. *Tortricidia testacea* Pack. (4652. *Tortricidia testacea* Pack.) – 9-VI-2005 1.

COSSIDAE – Carpenterworm Moths

391. *Acossus centerensis* (Lint.) (2675. *Acossus centerensis* (Lint.)) (Poplar Carpenterworm) – 8-VII-2005 1, 22B-VII-2009 2 and 17C-VII-2010 1.

TORTRICIDAE – Tortricid Moths

Tortricidae, Tortricinae, Tortricini

403. *Acleris albicomana* (Clem.) (3502. *Croesia albicomana* (Clem.)) – 31-VII-2004 1 and 28-VI-2006 1.

431. *Acleris variana* (Fern.) (3548. *Acleris variana* (Fern.)) (Eastern Black-headed Budworm) – 5-IX-2003 1.

Tortricidae, Tortricinae, Cochylini

Razowski (1997) has a paper on Canadian Cochyliids, but they are difficult to identify with certainty. The family is being revised by Dr. Eric Metzler and Dr John Brown. Some of the following specimens are now being examined by them.

Phtheochroa sp. – 6-VII-2002 2.

443. *Phtheochroa fulviplicana* (Wlsm.) (3792. *Hysterosia fulviplicana* (Wlsm.)) – 22A-VII-2009 1.

446. *Phtheochroa vitellinana* (Zell.) (3787. *Carolella vitellinana* (Zell.)) – 22A-VII-2009 1.

453. *Platphalonidia* prob. *lavana* Raz. (Not in Hodges) – 20-VI-2002 1.

456. *Aethes monera* Raz. ? (Not in Hodges) – 8-VII-2005 2.

458. *Aethes rutilana* (Hbn.) (3758. *Aethes rutilana* (Hbn.)) – 8-VII-2005 1.

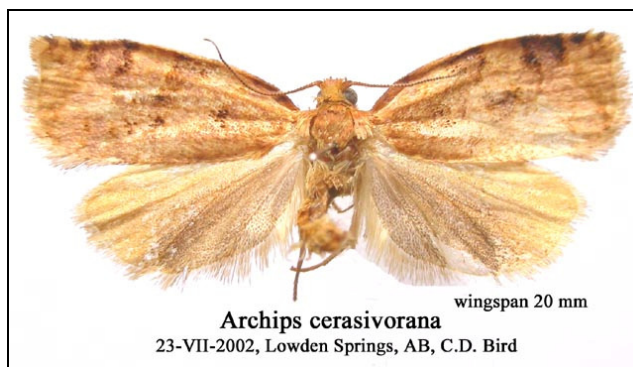
460. *Aethes smeathmanniana* (F.) (3755. *Aethes smeathmanniana* (F.)) (*Smeathmann's Aethes* Moth) – 9-VI-2005 1, 8-VII-2005 1, 28-VI-2006 3 and 28-VI-2008 1.

Tortricidae, Tortricinae, Archipini

472. *Pandemis canadana* Kft. (3595. *Pandemis canadana* Kft.) (Green Aspen Leaf-tier) – 23-VII-2002 1, 31-VII-2004 1 and 22C-VII-2009 1.

483. *Choristoneura rosaceana* (Harr.) (3635. *Choristoneura rosaceana* (Harr.)) (Oblique-banded Leafroller Moth) – 28-VI-2006 2, 22B-VII-2009 1 and 22C-VII-2009 1.

485. *Choristoneura conflictana* (Wlk.) (3637. *Choristoneura conflictana* (Wlk.)) (Large Aspen Tortrix) – 8-VII-2005 1.



498. *Archips cerasivorana* (Fitch) (3661. *Archips cerasivorana* (Fitch)) (Uglynest Caterpillar Moth) – 23-VII-2002 1.
504. *Aphelia alleniana* (Fern.) (3675. *Aphelia alleniana* (Fern.)) – 8-VII-2005 2, 28-VI-2008 3 and 22C-VII-2009 1.
508. *Clepsis persicana* (Fitch) (3682. *Clepsis persicana* (Fitch)) (White-triangle Tortrix Moth) – 28-VI-2006 1, 28-VI-2008 2 and 22A-VII-2009 1.
509. *Clepsis clemensiana* (Fern.) (3684. *Clepsis clemensiana* (Fern.)) (Clemen's Clepsid Moth) – 6-VII-2002 1, 23-VII-2002 1, 23-VIII-2002 1, 31-VII-2004 3, 11-VIII-2004 2, 8-VII-2005 2, 5-VIII-2005 2, 28-VI-2006 2, 28-VI-2008 3, 22A-VII-2009 1 and 22B-VII-2009 1.
512. *Clepsis peritana* (Clem.) (3688. *Ptycholoma peritana* (Clem.)) (Garden Tortrix Moth) – 14-VIII-2003 1, 31-VII-2004 1, 11-VIII-2004 1, 5-VIII-2005 1 and 22B-VII-2009 1.
515. *Xenotemna pallorana* (Rob.) (3693. *Xenotemna pallorana* (Rob.)) – 23-VII-2002 1.

Tortricidae, Tortricinae, Sparganothidini

516. *Sparganothus sulfureana* (Clem.) (3695. *Sparganothis sulfureana* (Clem.)) (Sparganothis Fruitworm Moth) – 5-VIII-2005 1, 22A-VII-2009 1 and 22B-VII-2009 1.
518. *Sparganothis xanthoides* (Wlk.) (3706. *Sparganothis xanthoides* (Wlk.)) (Mosaic Sparganothis Moth) – 23-VII-2002 5, 5-VIII-2005 1, 22A-VII-2009 1, 22C-VII-2009 1, 17B-VII-2010 2 and 17C-VII-2010 2.
520. *Sparganothis unifasciana* (Clem.) (3711. *Sparganothis unifasciana* (Clem.)) (One-lined Sparganothis Moth) – 8-VII-2005 2.
521. *Sparganothis vocaridorsana* Kft. (3712. *Sparganothis vocaridorsana* Kft.) – 2-VII-2002 1, 6-VII-2002 1, 15-VI-2003 1, 9-VI-2005 1 and 28-VI-2008 2.
522. *Sparganothis reticulatana* (Clem.) (3720. *Sparganothis reticulatana* (Clem.)) (Reticulated Fruitworm Moth) – 31-VII-2004 1.



Sparganothis directana, both images from the Moth Photographers Group web site.

- 522.2. *Sparganothis directana* (Wlk.) (3722. *Sparganothis directana* (Wlk.)) – 23-VII-2002 4 and 22C-VII-2009 1. Reported as new to Alberta in Pohl et al 2011.

Tortricidae, Olethreutinae

Olethreutines indet. – 31-VII-2005 4.

533. *Endothenia nubilana* (Clem.) (2743a. *Endothenia quadrimaculana nubilana* (Clem.)) – 23-VII-2002 2, 23-VIII-2002 1.

537. *Bactra furfurana* (Haw.) (2706. *Bactra furfurana* (Haw.)) – 23-VIII-2002 1.

538. *Bactra verutana* Zell. (2707. *Bactra verutana* Zell.) (Javelin Moth) – 6-VII-2002 1 and 8-VII-2005 1.

Bactra furfurana (Haw.) or *B. verutana* Zell. – 8-VII-2005 1 and 28-VI-2006 1.

547. *Apotomis removana* (Kft.) (2766. *Apotomis dextrana* McD.) (Green Aspen Leafroller) – 5-VIII-2005 1.

552. *Apotomis deceptana* (Kft.) (2765. *Apotomis deceptana* (Kft.)) (Deceptive Apotomis Moth) – 13-VI-2002 1.

557. *Orthotaenia undulana* (D. & S.) (2770. *Orthotaenia undulana* (D. & S.)) (Dusky Leafroller) – 8-VII-2005 1, 28-VI-2008 9 and 17B-VII-2010 3.

Olethreutes spp. – 23-VII-2002 2, 23-VIII-2002 1, 31-VII-2004 2, 5-VIII-2005 1, 28-VI-2008 1, 22A-VII-2009 1 and 22C-VII-2009 1. Many of the species in this genus are difficult to identify, require genitalic examination and/or are poorly known

561. *Olethreutes quadrifidus* (Zell.) (2794. *Olethreutes quadrifidus* (Zell.)) – 8-VII-2005 1.

584. *Hedya ochroleucana* (Frölich) (2861. *Hedya ochroleucana* (Frölich)) (Off-white Hedya Moth) – 28-VI-2006 3 and 22C-VII-2009 1.

585. *Hedya nubiferana* (Haw.) (2862. *Hedya nubiferana* (Haw.)) (Marbled Orchard Tortrix Moth) – 13-VI-2002 1, 23-VIII-2002 1 and 31-VII-2004 1.

Tortricidae, Olethreutinae, Enarmoniini

598. *Ancylis diminutana* (Haw.) 3379. *Ancylis diminutana* (Haw.) – 28-VIII-2006 1.

Tortricidae, Olethreutinae, Eucosmini

Phaneta sp. – 9-VII-2005 1.

626. *Phaneta marmontana* (Kft.) (2933. *Phaneta marmontana* (Kft.)) – 28-VI-2006 4.

628. *Phaneta parmatana* (Clem.) (2937. *Phaneta parmatana* (Clem.)) – 8-VII-2005 2.

641. *Phaneta fertoriana* (Heinr.) (2965. *Phaneta fertoriana* (Heinr.)) – 28-VIII-2006 4.
 643. *Phaneta indagatricana* (Heinr.) (2969. *Phaneta indagatricana* (Heinr.)) – 14-VIII-2003 1, 31-VII-2004 6, 11-VIII-2004 1, 5-VIII-2005 3, 17B-VII-2010 1 and 17C-VII-2010 1.
 645. *Phaneta striatana* (Clem.) (2973. *Phaneta striatana* (Clem.)) (Striated Phaneta Moth) – 8-VII-2005 1 and 28-VI-2008 1.
 648. *Phaneta pallidicostana* (Wlsm.) (2980. *Phaneta pallidicostana* (Wlsm.)) – 23-VII-2002 1, 11-VIII-2004 2, 8-VII-2005 6, 28-VI-2006 9, 28-VI-2008 4, 22A-VII-2009 1, 22B-VII-2009 1 and 22C-VII-2009 1.
 656. *Eucosma ridingsana* (Rob.) (3014. *Eucosma ridingsana* (Rob.)) (Riding's Eucosma Moth, Snakeweed Borer Moth) – 27A-VI-2003 1, 11-VIII-2004 4, 5-VIII-2005 8 and 28-VIII-2006 1.



