



ALBERTA LEPIDOPTERISTS' GUILD NEWSLETTER

2021

Welcome to the ALG Newsletter, a compendium of news, reports, and items of interest related to lepidopterans and lepidopterists in Alberta. The newsletter is edited by John Acorn, and under normal circumstances it is published twice a year, in spring and fall. However, 2021 has been a slow year thanks to the pandemic, so this is the sole issue for the year.



Vic Romanyshyn, David Lawrie, Shaye Hill, and Claudia Lipski, counting butterflies at Dry Island Buffalo Jump Provincial Park (story p. 19).

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Lepidoptera of the Nature Conservancy of Canada

Ghost Horse Hills Property, Alberta

H. Loney Dickson and David D. Lawrie

In 2017, we acquired a permit (NCC Permit 2017-1) from the Nature Conservancy of Canada to conduct Lepidoptera inventories on several of their properties in the Edmonton area, including the Ghost Horse Hills Property, where we sampled butterflies and moths during 2018, 2019 and 2020. The Ghost Horse Hills consists of two quarter sections of land in Sturgeon County, northwest of Edmonton, approximately 20.0 km southwest of Thorhild. The property is vegetated mainly by aspen, with scattered white birch and white spruce patches. In addition, there are some open areas of grassy jack pine habitat that are very similar to those found in the nearby Opal Natural Area. As well, there is a large cattail wetland in the southwest corner of the property.



Photo: Nature Conservancy of Canada

We conducted both diurnal and nocturnal sampling. We used butterfly nets as we walked the property, looking in a variety of habitats. We also used hanging bait traps (with fermented bananas as bait) to attract butterflies. The nocturnal surveys also utilized the banana bait traps, but focused more on one or two sheets, lit with 175 W Mercury Vapour lights powered by a generator, or by LED UV white light

powered by batteries. A hanging light trap, lit with LED lights or black/white UV tubes (battery powered) was also hung at dusk, as was a bucket light trap, lit with a UV-LED light tube, or a white UV tube. We sampled several times each year, with four surveys in 2018 (May 2, 24/ 25, June 28, and July 4), and two surveys in 2019 (June 4/6, 16). Unfortunately COVID, coupled with poor weather, limited us to only one survey on the evening of June 22/23 in 2020, and also cancelled the annual student butterfly count.

We had a wonderful time on both July 4, 2018, and June 5, 2019, when we participated with the NCC Staff to carry out a butterfly survey as part of the annual student trip to the Ghost Horse Hills (GHH) property. It was really the grade-school students that did a lot of the work. Once they were all decked out with their own butterfly nets, and given some limits on how far they were allowed to wander away in search of elusive butterflies, they were turned loose (about 20 students each year) to catch and bring back the butterflies they caught, for identification in a Plexiglas cage. The cage, built by Dave, allowed everyone to get to see the butterflies and learn how to tell them apart. Once the first round of butterflies were in the cage and checked out, student went out in search of different species.

Voucher specimens for moths and hard to identify butterflies were collected. Specimens were compared with those in the Northern Forestry Research Centre Entomological Collection, as well as through the use of various identification resources and through direct contact with various colleagues in the entomology community, as listed below:

Publications: Acorn (1993); Beadle and Leckie (2012), Bird et al. (1995); Gilligan et al. (2008); Guppy and Shepard (2001); Handfield (2011); Howe (1975); Layberry et al. (1998); Miller (1987), Powell and Opler (2009), and Schmidt (2010).

Internet identification sites: BugGuide. (2016); Moth Photographers Group (2015); Pacific Northwest Moths (2018); Troubridge J.T. and J.D. Lafontaine (2016); University of Alberta (2020) Strickland Museum Website,. <http://www.entomology.ualberta.ca>. and Warren et al. (2012).

Experts: Pohl, Greg (2017, 2018, 2019 & 2020); Anweiler, Gary (2017); Schmidt, Christian (2017); Acorn, John (2017); and Johnson, Kyle E. (2017).

We adopted the "Scarcity Rating System" developed by Macaulay (unpublished), as updated on April 15, 2021. Macaulay rates species as Rare, Uncommon, Common or Abundant in Alberta. This is not the same as the provincial or federal status ranking systems. The Scarcity Rating System of Macaulay is based on voucher specimens (including photos) and abundances of species at particular locations.

