

Additions and Corrections to the Alberta Lepidoptera List, 2014

Greg Pohl

Introduction:

This is the fourth annual update to the "Annotated list of the Lepidoptera of Alberta, Canada" (Pohl et al. 2010). The previous updates are published in the Alberta Lepidopterists' Guild Newsletter (Pohl et al. 2011, 2012, 2013). Once again a number of new species were discovered and described in the province, and several species that were listed as "unconfirmed" have been verified as occurring here. The revised list now stands at 2465 reported species. The new finds and confirmations are detailed below. Three recent taxonomic changes affecting Alberta species are also detailed, and six species are removed from the Alberta list, based on newly obtained information and corrections in identification. As well, several erroneous old historical records of species in Alberta have been uncovered, so they are detailed here and added to the Excluded Taxa list.

New additions and confirmations:

10 *Stigmella populetorum* (Frey & Boll, 1878). This species was previously listed as unconfirmed in Alberta, based on two female specimens from Sherwood Park that could not be identified with certainty. Recently one of those specimens, as well as others collected recently by the Biodiversity Institute of Ontario (BIO) from Elk Island, Jasper, Waterton Lakes and Wood Buffalo National Parks have been confirmed via barcoding.

52.5 *Elatobia montiliella* (Schantz, 1951). New Alberta (and North American) record by Landry et al. (2013), based on barcoded material from several sites in the Rocky Mountains.

60 *Tinagma pulverilinea* Braun, 1921. Previously listed as unconfirmed for Alberta; specimens from near Rocky Mountain House have been confirmed via barcoding.

68 *Caloptilia betulivora* McDunnough, 1946. This species was listed by Pohl et al. (2010) as unconfirmed for Alberta, but at least some Alberta specimens in the CNC have now been verified.

- 223.5 *Coleophora granulatella* Zeller, 1849. New Alberta (and North American) record by Landry et al. (2013). It is known in Alberta only from Dunvegan Provincial Park, but is probably more widely distributed.
- 318 *Filatima albicostella* Clarke, 1942. Previously listed as unconfirmed in Alberta based on an old Bowman specimen from Edmonton that was not identified with certainty. Specimens collected recently by BIO in Banff National Park have been confirmed via barcoding.
- 332.04 *Gnorimoschema sheperdiae* Priest, 2014. A new species described by Adamski et al. (2014). Alberta specimens include several from the Rocky Mountains, as well as from Wood Buffalo National Park and Tolman Bridge. It is a leaf miner on *Sheperdia canadensis* (L.) Nutt. (Eleagnaceae).
- 336.5 *Scrobipalpula manierreorum* Priest, 2014. A new species described by Adamski et al. (2014). It is widely distributed across Canada, including records from Edmonton, Sherwood Park, and the Milk River Ridge near Cardston.
- 390.1 *Carmenta verecunda* (Edwards, 1881). This species was previously listed as probable for Alberta. It was reported by Eichlin and Duckworth (1988) "from MB to WA", but no records were known specifically from Alberta until now. A specimen collected and photographed by Jan Scott in Medicine Hat, on 11 August 2014, was confirmed by sesiid expert William Taft. Images, one of which is reproduced below, are on file at the CFS Northern Forestry Research Collection (NFRC) in Edmonton.



Jan Scott

- 444 *Phtheochroa modestana* (Busck, 1907). Previously reported as unconfirmed in Alberta, based on two specimens collected at Nordegg by James McDunnough in 1921; determination uncertain. A specimen collected by BIO in Banff National Park has been identified via barcode.
- 624 *Eucosma verna* (Miller, 1971). This species has long been confused with *E. refusana* (Walker), and its status in Alberta was uncertain. Recently Wright & Brown (2014) detailed the differences and confirmed that both species reside in Alberta. The sole known Alberta *E. verna* specimen is from Cypress Hills. Until recently both these species were placed in the genus *Phaneta*.
- 911.05 *Dioryctria monticolella* Mutuura, Munroe & Ross, 1969. This species was previously thought to occur only in British Columbia. A paratype in the CNC does not have a definitive locality on the label, but it refers to a Canadian Forest Service Forest Insect and Disease Survey (FIDS) slip number 61A1208-1. The original FIDS slip on file at NFRRC reads "Elkwater, Cypress Hills, 6 mi e on Graburn Rd." That location is from the Alberta side of the Cypress Hills, which straddle the Alberta/Saskatchewan border. The specimen was identified on the FIDS slip as *D. zimmermani* (Grote), prior to its designation as a paratype in the description of *D. monticolella*.
- 1379.5 *Idaea dimidiata* (Hufnagel, 1767). New Alberta record. Gary Anweiler collected a specimen of this small geometrid in his yard in Edmonton, on 20 September 2014. It is deposited in the Strickland Museum at the University of Alberta (UASM). It was previously known from British Columbia and from eastern Canada as far west as Ontario.