660. *Eucosma serpentana* (Wlsm.) (3031. *Eucosma serpentana* (Wlsm.)) – 6-VII-2002 3, 23-VII-2002 4, 5-IX-2003 2, 31-VII-2004 1, 11-VIII-2004 4, 8-VII-2005 3, 5-VIII-2005 3 and 22C-VII-2009 1.
 662. *Eucosma morrisoni* (Wlsm.) (3035. *Eucosma morrisoni* (Wlsm.)) – 8-VII-2005 1.
 664. *Eucosma agricolana* (Wlsm.) (3037. *Eucosma agricolana* (Wlsm.)) – 6-VII-2002 5, 23-VII-2002 1, 15-VI-2003 1, 7-VII-2003 2, 31-VII-2004 1, 9-VI-2005 4, 8-VII-2005 3 and 28-VI-2008 1.
 Not in Pohl et al. (3039. near *Eucosma barbara* Miller) – 8-VII-2005 1.
 685. *Eucosma junciciliana* (Wlsm.) (3119. *Eucosma junciciliana* (Wlsm.)) – 31-VII-2004 1.
 692. *Eucosma cataclystiana* (Wlk.) (3142. *Eucosma cataclystiana* (Wlk.)) (Solidago Eucosma Moth) – 7-VII-2003 2, 8-VII-2005 2 and 22B-VII-2009 1.
 696. *Pelochrista scintillana* (Clem.) (3151a. *Pelochrista scintillana* (Clem.)) – 8-VII-2005 1.
 706. *Epiblema resumptana* (Wlk.) (3205. *Epiblema resumptana* (Wlk.)) – 13-VI-2002 1 and 8-VII-2005 1.
 709. *Notocelia culminana* (Wlsm.) (3211. *Notocelia culminana* (Wlsm.)) – 31-VII-2004 1 and 11-VIII-2004 1.
 710. *Gypsonoma fasciolana* (Clem.) (3223. *Gypsonoma fasciolana* (Clem.)) – 28-VI-2008 1.
 733. *Epinotia castaneana* (Wlsm.) (3288. *Epinotia castaneana* (Wlsm.)) – 28-VI-2006 1.

ALUCITIDAE – Many-plume Moths

792. *Alucita montana* Barnes & Lindsey (2313. *Alucita montana* Barnes & Lindsey) (The Six Plume Moth) – 13-VI-2002 2, 20-VI-2002 1, 1-V-2003 1, 15-VI-2003 1, 14-VIII-2003 2.

Bernard Landry and Jean-François Landry (2004) show that true *Alucita hexadactyla* does not occur in North America and that three different species occur in Alberta.

PTEROPHORIDAE – Plume Moths

Pterophoridae indet. – 9-VI-2005 2, 8-VII-2005 4, 5-VIII-2005 1 and 28-VI-2006 6. These are presently being examined by Doug Macaulay.

Pterophoridae, Pterophorinae, Platyptiliini

800. *Gillmeria pallidactyla* (Haw.) (6107. *Gillmeria pallidactyla* (Haw.)) – 9-VI-2005 1, 8-VII-2005 21 and 28-VI-2008 3.

802. *Stenoptilia coloradensis* Fern. (6149. *Stenoptilia coloradensis* Fern.) – 28-VI-2008 1.

Pterophoridae, Pterophorinae, Oidaematophorini

824. *Hellinsia pectodactylus* (Staud.) (6205. *Hellinsia pectodactylus* (Staudinger)) – 22C-VII-2009 1.

833. *Oidaematophorus mathewianus* (Zell.) (6166. *Oidaematophorus mathewianus* (Zell.)) (Matthew's Plume Moth) – 9-VI-2005 1, 5-VIII-2005 1 and 22C-VII-2009 1.

PYRALIDAE – Pyralid Moths

Pyralidae, Phycitinae, Phycitini

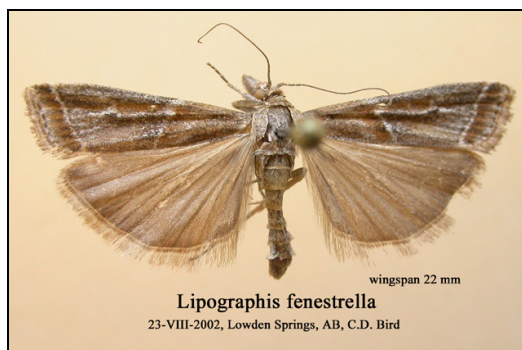
861. *Acrobasis tricolorella* Grt. (5655. *Acrobasis tricolorella* Grt.) (Tricolored Acrobasis Moth) – 28-VI-2006 1.

881. *Pima fulvirugella* Rag. (5751. *Pima fulvirugella* Rag.) – 22A-VII-2009 1 and 22C-VII-2009 1.

884. *Interjectio niviella* (Hulst) (5758. *Interjectio niviella* (Hulst)) – 22C-VII-2009 1.

893. *Sciota fernaldi* (Rag.) (5792. *Nephopterix fernaldi* (Rag.)) – 23-VII-2002 1.

896. *Telethusia ovalis* (Pack.) (5812. *Telethusia ovalis* (Pack.)) – 22B-VII-2009 1 and 22C-VII-2009 1.



915. *Lipographis fenestrella* (Pack.) (5886. *Lipographis fenestrella* (Pack.)) – 23-VIII-2002 3, 14-VIII-2003 6 and 5-VIII-2005 3. First determined by Brian Scholtens, who has retained one specimen. Reported as new to Alberta in Pohl et al. (2005).

918. *Hulstia undulatella* (Clem.) (5918. *Hulstia undulatella* (Clem.)) (Sugarbeet Crownborer Moth) – 23-VII-2002 1, 28-VI-2006 1, 22A-VII-2009 1, 22B-VII-2009 1 and 22C-VII-2009 1.

920. *Zophodia grossulariella* (Hbn.) 5968. *Zophodia convolutella* (Hbn.) (Gooseberry Fruitworm) – 1-V-2003 1.

928. *Phycitoides mucidella* (Rag.) (5946. *Phycitoides mucidella* (Rag.)) – 23-VII-2002 1.

CRAMBIDAE – Snout Moths

Crambidae, Scopariinae

934. *Gesneria centuriella* (D. & S.) (4703. *Gesneria centuriella* (D. & S.)) – 8-VII-2005 1.

935. *Scoparia biplagiata* Wlk. (4716. *Scoparia biplagiata* Wlk.) (Double-striped Scoparia Moth) – 20-VI-2002 1 and 5-VIII-2005 1.

Crambidae, Crambinae, Crambini

948. *Chrysoteuchia topiarius* (Zell.) (5391. *Chrysoteuchia topiaria* (Zell.)) (Cranberry Girdler or Topiary Grass-veneer Moth) – 6-VII-2002 8, 5-IX-2003 3, 8-VII-2005 4, 28-VI-2006 1, 28-VIII-2006 2 and 28-VI-2008 5, 22A-VII-2009 1, 22B-VII-2009 1 and 17A-VII-2010 1.

953. *Crambus perlella* (Scop.) (5343a. *Crambus perlellus innotatellus* Wlk.) – 33-VII-2002 3, 31-VII-2004 1, 11-VIII-2004 2, 8-VII-2005 1, 5-VIII-2005 1, 22A-VII-2009 1 and 22C-VII-2009 1.

955. *Crambus whitmerellus browni* Klotz (5345a. *Crambus whitmerellus browni* Klotz) – 2-VII-2002 1, 7-VII-2003 3, 8-VII-2005 1, 28-VI-2008 3, 22A-VII-2009 1, 22B-VII-2009 1, 22C-VII-2009 1 and 17B-VII-2010 1.

959. *Crambus ainsliellus* Klotz (5354. *Crambus ainsliellus* Klotz) – 28-VIII-2006 2.

967. *Agriphila ruricolella* (Zell.) (5399. *Agriphila ruricolella* (Zell.)) (Lesser Vagabond Sod Webworm Moth) – 23-VIII-2002 1, 31-VII-2004 4, 11-VIII-2004 1, 22A-VII-2009 1, 22B-VII-2009 1 and 22C-VII-2009 1.

968. *Agriphila vulgivagella* (Clem.) (5403. *Agriphila vulgivagella* (Clem.)) (Vagabond Crambus Moth) – 5-IX-2003 1 and 28-VIII-2006 8.

969. *Agriphila attenuatus* Grt. (5404. *Agriphila attenuata* (Grote)) – 5-IX-2003 1 and 28-VIII-2006 2. Not previously known from Alberta.

970. *Neodactria luteolella* Clem. (5379. *Neodactria luteolella* Clem.) (Mottled Grass-veneer Moth) – 8-VII-2005 3, 28-VI-2006 2, 28-VI-2008 2, 22A-VII-2009 1 and 22C-VII-2009 1.

Pediasia spp. – 23-VII-2002 5, 8-VII-2005 3, 5-VIII-2005 3, 22A-VII-2009 1 and 22C-VII-2009 1. These are females of either *Pediasia aridella edmontella* or *ericella*.

974. *Pediasia aridella edmontella* McD. (5410a. *Pediasia aridella edmontella* McD.) – 6-VII-2002 1, 23-VIII-2002 1, 11-VIII-2004 1, 5-VIII-2005 4, 22A-VII-2009 1 and 22B-VII-2009 1.

976. *Pediasia trisecta* (Wlk.) (5413. *Pediasia trisecta* (Wlk.)) (Sod Webworm Moth) – 23-VIII-2002 3, 14-VIII-2003 2, 11-VIII-2004 5 and 28-VIII-2006 1.

978. *Pediasia ericella* (B. & McD.) (5415. *Pediasia ericella* (B. & McD.)) – 23-VII-2002 1, 7-VII-2003 3, 5-VIII-2005 1, 17A-VII-2010 3, 17B-VII-2010 2 and 17C-VII-2010 1.

980. *Pediasia dorsipunctella* (Kft.) (5417. *Pediasia dorsipunctella* (Kft.)) – 6-VII-2002 1, 23-VII-2002 1, 23-VII-2002 2, 7-VII-2003 3, 31-VII-2004 2, 11-VIII-2004 5, 8-VII-2005 1 and 5-VIII-2005 1.