Scarcity Rating System for species of Lepidoptera in Alberta

Rating	Definition
R	Rare species with 1- 5 documented populations in Alberta.
U	Uncommon species with 6- 20 documented populations in Alberta.
C	Common species with 21 -50 documented populations in Alberta.
A	Abundant species with more than 50 documented populations in Alberta.
E	Exotic (introduced)
SCNR	Scarcity not recorded.
?	Scarcity yet to be defined (location data required).

Results and Discussion

In total, 159 species comprising 38 micromoths, 29 butterflies and 92 macromoths were identified from the GHH. These were also summarized in reports to the NCC (Dickson and Lawrie, 2019, Dickson and Lawrie, 2020, and Dickson and Lawrie, 2021).

Five species with a **Rare** rating have been found on the property to date:

420996	R	<i>Chionodes fondella</i> (Busck, 1906).	no English name
421151	R	<i>Aroga trialbamaculella</i> (Chambers, 1875).	Red-striped Fireworm
460114	R	<i>Hellinsia lacteodactylus</i> (Chambers, 1873).	Plume Moth
620013	R	<i>Acleris cervinana</i> (Fernald, 1882).	no English name
621372	R	<i>Cydia</i> nr. <i>toreuta</i> (Grote, 1873).	Eastern Pine Seedworm

Chionodes fondella. GHH is the third location for this species in Alberta. It is also known from Red Deer and Edmonton. In Canada the species is known from Alberta to Quebec, and in Nova Scotia (Pohl et al., 2018).

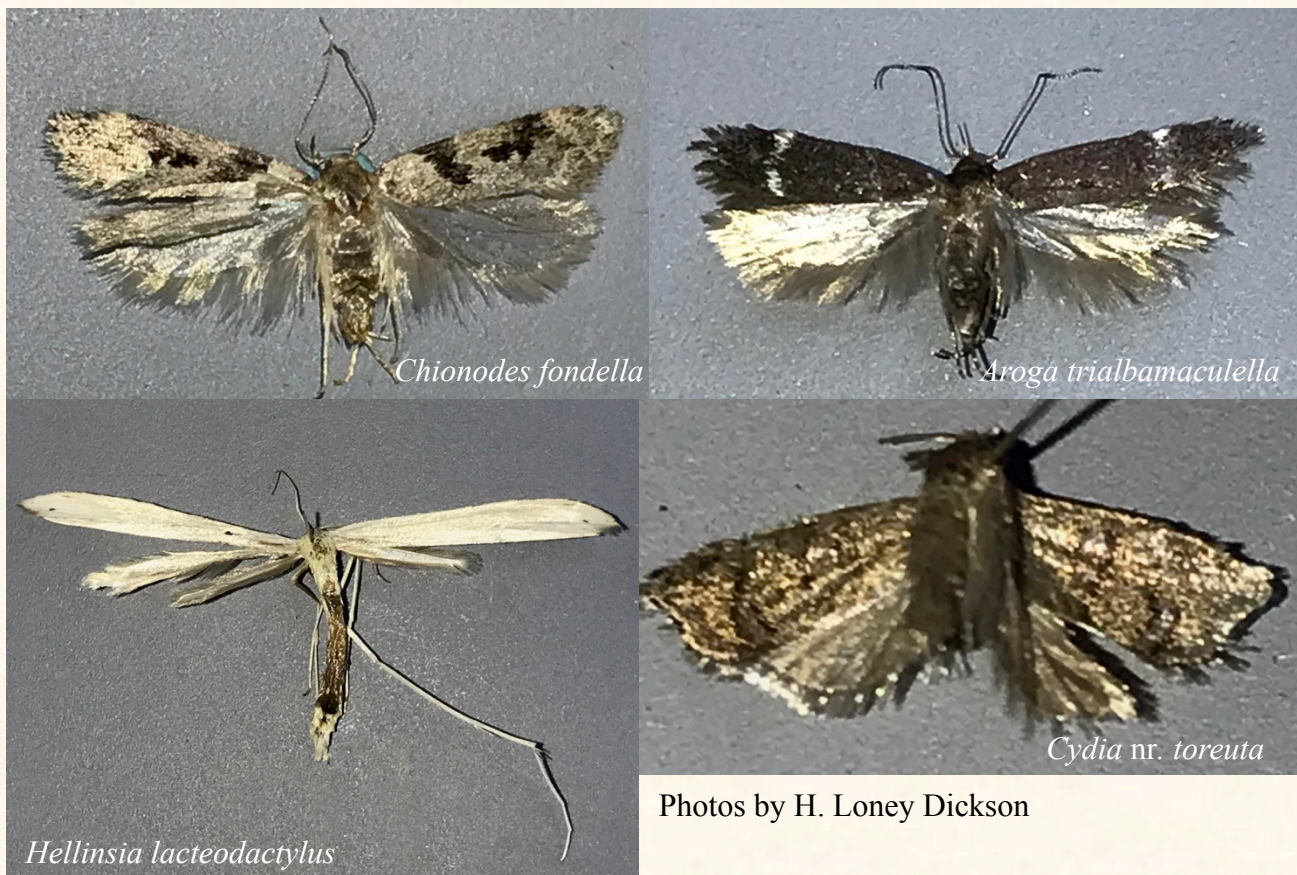
Aroga trialbamaculella, the Red-striped Fireworm, is known only from one other locality in Alberta: Rocky Mountain House. In Canada the species is known from Alberta, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island (Pohl et al., 2018). The larvae are known to feed on blueberries and