1716.1 *Catocala sordida* Grote, 1877. An Alberta specimen of this species has been discovered in the Royal Saskatchewan Museum. It was collected at Gordon Lake (near Ft. McMurray) by Ron Hooper. It was previously known from adjacent northwestern Saskatchewan and eastwards, and was listed as probable in Alberta by Pohl et al. (2010).

1733.5 *Autographa precationis* (Guenée, 1852). New Alberta record. Gary Anweiler collected a specimen of this plusiine noctuid in his yard in Edmonton, on 22 September 2014. It is deposited in the UASM. It was previously known from eastern Canada as far west as Saskatchewan (Hooper 1990).



Autographa precationis, Edmonton, 22 IX 2014, Gary Anweiler

1826.5 *Calophasia lunula* (Hufnagel, 1766). This palaearctic species was introduced to Alberta in 1991 to control Dalmatian Toadflax (*Linaria dalmatica* (L.) Mill.; Scrophulariaceae) (McClay & Hughes 1995, DeClerck-Floate & Carcamo 2011). It did not appear to have become established at that time, so Pohl et al. (2012) added it to the Alberta B list as a "stray". However, in 2014 larvae were observed and photographed in the Edmonton area by Gary Anweiler and Alec McClay, and in the Lethbridge area by Rose DeClerck-Floate. It is hereby added to the list of resident species.

1991.5 *Lithophane baileyi* Grote, 1877. A new species entry based on the correction of material previously identified as #1988 *L. tepida* Grote. All such Alberta specimens are *L. baileyi*; true *L. tepida* is not known to occur west of Manitoba.



Calophasia lunula, photo by G. Anweiler

Taxonomic changes:

214.5 *Coleophora cervinella* McDunnough, 1946 has been designated as a synonym of *C. atriplicis* Meyrick, 1928 by Landry et al. (2013). Thus *C. atriplicis* is recognised as a holarctic species that occurs in Alberta.

776 *Cydia strobilella* (Linnaeus, 1758) is changed to *C. youngana* (Kearfott, 1907). Until very recently, North American populations were treated as part of a holarctic concept of the species *C. strobilella*. However, North American populations have been recognised as a full species by Svensson et al. (2012), and the name *C. youngana* was raised from synonymy for the taxon.

1223 *Oeneis balderi* (Geyer, 1837) is changed to *O. jutta* (Hübner, [1806]). Pohl et al. (2010) used *O. balderi* as the name for North American populations of the *jutta* complex, but that has not been widely adopted and is leading to confusion, so we formally revert here to *O. jutta*, to follow Pelham (2008) and the majority of North American workers. We await further taxonomic work to more definitively sort out this group.

Checklist status corrections:

131 *Agonopterix lythrella* (Walsingham, 1889). Moved to the erroneous records list, at #E006.5. All Alberta material has been redetermined as #130 *A. gelidella* (Busck). *Agonopterix lythrella* is not known west of Ontario (Hodges 1974).

262 *Coleotechnites milleri* (Busck, 1914). Moved to the erroneous records list, at #E009.5. All Alberta records refer to #264 *C. starki* (Freeman). True *C. milleri* does not occur in Canada (Freeman 1957).