984. *Thaumtops fernaldella nortella* Kft. (5441a. *Thaumtops fernaldella nortella* Kft.) – 6-VII-2002 1, 23-VIII-2002 1, 7-VII-2003 1, 31-VII-2004 1, 11-VIII-2004 1, 22B-VII-2009 1 and 22C-VII-2009 1.

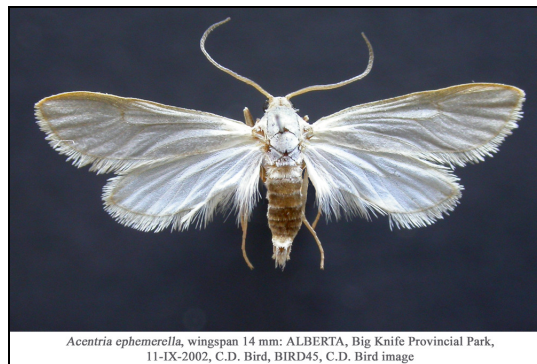
Crambidae, Schoenobiinae

Donacaula sp. – 22A-VII-2009 2 and 22B-VII-2009 1.

Not in Pohl et al. (5322. *Donacaula nitidella* (Dyar) – 8-VII-2005 1 and 28-VI-2006 5. Recent PhD thesis work by Edda Martinez-Caldez revealed that these two specimens, referred to as *Donacaula melinella* in the previous report, are actually *Donacaula nitidella*.

Donacaula n. sp. – 28-VI-2001 1. This specimen belongs to a species soon to be described by Edda Martinez-Caldez.

Crambidae, Acentropinae, Acentropini



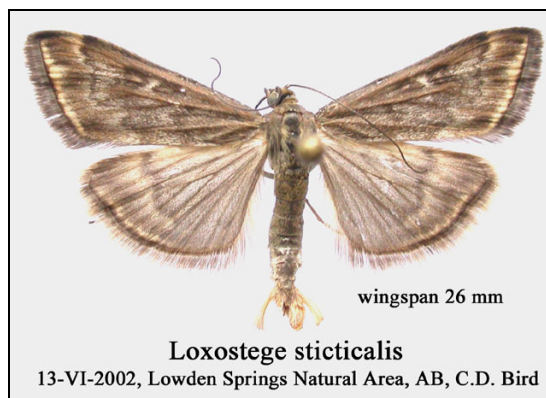
987. *Acentria ephemerella* (Denis & Schiffermüller) (5299. *Acentria nivea* (Olivier)) (Water Veneer Moth) – 23-VII-2002 1 and 22A-VII-2009 1. Reported as new to Alberta in Pohl et al (2005).

Crambidae, Acentropinae, Argyractini

991. *Petrophila kearfottalis* (B. & McD.) (4773. *Petrophila kearfottalis* (B. & McD.)) – 14-VIII-2003 1 and 22B-VII-2009 1.

Crambidae, Pyraustinae, Pyraustini

1018. *Sitochroa chortalis* (Grt.) (4987. *Sitochroa chortalis* (Grt.)) – 13-VI-2002 1, 6-VII-2002 2, 15-VI-2003 1, 8-VII-2005 1 and 28-VI-2006 1.



1021. *Loxostege sticticalis* (L.) (5004. *Loxostege sticticalis* (L.)) (Beet Webworm) – 13-VI-2002 4, 20-VI-2002 1, 23-VII-2002 1, 30-V-2003 1, 14-VIII-2003 3, 5-IX-2003 2 SR, 3-VI-2004 1 (2 SR), 31-VII-2004 1, 9-VI-2005 1, 28-VI-2006 2, 28-VIII-2006 2, 28-VI-2008 2, 22A-VII-2009 1 and 22C-VII-2009 1.
1025. *Loxostege cereralis* (Zell.) (5017. *Loxostege cereralis* (Zell.)) (Alfalfa Webworm Moth) – 23-VII-2002 1 and 8-VII-2005 1.
1027. *Pyrausta signatalis* (Wlk.) (5034. *Pyrausta signatalis* (Wlk.)) (Raspberry Pyrausta Moth) – 8-VII-2005 1.
1034. *Pyrausta unifascialis* (Pack.) (5068. *Pyrausta unifascialis* (Pack.)) (Pussytoes Pyrausta Moth) – 20-VII-2002 4, 8-VII-2005 2, 28-VI-2006 3, 28-VI-2008 4 and 17B-VII-2010 1.
1035. *Pyrausta fodinalis* (Led.) (5074. *Pyrausta fodinalis* (Led.)) – 9-VI-2005 1, 8-VII-2005 1 and 22B-VII-2009 1.

Crambidae, Pyraustinae, Spilomelini

1037. *Diastichtis ventralis* (G. & R.) (5255. *Diastichtis ventralis* (G. & R.)) – 20C-IV-2010 1.
1052. *Mecyna submedialis* (Grt.) (5135. *Mecyna submedialis* (Grt.)) (Orange-toned Mecyna Moth) – 6-VII-2002 4, 23-VII-2002 2, 23-VIII-2002 1, 31-VII-2004 1, 11-VIII-2004 1, 8-VII-2005 2, 5-VIII-2005 2, 28-VI-2006 1 and 22B-VII-2009 1.
1054. *Nomophila nearctica* Mun. (5156. *Nomophila nearctica* Mun.) (Celery Stalkworm or Lucerne Moth) – 14-VIII-2003 1, 5-VIII-2005 1 and 28-VIII-2006 1.

PAPILIONIDAE – Swallowtail Family

Papilionidae, Papilioninae, Papiliopini

1091. *Papilio canadensis* Roth. & Jord. (4176a. *Papilio glaucus canadensis* R. & J.) (Tiger Swallowtail) – 13-VI-2002 2 SR.

PIERIDAE – White and Sulphur Butterflies

Pieridae, Coliadinae

- 1095a. *Colias philodice eriphyle* Edw. (4209. *Colias philodice* Godt.) (Clouded Sulphur) – 13-VI-2002 3 SR.

LYCAENIDAE – Blues and Hairstreaks

Lycaenidae, Polyommatainae, Polyommataini

- 1156c. *Agriades glandon rustica* (Edw.) (4384d. *Plebejus rusticus rusticus* (Edw.)) (Arctic Blue) – 13-VI-2002 1.

NYMPHALIDAE - Fritillaries

1166. *Boloria bellona jenistai* Stall. & Turn. (4465b. *Boloria bellona jenistai* (D. Stallings & Turner)) (Meadow Fritillary) – 13-VI-2002 2 SR.

SATYRIDAE - Arctics

Satyridae, Satyrinae, Satyrini

- 1213a. *Coenonympha inornata benjamini* McD. (4583b. *Coenonympha inornata benjamini* McD.) (Ringlet) – 13-VI-2002 1.
 1228. *Oeneis alberta* (Elwes & Edw.) (4608. *Oeneis alberta* Elwes) (Alberta Arctic) – 13-VI-2002 1.

DREPANIDAE – Lutestrings and Hooktips

Drepanidae, Thyatirinae, Macrothyatirini

1233. *Euthyatira pudens* (Gn.) (6240. *Euthyatira pudens* (Gn.)) (Dogwood Thyatira) – 15C-V-2006 1.

Drepanidae, Thyatirinae, Ceranemotini

1234. *Ceranemota albertae* Clarke (6248. *Ceranemota albertae* Clarke) (Alberta Lutestring) – 28-VIII-2006 1.

Drepanidae, Drepaninae, Drepanini

1238. *Eudeilinea herminiata* (Gn.) (6253. *Eudeilinea herminiata* (Gn.)) (Northern Eudeilinea) – 17C-VII-2010 1.

GEOMETRIDAE – Inchworm or Geometrid Moths

Geometridae, Larentiinae, Cidariini

1253. *Eulithis testata* (L.) (7201. *Eulithis testata* (L.)) (Chevron Moth) – 5-VIII-2005 1.

Geometridae, Larentiinae, Hydriomenini

1271. *Hydriomena ruberata* (Frey.) (7254. *Hydriomena ruberata* (Freyer)) – 13-VI-2002 1.
 1273. *Hydriomena furcata* (Thunb.) (7257. *Hydriomena furcata* (Thunb.)) (Common Highflyer) – 31-VII-2004 1.

Geometridae, Larentiinae, Xanthorhoini

1308. *Epirrhoe alternata* (Müller) (7394. *Epirrhoe alternata* (Müller)) (White-banded Toothed Carpet) – 22C-VII-2009 1.
 1310. *Epirrhoe sperryi* Herb. (7396. *Epirrhoe sperryi* Herbulot) (Small Argent & Sable) – 13-VI-2002 1.

Geometridae, Larentiinae, Eupitheciini

1345. *Eupithecia anticaria* Wlk. (7594. *Eupithecia anticaria* Wlk.) – 20-VI-2002 2, 2-VII-2002 1.
 1370. *Eupithecia regina* Tayl. (7483. *Eupithecia regina* Tayl.) – 6-VII-2002 1.

Geometridae, Sterrhinae, Scopulini

1388. *Scopula frigidaria* Mösch. (7166. *Scopula frigidaria* Mösch.) (Frigid Wave) – 8-VII-2005 3.
 1390. *Scopula inductata* (Gn.) (7169. *Scopula inductata* (Gn.)) (Soft-lined Wave) – 6-VII-2002 1,
 23-VII-2002 2, 31-VII-2004 2, 28-VI-2006 2, 28-VIII-2006 1, 28-VI-2008 2, 22A-VII-2009 1,
 22B-VII-2009 1 and 22C-VII-2009 1.

Geometridae, Geometrinae, Nemoriini

1394. *Nemoria unitaria* (Pack.) (7018. *Nemoria unitaria* (Pack.)) (Single-lined Emerald) – 22A-VII-2009 1.

Geometridae, Geometrinae, Synchronini

1399. *Synchlora aerata* (F.) (7058. *Synchlora aerata* (F.)) (Wavy-lined Emerald) – 8-VII-2005 1.