and other ericaceous plants, *Quercus*, and *Robinia* (BugGuide.net).

Hellinsia lacteodactylus, a Plume Moth, is also known from Rochon Sands Provincial Park, Greenwood (SE of Sherwood Park), Elk Island National Park, and the GHH. In Canada the species is known from British Columbia to Quebec, Nova Scotia, and Prince Edward Island (Pohl et al., 2018). The larvae are known to feed on Common Boneset (*Eupatorium perfoliatum*) and Goldenrod (*Solidago* spp.) (BugGuide.net).

Acleris cervinana has other records from Edmonton, Big Knife Provincial Park, and Winfield. In Canada the species is known from British Columbia to Quebec, New Brunswick, and Nova Scotia (Pohl et al., 2018). The larvae are known to feed on Beaked Hazel (*Corylus cornuta*) (Powell and Opler, 2009).

Cydia nr. *toreuta*, the Eastern Pine Seedworm (or a close relative), was found on the GHH. If confirmed, this locality will join the other provincial record from the Holmes Crossing Ecological Reserve, and Fort Assiniboine. In Canada the species is known from British Columbia to Quebec, and New Brunswick (Pohl et al., 2018). The larvae are known to feed on Beaked Hazel (*Corylus cornuta*) (Powell and Opler, 2009) and the seeds of pine (*Pinus* spp.) (BugGuide.net).



Photos by H. Loney Dickson

Another fourteen species with **Uncommon** ratings have also been found:

420125	U <i>Bibarrambla allenella</i> (Walsingham, 1882)	Bog Bibarrambla
420793	U <i>Xenolechia velatella</i> (Busck, 1907)	no English name
620641	U <i>Ancylis nubeculana</i> (Clemens, 1860)	Little Cloud
620767	U <i>Eucosma awemeana</i> (Kearfott, 1907)	no English name
621145	U <i>Zeiraphera fortunana</i> (Kearfott)	no English name
621216	U <i>Epinotia sollicitana</i> (Walker, 1863)	Birch Shoot Borer
621347	U <i>Cydia multilineana</i> (Kearfott, 1907)	no English name
770753b	U <i>Lethe anhedon borealis</i> (A.H. Clark, 1936)	Northern Pearly Eye
800729	U <i>Elophila oblitalis</i> (Walker, 1859)	Waterlily Leafcutter
801350	U <i>Diacme adipaloides</i> (Grote & Robinson, 1867)	Dark Diacme
801541	U <i>Pyrausta borealis</i> (Packard, 1867)	Northern Pyrausta
890208	U <i>Darapsa choerilus</i> (Cramer, [1780])	Azalea Sphinx Moth
930006	U <i>Clostera strigosa</i> (Grote, 1882)	Striped Chocolate-tip
931508	U <i>Cucullia florea</i> Guenée, 1852	no English name

Also of note was an *Oeneis macounii* (Macoun's Arctic) that was discovered and captured by Riley, one of the students at the NCC Butterfly Count, on June 5, 2019.