- 321 *Filatima ornatifimbriella* (Clemens, 1864). Moved to the erroneous records list, at #E010.05. Reports of this species from Canada refer to #324 *F. xanthuris* (Meyrick). These species have long been confused in collections, but they were sorted out by Hodges & Adamski (1997), who found no records of *Filatima ornatifimbriella* north of Colorado and Nebraska.
- 568 *Olethreutes coruscana* (Clemens, 1860). Moved to the erroneous records list, at #E023.5. This species was reported from Alberta by Pohl et al. (2010), based on Heinrich's (1926) report of "*O. puncticostana major*" in Alberta. The true *O. puncticostana* is a synonym of *O. coruscana*, so this was interpreted to be an Alberta record of the latter. However, according to Miller (1985), Heinrich's (1926) western records are actually misidentified specimens of #569 *O. metallicana* (Hübner). True *O. coruscana* is an eastern species known with certainty only as far west as Saskatchewan.
- 500 *Pandemis borealis* (Freeman, 1965). Moved to the erroneous records list, at #E024.5. This species was considered unconfirmed in Alberta previously, but it has now been established that all Alberta material is #501 *P. coniferana* (Mutuura). True *P. borealis* does not occur west of Ontario. Both of these species were historically placed in the genus *Archepandemis*.
- E070 *Oeneis jutta* (Hübner, [1806]). Removed from the erroneous records list, and inserted into the Alberta species list at #1223. As discussed above, *O. jutta* is recognised herein as the valid North American name for this taxon, rather than *O. balderi* (Geyer).

Overlooked erroneous records:

- Olethreutes obsoletana* (Zetterstedt, 1840). Added to the erroneous records list at #E023.6. This palaearctic species was reported from Alberta by Miller (1985) in error. All North American material is a separate species, #570 *O. nordeggana* (McDunnough).
- Zeiraphera ratzeburgiana* (Saxesen, 1840). Added to the erroneous records list, at #E026.5. This palaearctic name was used by Prentice (1965). All North American populations are #720 *Z. canadensis* Mutuura & Freeman.
- Zophodia convolutella* (Hübner, 1796). Added to the erroneous records list, at #E038.5. Historical records of this Old World species in Alberta and the rest of North America (e.g., by Heinrich 1956) refer to #920 *Z. grossulariella* (Hübner).
- Lycaena epixanthe* (Boisduval & Le Conte, [1835]). Added to the erroneous records list, at #E058.5. Belton (1988) reported this species from Alberta in error; it does not occur west of Manitoba.

- Colostygia turbata* (Hübner, [1799])- Added to the erroneous records list, at #E073.5. Records of this palaearctic species in Canada (e.g., by Troubridge & Lafontaine 2003) are based on a previous taxonomic arrangement. North American populations are #1261 *C. circumvallaria* (Taylor).
- Eupithecia arceuthata* (Freyer, 1842). Added to the erroneous records list, at #E076.5. This palaearctic name was used by Prentice (1963) following a previous taxonomic arrangement; North American populations are now known as #1354 *E. intricata* (Zetterstedt).
- Eupithecia sobrinata* (Hübner, [1817]). Added to the erroneous records list, at #E079.5. This species was reported from Alberta by Prentice (1963) as *E. sobrinata interruptofasciata* Packard. *Eupithecia interruptofasciata* (#1351) is now recognised as a distinct species in North America; *E. sobrinata* is restricted to the Palaearctic.
- Nemoria chloroleucaria* Guenée, [1858]. Added to the erroneous records list, at #E087.5. Belton (1988) reported this species from Alberta in error; it does not occur west of Saskatchewan.
- Syngrapha hochenwarthi* (Hochenwarth, 1785). Added to the erroneous records list, at #E118.5. Historical records of this palaearctic species in North America, e.g., by Crumb (1956), refer to *S. ignea* (Grote).

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Maple Spanworm, *Ennomos magnaria* (Guenee, 1858). Family: Geometridae. Subfamily: Ennominae, Tribe Ennomini. Peterson Guide No. 6797, pg 230. Annot. list of Alta Leps: 1495. photo by: H. Loney Dickson, Det. by: H. Loney Dickson SE/2014. 4.6 km N. of Hwy 16 on RR 222, 6.0 km N. of Ardrossan, Alberta. In field surrounded by aspen, Pob, Spw and Pil. 53° 36.412'N 113° 8.904'W. 31 August, 2014.