Geometridae, Ennomiinae, Macariini

1410. *Speranza alboflava* (Ferg.) (6283. *Itame sulphurea* (Pack.)) (Spotted Sulphur) – 22C-VII-2009 1.
 1414. *Speranza bitactata* (Wlk.) (6304. *Itame bitactata* (Wlk.)) – 11-VIII-2004 1 and 5-VIII-2005 1.
 1416. *Speranza occiduaria* (Pack.) (6279. *Itame occiduaria* (Pack.)) (Western Sulphur) – 7-VII-2003 1, 11-VIII-2004 2, 8-VII-2005 1 and 5-VIII-2005 1.
 1421. *Speranza loricaria* (Evers.) (6290. *Itame loricaria* (Evers.)) (False Bruce Spanworm Moth) – 6-VII-2002 1 and 17A-VII-2010 1.
 1433. *Digrammia denticulata* Grt. (6373. *Semiothisa denticulata* Grt. (Striped Granite) – 20-VI-2002 1, 31-VII-2004 1, 28-VI-2008 1 and 22C-VII-2009 1.
 1438. *Digrammia mellistrigata* (Grt.) (6397. *Semiothisa mellistrigata* (Grt.)) – 31-VII-2004 1 and 8-VII-2005 1.
 1440. *Digrammia neptaria* (Gn.) (6396. *Semiothisa neptaria* (Gn.)) – 3-VI-2004 1 and 28-VI-2006 1.

Geometridae, Ennomiinae, Bistonini

1461. *Lycia ursaria* (Wlk.) (6651. *Lycia ursaria* (Wlk.)) (The Bear or the Stout Spanworm) – 1-V-2003 1.

Geometridae, Ennomiinae, Caberini

1472. *Cabera erythemaria* Gn. (6677. *Cabera erythemaria* Gn.) (Yellow-dusted Cream Moth) – 9-VI-2005 1, 28-VI-2006 1 and 28-VI-2008 1.
 1473. *Cabera variolaria* Gn. (6678. *Cabera variolaria* Gn.) (Pale-striped Willow Spanworm) – 8-VII-2005 1, 28-VI-2006 1 and 22A-VII-2009 1.

Geometridae, Ennomiinae, Angeronini

1480. *Aspitates aberrata* (Hy. Edw.) 6715. *Aspitates aberratus* (Hy. Edw.) – 13-VI-2002 3, 20-VI-2002 2, 15-VI-2003 1, 3-VI-2004 2, 9-VI-2005 1, 8-VII-2005 2, 28-VI-2006 1 and 28-VI-2008 2.
 1482. *Euchlaena obtusaria* (Hbn.) (6726. *Euchlaena obtusaria* (Hbn.)) (Obtuse Euchlaena) – 6-VII-2002 1 and 28-VI-2006 1.

1483. *Euchlaena johnsonaria* (Fitch) (6729. *Euchlaena johnsonaria* (Fitch) (Johnson's *Euchlaena*) – 23-VII-2002 1 and 8-VII-2005 2.
1486. *Euchlaena tigrinaria* (Gn.) (6737. *Euchlaena tigrinaria* (Gn.)) (Mottled *Euchlaena* or Variable Thorn) – 28-VI-2006 1.
1488. *Xanthotype sospeta* (Drury) (6743. *Xanthotype sospeta* (Drury)) (Crocus Geometer) – 28-VI-2006 1.

Geometridae, Ennomiinae, Azelini

1490. *Pero morrisonaria* (Hy. Edw.) (6755. *Pero morrisonaria* (Hy. Edw.)) (Lesser Umber or Morrison's *Pero*) – 15-VI-2003 1.

Geometridae, Ennomiinae, Anagogini

1506. *Metarranthis duaria* (Gn.) (6822. *Metarranthis duaria* (Gn.)) (Ruddy *Metarranthis*) – 28-VI-2008 1.

Geometridae, Ennomiinae, Ourapterygini

1522. *Sicya macularia* (Harr.) 6912. *Sicya macularia* (Harr.) (Pink-bordered Yellow) – 22A-VII-2009 1.
1524. *Synaxis jubararia* (Hulst) (6954. *Synaxis jubararia* (Hulst)) (October Thorn) – 5-IX-2003 1.
1528. *Tetracis crocallata* Gn. (6963. *Tetracis crocallata* Gn.) (Yellow Slant-line) – 8-VII-2005 1.
1531. *Prochoerhodes lineola* (Göze) (6982. *Prochoerhodes transversata* (Drury)) (Large Maple Spanworm) – 14-VIII-2003 1.

LASIOCAMPIDAE – Tent Caterpillar and Lappet Moths

Lasiocampidae, Lasiocampinae, Gastropachini

1536. *Phyllodesma americana* (Harr.) (7687. *Phyllodesma americana* (Harr.)) (Lappet Moth) – 12B-V-2010 1.

Lasiocampidae, Lasiocampinae, Lasiocampini

1537. *Malacosoma disstria* Hbn. (7698. *Malacosoma disstria* Hbn.) (Forest Tent Caterpillar) – 8-VII-2005 1.
1538. *Malacosoma californica* (Pack.) (7702. *Malacosoma californicum* (Pack.)) (Western Tent Caterpillar) – 31-VII-2004 1 and 28-VI-2006 1.

SATURNIIDAE – Giant Silkworm Moths

Saturniidae, Saturniinae, Saturniini

1542. *Antheraea polyphemus* (Cram.) (7757. *Antheraea polyphemus* (Cram.)) (Polyphemus Moth) – 13-VI-2002 1, 15-VI-2003 1.

Saturniidae, Saturniinae, Attacini

1544. *Hyalophora gloveri* (Stkr.) (7769. *Hyalophora gloveri* (Stkr.)) (Glover's Silk-moth) – 8-V-2005 1, 15B-V-2006 1 and 15C-V-2006 1.

SPHINGIDAE – Sphinx Moths

Sphingidae, Sphinginae, Sphingini

1548. *Sphinx vashti* Stkr. (7803. *Sphinx vashti* Stkr.) (Vashti or Snowberry Sphinx) – 13-VI-2002 1, 20-VI-2002 1 SR, 15-VI-2003 1, 30-V-2003 1, 3-VI-2004 4 SR, 9-VI-2005 2, 28-VI-2008 2, 22B-VII-2009 1 and 17C-VII-2010 1.

Sphingidae, Smerinthinae, Smerinthini

1553. *Smerinthus jamaicensis* (Drury) (7821. *Smerinthus jamaicensis* (Drury)) (Twin Spotted Sphinx) – 13-VI-2002 1, 20-VI-2002 5 SR, 2-VII-2002 3 SR, 6-VII-2002 2 SR, 3-VI-2004 1 SR, 28-VI-2008 1, 22A-VII-2009 1, 22B-VII-2009 1 and 22C-VII-2009 1.
1554. *Smerinthus cerisyi* Kby. (7822. *Smerinthus cerisyi* Kby.) (One-eyed Sphinx) – 13-VI-2002 1, 20-VI-2002 2 SR, 2-VII-2002 1 SR, 6-VII-2002 1 SR, 7-VII-2003 1 SR, 3-VI-2004 1 SR, 9-VI-2005 1, 28-VI-2008 1, 22A-VII-2009 1 and 22B-VII-2009 1.
1556. *Paonias excaecatus* (J.E. Sm.) (7824. *Paonias excaecatus* (J.E. Smith)) (Blinded Sphinx) – 28-VI-2008 1.
1558. *Pachysphinx modesta* (Harr.) (7828. *Pachysphinx modesta* (Harr.)) (Great Poplar Sphinx) – 20-VI-2002 1 SR.

Sphingidae, Macroglossinae, Macroglossini

1570. *Hyles gallii* (Rott.) (7893. *Hyles gallii* (Rottemburg)) (Galium Sphinx) – 15-VI-2003 1 and 9-VI-2005 1.

NOTODONTIDAE – Prominent Moths

Notodontidae, Pygaerinae

1572. *Clostera albosigma* Fitch (7895. *Clostera albosigma* Fitch) (Sigmoid Prominent) – 5-VIII-2005 1.
1575. *Clostera apicalis* (Wlk.) (7901. *Clostera apicalis* (Wlk.)) (Common Chocolate-tip or Red-marked Tentmaker) – 13-VI-2002 1 and 24-V-2009 1.

Notodontidae, Notodontinae, Notodontini

1579. *Notodonta torva* Hbn. (7928. *Notodonta simplaria* Graef) (Simple Prominent) – 11-VIII-2004 1 and 18-V-2005 1.

Notodontidae, Notodontinae, Dicranurini

1580. *Gluphisia septentrionis* Wlk. (7931. *Gluphisia septentrionis* Wlk.) (Small Pebble or Common Gluphisia) – 13-VI-2002 1, 20-VI-2002 1, 9-VI-2005 1 and 28-VI-2006 1.
1585. *Furcula occidentalis* (Lint.) (7939. *Furcula occidentalis* (Lint.)) (Willow Kitten) – 2-VII-2002 1 and 8-VII-2005 1.

1587. *Furcula modesta* (Huds.) (7941. *Furcula modesta* (Huds.)) (Modest Kitten) – 28-VI-2008 1.

EREBIDAE – Quadrifine Noctuoids

Erebidae, Lymantriinae, Orgyiini

1600. *Dasychira vagans* (B. & McD.) (8294. *Dasychira vagans* (B. & McD.)) (Variable Tussock Moth) – 2-VII-2002 1, 8-VII-2005 1 and 28-VI-2006 1.

Erebidae, Arctiinae, Lithosiini

1606. *Hypoprepia miniata* (Kby.) (8089. *Hypoprepia miniata* (Kby.)) (Scarlet-winged Lichen Moth) – 23-VII-2002 1, 22A-VII-2009 1 and 22B-VII-2009 1.

1610. *Crambidia casta* (Pack.) (8051. *Crambidia casta* (Pack.)) (Pearly-winged Lichen Moth) – 23-VIII-2002 1, 14-VIII-2003 2 and 28-VIII-2006 1.

Erebidae, Arctiinae, Arctiini

1613. *Virbia ferruginosa* (Wlk.) (8123. *Holomelina ferruginosa* (Wlk.)) (Rusty Holomelina) – 8-VII-2005 1 and 28-VI-2006 1.

1619. *Grammia virgo* (L.) (8197. *Grammia virgo* (L.)) (Virgin Tiger Moth) – 8-VII-2005 1, 28-VI-2006 1, 28-VI-2008 1, 22B-VII-2009 1, 22C-VII-2009 1 and 17C-VII-2010 1.