Oeneis macounii- photo by H. Loney Dickson

Apparently, as many of us have already experienced, it put on a great show of speed and agility as it fled from Riley's pursuit. This was the only record for this species at GHH, or any of the other three NCC Properties we surveyed between 2017 and 2021. Although now considered common in parts of Alberta, it is somewhat elusive given that it is a woodland species, and is only common in odd-numbered years, since it takes two years for this species' caterpillar to mature to an adult. The adult only survives for a couple of weeks (Acorn, 1993). There are 24 known sites for this species in Alberta. The larvae probably feed on sedges (*Carex* spp.) (BugGuide.net).



Papilio zelicaon- photo by H. Loney Dickson

Checklist of Lepidoptera recorded from the Ghost Horse Hills NCC Property in 2018, 2019 & 2020. ACLCA species numbers ("P3 numbers" from the Annotated Checklist of Lepidoptera of Canada and Alaska (Pohl et al., 2018)) are followed by Species Scarcity Ratings.

Micromoths

21. Adeloidea 11. Adelidae 11.1 Adelinae

210119 *C Adela purpurea* (Walker, 1863)

Purple Fairy Moth

36. Yponomeutoidea – Argyresthiidae- [Argyresthiinae]

360174 *C Argyresthia oreasella* Clemens, 1860

Cherry Shoot Borer

42. Gelechioidea 34. Depressariidae 34.1 Depressariinae		
420125	U <i>Bibarrambra allenella</i> (Walsingham, 1882)	Bog Bibarrambra
42. Gelechioidea 36. Gelechidae 36.2 Dichomeridinae		
420501	A <i>Helcystogramma fernaldella</i> (Busck, 1903)	Fernald's Helcystogramma
42. Gelechioidea 36. Gelechidae 36.5 Anomologinae		
420684	? <i>Bryotropha</i> cf. <i>gemella</i> (Rutten & Karsholt, 2004)	no English name
42. Gelechioidea 36. Gelechidae 36.6 Gelechiinae		
420793	U <i>Xenolechia velatella</i> (Busck, 1907)	no English name
420971	A <i>Chionodes mediofuscella</i> (Clemens, 1863)	Black-smudged Chionodes
4209...	<i>Chionodes</i> sp.	
420972	C <i>Chionodes terminimaculella</i> (Kearfott, 1908)	no English name
420996	R <i>Chionodes fondella</i> (Busck, 1906).	no English name
421151	R <i>Aroga trialbamaculella</i> (Chambers, 1875)	Red-striped Fireworm
42. Gelechioidea 38. Coleophoridae		
421647	E <i>Coleophora trifolii</i> (Curtis, 1832)	Large Clover Casebearer
46. Pterophoridae 47. Pterophoridae 47.1 Pterophorinae		
460022	? <i>Stenoptilia mengeli</i> (Fernald, 1898)	no English name
460051	A <i>Amblyptilia pica</i> (Walsingham, 1880)	Geranium Plume Moth
460114	R <i>Hellinsia lacteodactylus</i> (Chambers, 1873)	Plume Moth
62. Tortricidae 55. Tortricidae 55.1 Tortricinae		
620013	R <i>Acleris cervinana</i> (Fernald, 1882)	no English name
620227	C <i>Eulia ministrana</i> (Linnaeus, 1758)	Ferruginous Eulia Moth
620284	C <i>Argyrotaenia mariana</i> (Fernald, 1882)	Gray-banded Leafroller
620302	A <i>Choristoneura conflictana</i> (Walker, 1863)	Large Aspen Tortrix
620340	C <i>Syndemis afflictana</i> (Walker, 1863)	Gray Leafroller
620357	C <i>Clepsis persicana</i> (Fitch, 1856)	White Triangle Tortrix
620362	C <i>Clepsis melaleucanus</i> (Walker, 1863)	Black-patched Clepsis
62. Tortricidae 55. Tortricidae 55.2 Olethreutinae		
620528	C <i>Apotomis capreana</i> (Hübner, [1817])	Sallow Apotomis Moth
620538	C <i>Pseudosciaphila duplex</i> (Walsingham, 1905)	Poplar Leafroller
620539	A <i>Orthotaenia undulana</i> ([Denis & Schiffermüller], 1775)	Dusky Leafroller
620641	U <i>Ancylis nubeculana</i> (Clemens, 1860)	Little Cloud
620642X	C <i>Ancylis subaequana</i> complex (Miller, 1987)	no English name
620647	C <i>Ancylis metamelana</i> (Walker, 1863)	Black-marked Ancylis
620653X	? <i>Ancylis spiraeifoliana</i> complex Miller, 1987	no English name
620664	? <i>Ancylis apicana</i> (Walker, 1866)	Raspberry Leaf-roller
620667	? <i>Ancylis</i> nr. <i>uncella</i> ([Denis & Schiffermüller], 1775)	no English name

620767	U	<i>Eucosma awemeana</i> (Kearfott, 1907)	no English name
621124	C	<i>Gypsonoma fasciolana</i> (Clemens, 1864)	a leaf-roller
621145	U	<i>Zeiraphera fortunana</i> (Kearfott)	no English name
621159	A	<i>Pseudexentera oregonana</i> (Walsingham, 1879)	Aspen Leaf-roller
621216	U	<i>Epinotia sollicitana</i> (Walker, 1863)	Birch Shoot Borer
621347	U	<i>Cydia multilineana</i> (Kearfott, 1907)	no English name
621372	R	<i>Cydia</i> nr. <i>toreuta</i> (Grote, 1873)	Eastern Pine Seedworm

Butterflies:

77. Papilionoidea 61. Hesperiiidae 61.1 Eudaminae

770047	C	<i>Thorybes pylades</i> (Scudder, 1870)	Northern Cloudywing
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77. Papilionoidea 61. Hesperiiidae 61.2 Pyrginae

770086	C	<i>Erynnis icelus</i> (Scudder and Burgess, 1870)	Dreamy Duskywing
770102	C	<i>Erynnis persius</i> (Scudder, 1863).	Persius Duskywing

77. Papilionoidea 61. Hesperiiidae 61.3 Heteropterinae

770127c	C	<i>Carterocephalus palaemon mandan</i> (Edwards, 1863)	Arctic Skipper
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77. Papilionoidea 61. Hesperiiidae 61.4 Hesperinae

770249	C	<i>Poanes hobomok</i> (Harris, 1862)	Hobomok Skipper
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77. Papilionoidea 62. Papilionidae 62.2 Papilioninae

770302	A	<i>Papilio zelicaon</i> Lucas, 1852	Anise Swallowtail
770314	A	<i>Papilio canadensis</i> (Rothschild & Jordan, 1906)	Canadian Tiger Swallowtail

77. Papilionoidea 63. Pieridae 63.1 Coliadinae

770355	C	<i>Colias interior</i> (Scudder, 1862)	Pink-edged Sulphur
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77. Papilionoidea 63. Pieridae 63.2 Pierinae

770392	E A	<i>Pieris rapae</i> (L., 1758)	Cabbage White
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77. Papilionoidea 64. Lycaenidae 64.3 Theclinae

770437	C	<i>Satyrrium liparops</i> (Le Conte, 1833)	Striped Hairstreak
770464	A	<i>Callophrys augustinus</i> (Westwood, 1852)	Brown Elfin
770467b	A	<i>Callophrys polios obscurus</i> (Ferris & Fisher, 1973)	Hoary Elfin

77. Papilionoidea 64. Lycaenidae 64.4 Polyommatainae

770512	A	<i>Celastrina lucia</i> (Kirby, 1837)	Northern Azure
770540	A	<i>Glaucopsyche lygdamus afra</i> (Edwards, 1884)	Silvery Blue
770511f	C	<i>Cupido amyntula albrightii</i> (Clench, 1944)	Western Tailed Blue
770548	C	<i>Icaricia saepiolus</i> (Boisduval, 1852)	Greenish Blue