1620. *Grammia parthenice* (W. Kby.) (8196. *Grammia parthenice* (W. Kirby)) (Parthenice Tiger Moth) – 23-VII-2002 2, 23-VIII-2002 1, 31-VII-2004 1, 8-VII-2005 1, 5-VIII-2005 1, 22A-VII-2009 1, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1 and 17C-VII-2010 1.

1621. *Grammia virguncula* (W. Kby.) (8175. *Grammia virguncula* (W. Kby.)) (Little Virgin Moth) – 23-VII-2002 3, 8-VII-2005 3, 28-VI-2006 1, 28-VI-2008 3, 22A-VII-2009 1, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 1.

1625. *Grammia williamsii* (Dodge) (8186. *Grammia williamsii* (Dodge)) (William's Tiger Moth) – 2-VII-2002 1, 7-VII-2003 2, 28-VI-2006 1 and 28-VI-2008 1.

1631. *Platarctia parthenos* (Harr.) (8162. *Platarctia parthenos* (Harr.)) (St. Lawrence Tiger Moth) – 20-VI-2002 2 SR and 28-VI-2008 1.

1633. *Phragmatobia fuliginosa* (L.) (8156. *Phragmatobia fuliginosa* (L.)) – 15C-V-2006 2.

1635. *Phragmatobia assimilans* (Wlk.) (8158. *Phragmatobia assimilans* (Wlk.)) (Large Ruby Tiger Moth) – 20-VI-2002 1 and 24-V-2009 1.

1636. *Pyrrharctia isabella* (J.E. Sm.) (8129. *Pyrrharctia isabella* (J. E. Smith)) (Isabella Tiger Moth or Banded Woollybear Moth) – 20-VI-2002 1 and 22B-VII-2009 1.

1637. *Estigmene acraea* (Drury) (8131. *Estigmene acraea* (Drury)) (Saltmarsh Tiger Moth) – 13-VI-2002 5 and 28-VI-2008 1.

1641. *Spilosoma virginica* (F.) (8137. *Spilosoma virginica* (F.)) (Virginian Tiger Moth or Yellow Woollybear Moth) – 6-VII-2002 1 and 28-VI-2008 1.

1653. *Cisseps fulvicollis* (Hbn.) (8267. *Cisseps fulvicollis* (Hbn.)) (Yellow-collared Scape Moth) – 8-VII-2005 1, 22A-VII-2009 1 and 22B-VII-2009 1.

Erebidae, Herminiinae

1666. *Phalaenostola metonalis* (Wlk.) (8362. *Phalaenostola metonalis* (Wlk.)) (Pale Phalaenostola or Tufted Snout) – 23-VII-2002 1, 8-VII-2005 2 and 22C-VII-2009 1.

Erebidae, Hypheninae

1677. *Hypena humuli* Harr. (8461. *Hypena humuli* Harr.) (Hop-vine Snout Moth) – 12A-V-2010 1.

Erebidae, Scoliopteryginae, Scoliopterygini

1680. *Scoliopteryx libatrix* (L.) (8555. *Scoliopteryx libatrix* (L.)) (The Herald) – 13-VI-2002 1.

Erebidae, Erebinae, Eucliniini

1700. *Caenurgina crassiuscula* (Haw.) (8738. *Caenurgina crassiuscula* (Haw.)) (Clover Looper Moth) – 13-VI-2002 4, 23-VII-2002 2, 15-VI-2003 1, 22B-VII-2009 1 and 22C-VII-2009 1.

1701. *Caenurgina erechtea* (Cram.) (8739. *Caenurgina erechtea* (Cram.)) (Forage Looper Moth) – 31-VII-2004 2 and 28-VIII-2006 1.

NOLIDAE**Nolidae, Nolinae**

1721. *Nola cilicoides* (Grt.) (8990. *Nola cilicoides* (Grt.)) (Bluffy-patched Nola) – 23-VII-2002 1, 22B-VII-2009 1 and 22C-VII-2009 1.

NOCTUIDAE – Noctuid Moths**Noctuidae, Plusiinae, Plusiini**

1727. *Diachrysia aeroides* (Grt.) (8896. *Diachrysia aeroides* (Grt.)) (Dark-spotted Looper Moth) – 23-VII-2002 1 and 8-VII-2005 1.

1738. *Autographa mappa* (G. & R.) (8912. *Autographa mappa* (G. & R.)) (Wavy Chestnut Y) – 28-VI-2008 1.

1740. *Autographa californica* (Spey.) (8914. *Autographa californica* (Speyer)) – 7-VII-2003 2 SR.

1744. *Autographa ampla* (Wlk.) (8923. *Autographa ampla* (Wlk.)) (Broken-banded Y, Large Looper Moth) – 28-VI-2006 1.

1745. *Anagrapha falcifera* (Kby.) (8924. *Anagrapha falcifera* (Kby.)) (Celery Looper) – 13-VI-2002 1, 15-VI-2003 1, 5-IX-2003 1, 9-VI-2005 1 and 28-VI-2008 1.

1763. *Plusia putnami* (Grt.) (8950. *Plusia putnami* Grt.) (Putnam's Looper Moth) – 8-VII-2005 1, 28-VI-2006 1 and 28-VI-2008 1.

1765. *Plusia venusta* Wlk.) (8953. *Plusia venusta* Wlk.) (White-streaked Looper Moth) – 23-VII-2002 1, 28-VI-2006 1, 22A-VII-2009 1 and 22C-VII-2009 1.

Noctuidae, Eustrotiinae

1767. *Protodeltote albidula* (Gn.) (9048. *Lithacodia albidula* (Gn.)) (Common Midget) – 20-VI-2002 1, 22B-VII-2009 1, 22C-VII-2009 1 and 17B-VII-2010 1.

Noctuidae, Acontiinae, Acontiini

1770. *Ponometia tortricina* (Zell.) (9101. *Tarachidia tortricina* (Zell.)) (Olive-shaded Bird-dropping Moth) – 13-VI-2002 1, 6-VII-2002 1, 28-VI-2006 1 and 28-VI-2008 2.

1773. *Tarache angustipennis* (Grt.) (9111. *Therasea angustipennis* (Grt.) and 9112. *Therasea flavicosta* (Sm.)) (Narrow-winged Midget) – 3-VI-2004 1.

Noctuidae, Dilobinae

1778. *Raphia frater* Grt. (9193. *Raphia frater* Grt.) (The Brother) – 13-VI-2002 1.

Noctuidae, Acronictinae

1801. *Simyra insularis* (H.-S.) (9280. *Simyra henrici* (Grt.)) (Henry's Marsh Moth) – 15-VI-2003 1 and 28-VI-2008 2.

Noctuidae, Cuculliinae

1808. *Cucullia intermedia* Spey. (10194. *Cucullia intermedia* Speyer) (Goldenrod Cutworm Moth or Intermediate Falconer) – 13-VI-2002 3, 18-V-2005 1, 9-VI-2005 1, 8-VII-2005 1, 15C-V-2006 1, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 1.

Noctuidae, Oncocnemidinae

1828. *Pleromelloida conserta* (Grt.) (10028. *Pleromelloida obliquata* (Sm.)) (Oblique Rover) – 1-V-2003 1.

1836. *Sympistis stabilis* Sm. (10062. *Homohadena stabilis* Sm.) (Brown Sallow) – 14-VIII-2004 1, 21-VII-2004 1, 11-VIII-2004 1 and 5-VIII-2005 1.

Noctuidae, Heliiothinae

1875. *Heliothis phloxiphaga* G. & R. (11072. *Heliothis phloxiphagus* Grt. & Rob.) (Spotted Buff Gem or Spotted Straw) – 6-VII-2002 1.

1877. *Heliothis ononis* (F.) (11077. *Heliothis ononis* (F.)) (Flax Bollworm) – 22B-VII-2009 1.

1883. *Schinia meadi* (Grt.) (11175. *Schinia meadi* (Grt.)) (Mead's Flower Moth) – 23-VII-2002 3.

Noctuidae, Noctuinae, Caradrini

1905. *Caradrina montana* (Bremer) (9656. *Platyperigea extima* (Wlk.)) (Civil Rustic) – 6-VII-2002 1 SR, 23-VII-2002 4 SR, 14-VIII-2003 1, 5-IX-2003 5 and 5-IX-2005 5 SR.

1906. *Proxenus miranda* (Grt.) (9647. *Proxenus miranda* (Grt.)) (Glistening Rustic) – 20-VI-2002 1, 28-VI-2008 2 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 2.

Noctuidae, Noctuinae, Apameini

1918. *Apamea sordens* (Hufn.) (9364. *Apamea finitima* Gn.) (Bordered Apamea) – 13-VI-2002 1, 20-VI-2002 1 and 9-VI-2005 1 and 28-VI-2006 1.

1924. *Apamea commoda* (Wlk.) (9359. *Apamea commoda* (Wlk.)) (Southern Quaker) – 2-VII-2002 2, 6-VII-2002 1, 23-VII-2002 1, 7-VII-2003 1, 28-VI-2008 2, 22B-VII-2009 1 and 17A-VII-2010 1.

1927. *Apamea amputatrix* (Fitch) (9348. *Apamea amputatrix* (Fitch)) (Northern Quaker or Dusky Sallow) – 8-VII-2005 1.