77. Papilionoidea 66. Nymphalidae 66.3 Heliconiinae

770613	C	<i>Boloria bellona</i> (Fab., 1775)	Meadow Fritillary
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770625	C <i>Speyeria cybele</i> (Fabricius, 1775)	Great Spangled Fritillary
770637	C <i>Speyeria hesperis</i> (Boisduval, 1852)	Northwestern Fritillary
77. Papilionoidea 66. Nymphalidae 66.4 Limenitidinae		
770593	C <i>Limenitis arthemis rubrofasciata</i> (Barnes & McDunnough, 1916)	White Admiral
77. Papilionoidea 66. Nymphalidae 66.6 Nymphalinae		
770680a	A <i>Nymphalis antiopa antiopa</i> (L., 1758)	Mourning Cloak
770683	C <i>Polygonia satyrus satyrus</i> (W.H. Edwards, 1869)	Satyr Comma
770687b	C <i>Polygonia faunus faunus</i> (W.H. Edwards, 1862)	Green Comma
770742b	A <i>Phyciodes cocyta selenis</i> (Kirby, 1837)	Northern Crescent
770743e	A <i>Phyciodes batesii saskatchewan</i> (Scott, 2006)	Tawny Crescent
77. Papilionoidea 66. Nymphalidae 66.7 Satyrinae		
770753b	U <i>Lethe anthedon borealis</i> (A.H. Clark, 1936)	Northern Pearly Eye
770782	A <i>Erebia epipsodea</i> (Butler, 1868)	Common Alpine
770783	A <i>Erebia discoidalis</i> (W. Kirby, 1837)	Red-disked Alpine
770799	C <i>Oeneis macounii</i> (Edwards, 1885)	Macoun's Arctic
Macromoths		
80. Pyraloidea 67. Pyralidae 67.5 Phycitinae		
800342	? <i>Glyptocera consobrinella</i> (Zeller, 1872)	no English name
800347	C <i>Meroptera pravella</i> (Grote, 1878)	Lesser Aspen Webworm
80. Pyraloidea 68. Crambidae 68.2 Acentropinae		
800729	U <i>Elophila oblitalis</i> (Walker, 1859)	Waterlily Leafcutter
80. Pyraloidea 68. Crambidae 68.3 Crambinae		
800926	A <i>Chrysoteuchia topiarius</i> (Zeller, 1866)	Cranberry Girdler
80. Pyraloidea 68. Crambidae 68.7 Spilomelinae		
801350	U <i>Diacme adipaloides</i> (Grote & Robinson, 1867)	Dark Diacme
80. Pyraloidea 68. Crambidae 68.9 Pyraustinae		
801406	C <i>Saucrobotys fumoferalis</i> (Hulst, 1886)	Dusky Saucrobotys
801425	C <i>Perispasta caeculalis</i> (Zeller, 1875)	Titian Peale's Pyralid
801541	U <i>Pyrausta borealis</i> (Packard, 1867)	Northern Pyrausta
801549	C <i>Pyrausta unifascialis</i> (Packard, 1873)	One-banded Pyrausta
85. Drepanoidea 70. Drepanidae 70.2 Drepaninae		
850003	C <i>Habrosyne scripta</i> (Gosse, 1840)	Lettered Habrosyne
850019	C <i>Drepana arcuata</i> (Walker, 1855)	Arched Hooktip
87. Lasiocampoidea 71. Lasiocampidae 71. Lasiocampinae		
870003	A <i>Phyllodesma americana</i> (Harris, 1841)	Lappet Moth

89. Bombycoidea 74. Saturniidae 74.4 Saturniinae

890070 C *Antheraea polyphemus* ((Cramer, 1776) Polyphemus Moth

89. Bombycoidea 75. Sphingidae 75.1 Sphinginae

890112 A *Sphinx vashti* (Strecker, 1878) Vashti Sphinx

89. Bombycoidea 75. Sphingidae 75.2 Smerinthinae

890140 C *Smerinthus jamaicensis* (Drury, 1773) Twin-spotted Sphinx

890141 A *Smerinthus cerisyi* (Wm. Kirby, 1837) One-eyed Sphinx

890144 C *Paonias excaecata* (J.E. Smith, 1797) Blinded Sphinx

890148 C *Pachysphinx modesta* (Harris, 1839) Modest Sphinx

89. Bombycoidea 75. Sphingidae 75.3 Macroglossinae

890208 U *Darapsa choerilus* (Cramer, [1780]) Azalea Sphinx Moth

890216 C *Hyles galli* (Rottemburg, 1775) Galium Sphinx

91. Geometroidea 76. Uraniidae 76.1 Epipleminae

910002 C *Callizia amorata* (Packard, 1876) Gray Scoopwing Moth

91. Geometroidea 77. Geometridae 77.1 Larentiinae

910092 C *Hydriomena ruberata* (Freyer, [1831]) Ruddy Highflyer

910131 C *Rheumaptera hastata* (L. 1758) Spear-marked Black

910132 C *Rheumaptera subhastata* (Nolcken, 1870) White-banded Black

910156 C *Spargania luctuata* ([Denis & Schiffermüller]) White-banded Carpet

910172 C *Anticlea vasciliata* (Guenée, 1858) no English name

910173 C *Anticlea multiferata* (Walker, 1863) Many-lined Carpet

910234 C *Xanthorhoe lacustrata* (Guenée, [1858]) Toothed Brown Carpet

910263 ? *Hydrelia lucata* (Guenée, [1858]) no English name

910274 C *Trichodezia albovittata* (Guenée, [1858]) White-striped Black

91029* *Eupithecia* sp.

910392 C *Eupithecia assimilata* Doubleday, 1856 no English name

910444 A *Eupithecia ravocostaliata* Packard, 1876 Tawny Eupithecia

910484 C *Lobophora magnoliatoidata* (Dyar, 1904) Large Bigwing Moth

91. Geometroidea 77. Geometridae 77.2 Sterrhinae Cosymbiini

910547 C *Cyclophora pendulinaria* (Guenée, [1858]) Sweetfern Geometer

910572 A *Scopula junctaria* (Walker, 1861) Simple Wave

91. Geometroidea 77. Geometridae 77.5 Ennominae Macariini

910702 C *Macaria brunneata* (Thunberg, 1784) no English name

910733 C *Macaria loricaria* (Eversmann, 1837) no English name

911016 C *Ectropis crepuscularia* ([Denis & Schiffermüller], 1775) Small Engrailed

911041 *Eufidonia discospilata* (Walker, 1862) Sharp-lined Powder Moth

911159 C *Euchlaena marginaria* (Minot, 1869) Ochre Euchlaena

911165 C *Xanthotype urticaria* (Swett, 1918) False Crocus Geometer

911168	C <i>Xanthotype sospeta</i> (Drury, 1773)	Crocus Geometer Moth
911183	C <i>Pero morrisonaria</i> (Edwards, 1881)	Morrison's Pero
911226	C <i>Campaea perlata</i> (Guenée, (1858)	Pale Beauty
911250	C <i>Selenia kentaria</i> (Grote & Robinson, 1867)	Kent's Geometer
911251	C <i>Metanema inatomaria</i> (Guenée, [1858])	Pale Metanema
911254	C <i>Metarranthis duaria</i> (Guenée, [1858])	Ruddy Metarranthis
(911270)	C <i>Probole amicaria</i> (Herrich-Schäffer, [1855])	Friendly Probole
911274	C <i>Plagodis phlogosaria</i> (Guenée, 1858)	Straight-lined Plagodis
911275	C <i>Plagodis pulveraria</i> (Linnaeus, 1758)	American Barred Umber
911400	C <i>Tetracis crocallata</i> (Guenée, (1858)	Yellow Slant-line Moth

93. Noctuoidea 78. Notodontidae 78.1 Pygaerinae

930003	C <i>Clostera albosigma</i> (Fitch, 1856)	Sigmoid Prominent
930006	U <i>Clostera strigosa</i> (Grote, 1882)	Striped Chocolate-tip
930009	C <i>Clostera apicalis</i> (Walker, 1855)	Apical Prominent

93. Noctuoidea 78. Notodontidae 78.2 Notodontinae

930012	C <i>Pheosia rimosa</i> (Packard, 1864)	Black-rimmed Prominent
930013	C <i>Odontesia elegans</i> (Strecker, 1885)	Elegant Prominent
930017b	C <i>Notodonta torva simplaria</i> (Graef, 1881)	Northern Finned Prominent
930019	A <i>Gluphisia septentrionalis</i> (Walker, 1855)	Common Gluphisia
930029	C <i>Furcula modesta</i> (Hudson, 1891)	Modest Furcula