1930. *Apamea scoparia* Mik., Must. & Laf. (9365. *Agroperina lateritia* (Hufn.)) (Red-winged Quaker) – 8-VII-2005 1, 28-VI-2008 1 and 17B-VII-2010 2.
1931. *Apamea cogitata* (Sm.) (9367a. *Agroperina dubitans cogitata* (Sm.)) (Ruby Quaker) – 8-VII-2005 1, 22B-VII-2009 1, 17A-VII-2010 1 and 17B-VII-2010 1.
1932. *Apamea inficita* (Wlk.) (9369. *Apamea inficita* (Wlk.)) (Inficita Quaker) – 23-VII-2002 2, 11-VIII-2004 1, 5-VIII-2005 1 and 22A-VII-2009 1.
1933. *Apamea devastator* (Brace) (9382. *Crymodes devastator* (Brace)) (Glassy Cutworm Moth) – 23-VIII-2002 1, 7-VII-2003 1, 5-IX-2003 1, 3-VII-2004 1, 11-VIII-2004 3, 8-VII-2005 1, 5-VIII-2005 1, 22A-VII-2009 1 and 22C-VII-2009 1.
1936. *Apamea niveivenosa* (Grt.) (9374. *Apamea niveivenosa* (Grt.)) (White-veined Quaker) – 11-VIII-2004 1 and 22A-VII-2009 1.
1938. *Resapamea passer* (Gn.) (9391. *Luperina passer* (Gn.)) (Dock Rustic) – 11-VIII-2004 1 and 17A-VII-2010 1.
1943. *Oligia egens* (Wlk.) (9417. *Oligia egens* (Wlk.)) (Neomogen's Quaker) – 23-VIII-2002 1 and 5-VIII-2005 1.
1946. *Neoligia subjuncta* (Sm.) (9412. *Oligia laevigata* (Sm.)) (Short-cloaked Quaker) – 8-VII-2005 1.
1950. *Photedes includens* (Wlk.) (9434. *Spartiniphaga includens* (Wlk.)) (Silver-C Borer) – 28-VIII-2006 1.
1956. *Hypocoena rufostrigata* (Pack.) (9440. *Chortodes rufostrigata* (Pack.)) (Brown-streaked Rustic) – 23-VII-2002 1, 23-VIII-2002 1.
1959. *Capsula subflava* (Grt.) (9450. *Archanara subflava* (Grt.)) (Subflava Sedge Borer) – 28-VIII-2006 1.
1960. *Helotropha reniformis* (Grt.) (9453. *Celaena reniformis* (Grt.)) (Kidney-spotted Rustic) – 14-VIII-2003 1.

Noctuidae, Noctuinae, Arzamini

1971. *Bellura obliqua* (Wlk.) (9525. *Bellura obliqua* (Wlk.)) (Cattail Borer Moth) – 13-VI-2002 1, 3-VI-2004 1 (5 SR).

Noctuidae, Noctuinae, Xylenini

1981. *Homoglaea hircina* Morr. (9881. *Homoglaea hircina* Morr.) (Goat Sallow) – 1-V-2003 1 and 20C-IV-2010 1.
1983. *Litholomia napaea* (Morr.) (9884. *Litholomia napaea* (Morr.)) (Dark Grey Peasant) – 1-V-2003 1, 20B-IV-2010 1, 20C-IV-2010 1 and 12B-V-2010 1.
1989. *Lithophane georgii* Grt. (9913. *Lithophane georgii* Grt.) (Large Grey Pinion) – 5-IX-2003 1.
1996. *Eupsilia tristigmata* (Grt.) (9935. *Eupsilia tristigmata* (Grt.)) (Three-spotted Sallow) – 1-V-2003 1.
2003. *Anathix puta* (G. & R.) (9962. *Anathix puta* (G. & R.)) – 14-VIII-2003 1, 31-VII-2004 1 and 11-VIII-2004 1.
2009. *Brachylomia algens* (Grt.) (9998. *Brachylomia algens* (Grt.)) (Willow Peasant) – 28-VIII-2006 2.
2012. *Parastichtis suspecta* (Hbn.) (9431. *Parastichtis suspecta* (Hbn.)) (Mottled Quaker) – 23-VIII-2002 1.
2020. *Enargia infumata* (Grt.) (9550. *Enargia infumata* (Grt.)) (Lesser Angle-striped Sallow) – 8-VII-2005 1.

Noctuidae, Noctuinae, Orthosiini

2042. *Stretchia plusiaeformis* Hy. Edw. (10471. *Stretchia plusiaeformis* Hy. Edw.) (Grey Spectacles) – 1-V-2003 1, 20A-IV-2010 1, 20B-IV-2010 1 and 20C-IV-2010 1.
2045. *Orthosia segregata* (Sm.) (10493. *Orthosia segregata* (Sm.)) (Segregate Penman) – 1-V-2003 3, 20A-IV-2010 2, 20B-IV-2010 1 and 12B-V-2010 2. *Orthosia segregata* f. *negussa* Sm. – 1-V-2003 4.
2049. *Egira dolosa* (Grt.) (10513. *Egira dolosa* (Grt.)) (Greater Black-letter Dart) – 1-V-2003 1.

Noctuidae, Noctuinae, Tholerini

2053. *Nephelodes minians* Gn. (10524. *Nephelodes minians* Gn.) (Shaded Umber or Bronzed Cutworm Moth) – 23-VIII-2002 1, 14-VIII-2003 2, 11-VIII-2004 1, 5-VIII-2005 1 and 28-VIII-2006 1.

Noctuidae, Noctuinae, Hadenini

2054. *Escaria homogena* McD. (9832. *Escaria homogena* McD.) – 23-VII-2002 1, 15-VI-2003 1, 8-VII-2005 1 and 5-VIII-2005 2. A seldom encountered species. Gary Anweiler comments “We have records from Lethbridge and the Wainwright Ecological Reserve”.
2059. *Anarta mutata* (Dod) (10223. *Discestra trifolii* (Hufn.)) (Clover Cutworm or The Nutmeg) – 15-VI-2003 3, 14-VIII-2003 1, 3-VI-2004 1, 28-VIII-2006 1 and 22B-VII-2009 1.
2064. *Anarta farnhami* (Grt.) (10232. *Discestra farnhami* (Grt.)) (Farnham’s *Discestra*) – 13-VI-2002 2, 20-VI-2002 1, 14-VI-2003 2, 3-VI-2004 2, 18-V-2005 2 and 19-VI-2005 2.
2065. *Anarta crotchii* (Grt.) (10233. *Discestra crotchii* (Grt.)) – 30-V-2003 1.
2072. *Polia discalis* (Grt.) (10273. *Polia discalis* (Grt.)) (Large Gray *Polia*) – 28-VI-2006 1.
2075. *Polia imbrifera* (Gn.) (10276. *Polia imbrifera* (Gn.)) (Cloudy Arches) – 7-VII-2003 1, 8-VII-2005 1, 28-VI-2006 1, 22B-VII-2009 1, 22C-VII-2009 1 and 17B-VII-2010 2.
2079. *Polia purpurissata* (Grt.) (10280. *Polia purpurissata* (Grt.)) (Purple Arches) – 23-VII-2002 1, 31-VII-2004 1, 11-VIII-2004 3, 5-VIII-2005 1, 22C-VII-2009 1 and 17A-VII-2010 1.
2081. *Lacanobia nevadae* (Grt.) (10296. *Lacanobia nevadae* (Grt.)) (Nevada Arches) – 22A-VII-2009 1.
2082. *Lacanobia atlantica* (Grt.) (10297. *Lacanobia atlantica* (Grt.)) (Atlanta Arches) – 13-VI-2002 4, 20-VI-2002 3, 2-VII-2002 2, 12B-VII-2003 1, 3-VI-2004 1, 9-VI-2005 1, 28-VI-2006 1, 28-VI-2008 1, 22A-VII-2009 1, 22B-VII-2009 1 17B-VII-2010 1 and 17C-VII-2010 1.
2083. *Lacanobia radix* (Wlk.) (10298. *Lacanobia radix* (Wlk.)) (Garden Arches) – 3-VI-2004 1 and 9-VI-2005 1.
2094. *Trichordestra dodii* (Sm.) (10305. *Trichordestra dodii* (Sm.)) (Dod’s Arches) – 13-VI-2002 2, 20-VI-2002 1, 2-VII-2002 1, 6-VII-2002 1.
2095. *Trichordestra lilacina* (Harv.) (10307. *Trichordestra lilacina* (Harv.)) (Lilac Arches) – 2-VII-2002 2, 7-VII-2003 1, 31-VII-2004 1, 8-VII-2005 2 and 17C-VII-2010 1.
2096. *Trichordestra liquida* (Grt.) (10308. *Trichordestra liquida* (Grt.)) (Liquid Arches) – 13-VI-2002 4, 20-VI-2002 4, 23-VII-2002 1, 15-VI-2003 1, 3-VI-2004 1, 9-VI-2005 3 and 28-VI-2008 2.
2102. *Mamestra configurata* (Wlk.) (10271. *Mamestra configurata* (Wlk.)) (Bertha Armyworm) – 28-VI-2006 1.
2107. *Sideridis rosea* (Herv.) (10265. *Sideridis rosea* (Harv.)) (Rosy Penman) – 13-VI-2002 2, 20-VI-2002 1 and 9-VI-2005 1 and 28-VI-2008 1.

Noctuidae, Noctuinae, Leucaniini

2112. *Faronta diffusa* (Wlk.) (10431. *Faronta diffusa* (Wlk.)) (Cloudy Wainscot or Wheat-head Armyworm Moth) – 9-VI-2005 2, 8-VII-2005 1, 28-VI-2006 1 and 28-VI-2008 1.
2114. *Mythimna oxygala* (Grt.) (10436. *Aletia oxygala* (Grt.)) (Lesser Wainscot) – 23-VII-2002 1, 31-VII-2004 1, 11-VIII-2004 2, 28-VI-2006 1, 22A-VII-2009 1, 22B-VII-2009 1 and 22C-VII-2009 1.
2117. *Leucania anteoclarata* Sm. (10442. *Leucania anteoclarata* Sm.) – 22B-VII-2009 1 and 22C-VII-2009 1.
2118. *Leucania multilinea* Wlk. (10446. *Leucania multilinea* Wlk.) (Many-lined Wainscot) – 17A-VII-2010 1.
2119. *Leucania commoides* Gn. (10447. *Leucania commoides* Gn.) (Comma Wainscot) – 31-VII-2004 1, 11-VIII-2004 1, 8-VII-2005 1, 5-VIII-2005 1, 22A-VII-2009 1, 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 2.
2120. *Leucania insueta* Gn. (10449. *Leucania insueta* Gn.) (Heterodox Wainscot) – 20-VI-2002 2, 15-VI-2003 1, 7-VII-2003 1, 9-VI-2005 2 and 28-VI-2008 2.

Noctuidae, Noctuinae, Eriopygini

2142. *Lacinipolia meditata* (Grt.) (10368. *Lacinipolia meditata* (Grt.)) (The Thinker or Pink-backed Cutworm Moth) – 31-VII-2004 4, 11-VIII-2004 1.
2143. *Lacinipolia lustralis* (Grt.) (10370. *Lacinipolia lustralis* (Grt.)) (Lustrous Arches) – 28-VI-2008 1, 17A-VII-2010 1 and 17C-VII-2010 2.
2145. *Lacinipolia anguina* (Grt.) (10372. *Lacinipolia anguina* (Grt.)) (Snaky Arches) – 17A-VII-2010 1 and 17B-VII-2010 2.
2148. *Lacinipolia vicina* (Grt.) (10394. *Lacinipolia vicina* (Grt.)) (Small Gray Arches) – 23-VII-2002 1 and 28-VI-2006 1.
2150. *Lacinipolia renigera* (Steph.) (10397. *Lacinipolia renigera* (Steph.)) (Kidney-spotted Arches or Bristly Cutworm Moth) – 23-VIII-2002 1, 31-VII-2004 1, 11-VIII-2004 1, 8-VII-2005 1, 28-VI-2008 2, 22A-VII-2009 1, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1 and 17C-VII-2010 1.
2152. *Lacinipolia lorea* (Gn.) (10405. *Lacinipolia lorea* (Gn.)) (Bridled Arches) – 2-VII-2002 2, 28-VI-2008 2, 22C-VII-2009 1 and 17B-VII-2010 1.
2153. *Lacinipolia olivacea* (Morr.) (10406. *Lacinipolia olivacea* (Morr.)) (Olive Arches) – 22A-VII-2009 1 and 17C-VII-2010 1.
2162. *Protorthodes oviduca* (Gn.) (10563. *Protorthodes oviduca* (Gn.)) (Ruddy Quaker) – 13-VI-2002 2, 15-VI-2003 1, 3-VI-2004 1 (12 SR) and 24-V-2009 1.
2165. *Polia goodelli* (Grt.) (10289. *Polia goodelli* (Grt.)) (Goodell's Arches) – 28-VI-2008 1.
2168. "*Polia*" *detracta* (Wlk.) (10288. *Polia detracta* (Wlk.)) (Disparaged Arches) – 20-VI-2002 3, 9-VI-2005 1 and 24-V-2009 1.

Noctuidae, Noctuinae, Noctuini

2172. *Peridroma saucia* (Hbn.) (10915. *Peridroma saucia* (Hbn.)) (Variegated Cutworm Moth) – 14-VIII-2003 1.
2174. *Anicla tepperi* (Sm.) (10910. *Euagrotis tepperi* (Sm.)) (Black-girdled Dart) – 2-VII-2002 4, 6-VII-2002 1, 23-VII-2002 2, 5-IX-2003 1, 8-VII-2005 2, 28-VI-2006 1, 28-VI-2008 1 and 22B-VII-2009 1.

2189. *Euxoa auxiliaris* (Grt.) (10731. *Chorizagrotis auxiliaris* (Grt.)) (Auxiliary Dart) – 23-VIII-2002 1, 5-IX-2003 1.
2195. *Euxoa divergens* (Wlk.) (10702. *Euxoa divergens* (Wlk.)) (Divergent Dart) – 23-VIII-2002 1, 7-VII-2003 1, 8-VII-2005 1, 28-VI-2006 1, 28-VI-2008 2, 22A-VII-2009 1, 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 1.
2200. *Euxoa scandens* (Riley) (10715. *Euxoa scandens* (Riley)) (Climbing Dart or White Cutworm Moth) – 22C-VII-2009 1.
2204. *Euxoa tristicula* (Morr.) (10723. *Euxoa tristicula* (Morr.)) (Early Cutworm) – 15-VI-2003 1, 31-VII-2004 1, 9-VI-2005 1, 5-VII-2005 1 and 28-VI-2008 1, 22A-VII-2009 1, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1 and 17C-VII-2010 1.
2206. *Euxoa pleuritica* (Grt.) (10727. *Euxoa pleuritica* (Grt.)) – 17A-VII-2010 1 and 17B-VII-2010 1.
2212. *Euxoa intrita* (Morr.) (10749. *Euxoa intrita* (Morr.)) (Tippling Dart) – 23-VIII-2002 1.
2220. *Euxoa tessellata* (Harr.) (10805. *Euxoa tessellata* (Harr.)) (Tessellate Dart or Striped Cutworm Moth) – 22B-VII-2009 1.
2228. *Euxoa ochrogaster* (Gn.) (10801. *Euxoa ochrogaster* (Gn.)) (Red-backed Cutworm Moth) – 23-VII-2002 1, 23-VIII-2002 1, 15-IX-2003 1.
2233. *Euxoa basalis* (Grt.) (10798. *Euxoa basalis* (Grt.)) (Pale-based Dart) – 11-VIII-2004 1.
2240. *Euxoa auripennis* Laf. (10852. *Euxoa auripennis* Laf.) – 5-VIII-2005 1.
2240. *Euxoa auripennis* Laf. or 2239 *Euxoa servitus* (Sm.) (10852. *Euxoa auripennis* Laf. or 10854 *Euxoa servita* (Sm.)) (Servita Dart) – 23-VII-2002 2, 23-VIII-2002 3, 31-VII-2004 2, 11-VIII-2004 2.
2252. *Euxoa quadridentata* (G. & R.) (10830. *Euxoa quadridentata* (Grt. & Rob.)) (Four-toothed Dart) – 15-IX-2003 1.
2269. *Euxoa flavicollis* (Sm.) (10864. *Euxoa flavicollis* (Sm.)) – 31-VII-2004 1 and 11-VIII-2004 1.
2271. *Euxoa ridingsiana* (Grt.) (10861. *Euxoa ridingsiana* (Grt.)) (Riding's Dart) – 23-VIII-2002 1, 14-VIII-2003 4, 31-VII-2004 1, 11-VIII-2004 1.
2274. *Feltia jaculifera* (Gn.) (10670. *Feltia jaculifera* (Gn.)) (Dingy Cutworm Moth) – 23-VII-2002 3, 23-VIII-2002 1, 14-VIII-2003 2, 31-VII-2004 1, 11-VIII-2004 1, 5-VIII-2005 1, 28-VIII-2006 1, 22A-VII-2009 1, 22B-VII-2009 1, and 22C-VII-2009 1.
2275. *Feltia herilis* (Grt.) (10676. *Feltia herilis* (Grt.)) (Master's Dart) – 23-VII-2002 1, 23-VIII-2002 1.
2276. *Agrotis vetusta* (Wlk.) (10641. *Agrotis vetusta* Wlk.) (Old Man Dart) – 22C-VII-2009 1.
2282. *Agrotis venerabilis* Wlk. (10651. *Agrotis venerabilis* Wlk.) (Venerable Dart) – 20-VI-2002 1, 23-VIII-2002 2, 7-VII-2003 1, 5-IX-2003 1 and 28-VIII-2006 2.
2283. *Agrotis vancouverensis* Grt. (10652. *Agrotis vancouverensis* Grt.) (Vancouver Dart) – 13-VI-2002 2, 20-VI-2002 2, 2-VII-2002 1, 6-VII-2002 1, 9-VI-2005 1 and 28-VI-2008 2.
2294. *Cerastis salicarum* (Wlk.) (10996. *Cerastis salicarum* (Wlk.)) (Willow Dart) – 20C-IV-2010 2.
2295. *Paradiarsia littoralis* (Pack.) (10992. *Paradiarsia littoralis* (Pack.)) (Labrador Dart) – 20-VI-2002 2, 2-VII-2002 1, 7-VII-2003 1, 8-VII-2005 1, 28-VI-2006 1, 28-VI-2008 3, 22B-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 1, 17B-VII-2010 1 and 17C-VII-2010 1.
2301. *Cryptocala acadiensis* (Bethune) (11012. *Cryptocala acadiensis* (Bethune)) (Catocaline Dart) – 22B-VII-2009 1.
2302. *Spaelotis clandestina* (Harr.) (10926. *Spaelotis clandestina* (Harr.)) (Clandestine Dart) – 23-VII-2002 1, 23-VIII-2002 1, 5-IX-2003 1 and 17A-VII-2010 1.
2305. *Eurois astricta* Morr. (10930. *Eurois astricta* Morr.) (Great Brown Dart) – 11-VIII-2004 1.
2312. *Eueretagrotis perattentus* (Grt.) (11008. *Eueretagrotis perattenta* (Grt.)) – 11-VIII-2004 1.

2313. *Xestia smithii* (Snell.) (10944. *Xestia smithii* (Snell)) (Smith's or Spotted Clay Dart) – 11-VIII-2004 1.
2314. *Xestia normanianus* (Grt.) (10943. *Xestia normaniana* IGrt.) (Norman's Dart) – 17A-VII-2010 1.
2322. *Xestia c-nigrum* (L.) (10942. *Xestia c-nigrum* (Franc.)) (Black-letter Dart) – 28-VI-2006 1, 22B-VII-2009 1 and 22C-VII-2009 1.
2335. *Agnorisma bugrai* (Koçak) (10954. *Xestia collaris* (G. & R.)) (Collared Dart) – 23-VIII-2002 1, 14-VIII-2003 1 and 11-VIII-2004 1, 5-VIII-2005 1 and 28-VIII-2006 1.
2337. *Pseudohermionassa tenuicula* (Morr.) (10951. *Xestia tenuicula* (Morr.)) (Hair-pin Dart) – 31-VII-2004 1, 22A-VII-2009 1, 22C-VII-2009 1, 17A-VII-2010 2 and 17C-VII-2010 1.
2344. *Protolampra rufipectus* (Morr.) (11004. *Protolampra rufipectus* (Morr.)) (Red-breasted Dart) – 5-VIII-2005 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 (LS) is most similar (52.41%) to that of the Big Knife area (BK), and least similar (23.04%) to the mixed woods of the East Poplar Creek quarter NW of Winfield (EP). Some prairie elements are present at BK while none occur at EP. The mixed wood communities of EP have many different food plants from those found in LS.

SUMMARY

Three hundred and nineteen species of moths and 4 butterflies are reported from the Lowden Springs Conservation Area. Most collections were made at night and, therefore, butterflies and day-flying moths are underrepresented. If all species in the undetermined categories were named, the actual total would be over 350. With further study and names on all of the undetermined specimens, the total would probably be close to 500 species of moths. To put things into perspective, Pohl et al (2010) document 2367 species of Lepidoptera for Alberta.

It was especially encouraging to have a first for Alberta (*Sparganothis directana*) plus several discoveries of seldom encountered species, such as *Xenotemna pallorana*, *Sciota fernaldi*, *Lipographis fenestrella*, *Escaria homogena*, *Heliothis phloxiphagus* and *Schinia meadi*. The list of species would have been considerably greater if the area had additional habitats such as woods or a riverine community but, at the same time, it is quite interesting to be able to discover the moths characteristic of an area with this kind of native prairie.

Of the 13 areas involved in the present study, 13 species of moths were found only in the native prairie of the Lowden Springs Natural Area - *Coleophora duplicis*-8 group, *Coleophora* JFL048, *Coleophora* JFL087, *Aethes monera*?, *Xenotemna pallorana*, *Sparganothis directana*, *Eucosma* nr *barbara*, *Epiblema resumptana*, *Donacaula nitidella*, *Diastichtis ventralis*, *Heliothis phloxiphagus*, *Escaria homogena*, and *Euxoa pleuritica*.

ACKNOWLEDGEMENTS

Thanks are extended to the Alberta Conservation Association (Grant Niemann, Andy Murphy, Jim Potter), Ducks Unlimited Canada (Bob Thompson) and Nature Conservancy Canada (Laurel Murphy, Juanna Thompson, Colleen McPhee) for encouraging the study and for providing a key to access the area. Sincere thanks are extended to Gary Anweiler for his help in

naming or verifying the macromoths, and Greg Pohl for his assistance in the identification of micromoths. Chris Schmidt verified the Arctiids and some of the Geometrids. Also to be thanked are Dr. J.-F. Landry for help with *Coleophora*, Chris Schmidt for help with Arctiids and Geometrids, Doug Macaulay for identifying Pterophorids, Dr. George Balogh for identifying specimens of the genus *Eupithecia*, Jason Dombroskie for help with Tortricids and Dr. Brian Scholtens for his help in identifying a number of moths. Jason Dombroskie provided help with some of the Tortricidae. Even though others helped, I personally take responsibility for the identification of the species mentioned in this report.

The Alberta Conservation Association deserves special thanks for providing a \$1000 grant in 2006 which allowed the purchase of an additional UV moth trap, 3 batteries, ethyl acetate and insect pins. Felix Sperling and Danny Shepley facilitated the study of specimens in the Bowman Collection of the Strickland Museum at the University of Alberta, and Greg Pohl did the same for the Northern Forest Research Centre Entomology Collection. The late Ernest Mengersen is thanked for allowing access to the Entomology Collection at Olds College.

LITERATURE CITED

- Adamski, D. 2000. A new species of *Glyphidocera* from south-central Colorado (Lepidoptera, Gelechioidea: Glyphidoceridae). *Fabreres* 25: 69-76.
- Bird, C. D. 2003. Lepidoptera of the Lowden Springs Conservation Area, a preliminary Report. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 8 pp.
- Bird, C. D. 2004. Lepidoptera of the Lowden Springs Conservation Area, a second Report. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 10 pp.
- Bird, C. D. 2005. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2004. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 13 pp.
- Bird, C. D. 2006. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2005. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 16 pp.
- Bird, C. D. 2007. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2006. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 19 pp.
- Bird, C. D. 2008. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2007. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 19 pp.
- Bird, C. D. 2009. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2008. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 20 pp.
- Bird, C. D. 2010. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2009. Report prepared for Alberta Conservation Association, Nature Canada, Ducks Unlimited, and Alberta Parks and Protected Areas. 22 pp.
- Bird, C. D. 2011. Lepidoptera of the Lowden Springs Conservation Area, Alberta, 2002-2011. Report prepared for Alberta Parks and Protected Areas. 21 pp.
- Bowman, Kenneth 1951. An annotated list of the Lepidoptera of Alberta. *Can. J. Zoology* 29: 121-165.

- Hodges, R. W. (ed.). 1983. Check List of the Lepidoptera of America North of Mexico. E.W. Classey Ltd. & The Wedge Entomological Research Foundation. 284 pp.
- Lafontaine, J. D. & B. C. Schmidt. 2010. Annotated check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. ZooKeys 40: 1-239.
- Landry, B. & J.-F. Landry. 2004. The genus *Alucita* in North America, with description of two new species (Lepidoptera: Alucitidae). The Canadian Entomologist 136: 553-579.
- Pohl, G. R., C. D. Bird, J.-F. Landry and G.G. Anweiler. 2005. New records of Microlepidoptera in Alberta, Canada. J. Lepidopterist's Soc. 59(2): 61-82.
- Pohl, G. R., G. G. Anweiler, B. C. Schmidt and N. G. Kondla. 2010. An annotated list of the Lepidoptera of Alberta, Canada. ZooKeys 38: 1-549.
- Pohl, G. R., J. J. Dombroskie, J.-F. Landry, C. D. Bird and V. Nazari. 2011. Errata and first update to the 2010 checklist of the Lepidoptera of Alberta. ALG Newsletter Spring 2011, pp. 10-16.
- Razowski, Józef. 1997. Cochylini (Lepidoptera: Tortricidae) of Canada. Acta zool. Cracov., 40(1): 107-163.
- Schintlmeister, A. 1983 [1984]. Zum status einiger fernöstlicher taxa. Notodontiden-Studien I. Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen 35: 106-111.

USEFUL ONLINE INFORMATION SOURCES ON MOTHS

Information on, and illustrations of, 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://acleris.com/dls/mothindex.html>). As many of the species also occur in Alberta, these images can be quite helpful

USEFUL BOOKS ON LEPIDOPTERA

- Acorn, J. 1993. Butterflies of Alberta. Lone Pine. 141 pp.
- Bird, C. D., G. J. Hilchie, N. G. Kondla, E. M. Pike and F. A. H. Sperling. 1995. Alberta Butterflies. Prov. Museum Alberta. 349 pp.
- Covell, Charles V., Jr. 1984. A Field guide to Moths; Eastern North America. Houghton, Mifflin Co., Boston, New York.
- Handfield, Louis. 1999. Le Guide des Papillons du Quebec. Vol. 1. Broquet, Boucherville, QC. 536 pp. + 123 pl.
- Handfield, Louis. 2011. Le Guide des Papillons du Quebec. Vol. 1. Partie 1 & 2, 1352 pp. plus 166 plates.
- Ives, W.G.H. & H.R. Wong. 1988. Tree and Shrub Insects of the Prairie Provinces. Can. Forestry Serv., Northern For. Centre, Inf. Rept. NOR-X-292.

- Layberry, R. A., P. W. Hall & J. D. Lafontaine. 1998. The Butterflies of Canada. Univ. Toronto Press. 280 pp.
- Powell, J. A. & P. A. Opler. 2009. Moths of Western North America. Univ. California Press. 369 pp.

APPENDIX

Collection dates, sites and other details

- 13 June 2002 – Diurnal, native prairie, 52.09, 112.425, 830 m. The Lowden Springs Conservation Area was dedicated on this day.
- 20 June 2002 – native prairie, UV, 52.09, 112.425, 830 m.
- 2 July 2002 – native prairie, UV, 52.09, 112.425, 830 m.
- 6 July 2002 – UV, native prairie, 52.09, 112.425, 830 m.
- 23 July 2002 – UV, native prairie, 52.09, 112.425, 830 m. Lots of little black beetles and corixids in the traps.
- 23 August 2002 – UV, native prairie, 52.09, 112.425, 830 m.
- 1 May 2003 – UV, native prairie, 52.154, 112.712, 825 m.
- 30 May 2003 – UV, native prairie, 52.154, 112.712, 825 m. Lots of mosquitoes.
- 15 June 2003 – UV, native prairie, 52.154, 112.712, 825 m. Large numbers of midges in the traps.
- 7 July 2003 – UV, native prairie, 52.154, 112.712, 825 m.
- 14 August 2003 – UV, native prairie, 52.154, 112.712, 825 m.
- 5 September 2003 – UV, native prairie, 52.154, 112.712, 825 m.
- 3 June 2004 – UV, native prairie, 52.154, 112.712, 825 m.
- 31 July 2004 – UV, native prairie, 52.154, 112.712, 825 m.
- 11 August 2004 – UV, native prairie, 52.154, 112.712, 825 m. Lots of mosquitoes. Most of Lowden Lake dry.
- 18 May 2005 – UV, native prairie, 52.154, 112.712, 825 m. Lots of mosquitoes.
- 9 June 2005 – UV, native prairie, 52.154, 112.712, 825 m. Quite a few midges.
- 8 July 2005 – UV, native prairie, 52.154, 112.712, 825 m. Lots of mosquitoes and midges.
- 5 August 2005 – UV, native prairie, 52.154, 112.712, 825 m. Lots of midges and corixids.
- 15A May 2006 – Crepuscular, silverwillow/buckbrush, 52.154, 112.712, 825 m.
- 15B May 2006 – UV, silverwillow/buckbrush, 52.154 (52.15419), 112.712 (112.71183), 838. Lots of sticky midges.
- 15C May 2006 – UV, native prairie/*Pulsatilla ludoviciana*, 52.153 (52.15346), 112.7111 (112.71123), 855 m. Lots of sticky midges.
- 28 June 2006 – UV, native prairie, 52.154, 112.712, 840 m. Lots of sticky, little aquatic beetles.
- 28 August 2006 – UV, native prairie, 52.154, 112.712, 825 m. Lots of mosquitoes and midges.
- 28 June 2008 - UV, native prairie, 52.154, 112.712, 825 m.
- 24 May 2009 – UV, native prairie and near silverwillow/buckbrush, 52.152, 112.706, 825 m.
- 22A July 2009 – UV, native prairie, 52.154, 112.711, 831 m.
- 22B July 2009 – UV, native prairie, 52.154, 112.711, 827 m.
- 22C July 2009 – UV, native prairie near *Symphoricarpos albus*, 52.154, 112.712, 839 m.
- 20A April 2010 – UV, native prairie near *Symphoricarpos albus*, 52.154, 112.712, 839 m.
- 20B April 2010 – UV, native prairie, 52.154, 112.711, 827 m.
- 20C April 2010 – UV, aspen/buckbrush grassland, 52.154, 112.713, 822 m.
- 12A May 2010 – UV, native prairie, 52.154, 112.711, 827 m.

12B May 2010 – UV, aspen/buckbrush grassland, 52.154, 112.713, 822 m.

26 May 2010 – UV, aspen/buckbrush grassland, 52.154, 112.713, 822 m.

17A July 2010 – UV, native prairie, 52.154, 112.711, 831 m.

17B July 2010 – UV, native prairie near *Symphoricarpos albus*, 52.154, 112.712, 839 m.

17C July 2010 – UV, aspen/buckbrush grassland, 52.154, 112.713, 822 m.