93. Noctuoidea 78. Notodontidae 78.3 Phalerinae

930046	C <i>Nadata gibbosa</i> (J.E. Smith, 1797)	White-dotted Prominent
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93. Noctuoidea 79. Erebidae 79.2 Arctiinae

930288	<i>Arctia parthenos</i> (Harris, 1850)	St. Lawrence Tiger Moth
930316	C <i>Spilosoma virginica</i> (Fabricius, 1798)	Virgin Tiger Moth
930334	C <i>Phragmatobia assimilans</i> Walker, 1855	Large Ruby Tiger Moth
930373	A <i>Lophocampa maculata</i> (Harris, 1841)	Spotted Tussock Moth

93. Noctuoidea 79. Erebidae 79.3 Hermeniinae

930487	C <i>Phalaenophana pyramusalis</i> (Walker, 1859)	Dark-banded Owlet
930502	A <i>Chytolita morbidalis</i> (Guenée, 1954)	Morbid Owlet
930551	C <i>Palthis angulalis</i> (Hübner, 1796)	Dark spotted Palthis

93. Noctuoidea 79. Erebidae 79.14 Erebiniae

930923	A <i>Caenurgina crassiuscula</i> (Haworth, 1809)	Clover Looper
930929	A <i>Euclidia cuspidea</i> (Hübner, 1818)	Toothed Somberwing

931032	C <i>Zale minerea</i> (Guenee, 1852)	Colorful Zale
93. Noctuoidea 81. Nolidae 81.3 Risobinae		
931149	C <i>Baileya ophthalmica</i> (Guenée, 1852)	Eyed Baileya
93. Noctuoidea 82. Noctuidae 82.1 Plusiinae		
931234	A <i>Anagrapha falcifera</i> (Kirby, 1837)	Celery Looper
93. Noctuoidea 82. Noctuidae 82.3 Eustrotiinae		
931291	C <i>Protodeltote albidula</i> (Guenée, 1852)	Pale Glyph
93. Noctuoidea 82. Noctuidae 82.6 Raphinae		
931412	C <i>Raphia frater</i> (Grote, 1864)	Brother Moth
93. Noctuoidea 82. Noctuidae 82.8 Acronictinae		
931427	C <i>Acronicta vulpina</i> (Grote, 1883)	Miller Dagger
931428	C <i>Acronicta innotata</i> (Guenée, 1852)	Unmarked Dagger
931433	C <i>Acronicta grisea</i> (Walker, 1856)	Gray Dagger
931443	C <i>Acronicta superans</i> (Guenée, 1852)	Splendid Dagger
931458	C <i>Acronicta fragilis</i> (Guenée, 1852)	Fragile Dagger Moth
931477	C <i>Acronicta impressa</i> (Walker, 1856)	Impressed Dagger
931498	C <i>Harrisimemna trisignata</i> (Walker, 1856)	Harris's Three-spot Moth
93. Noctuoidea 82. Noctuidae 82.10 Cuculliinae		
931508	U <i>Cucullia florea</i> (Guenée, 1852)	no English name
93. Noctuoidea 82. Noctuidae 82.13 Agaristinae		
931981	C <i>Alypia langtoni</i> (Couper, 1865)	Langton's Forester Moth
93. Noctuoidea 82. Noctuidae 82.18 Noctuinae		
932205	C <i>Pseudeustrotia carneola</i> (Guenée, 1852)	Pink-barred Pseudeustrotia
932234	C <i>Elaphria alapallida</i> (Pogue & Sullivan, 2003)	no English name
932249.5	C <i>Chytonix palliatricula</i> (Guenée, 1852)	Cloaked Marvel
932534	C <i>Lithophane innominata</i> (Smith, 1893)	Nameless Pinion Moth
932773	C <i>Orthosia revicta</i> (Guenée, 1852)	Subdued Quaker
932867	C <i>Polia nimbosa</i> (Guenée, 1852)	Stormy Arches
932868	C <i>Polia imbrifera</i> (Guenée, 1852)	Cloudy Arches
933113	C <i>Protorthodes oviduca</i> (Guenée, 1852)	Ruddy Quaker
933567	C <i>Aplectoides condita</i> (Guenée, 1852)	Quivering Dart Moth



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Hannah Schaepsmeyer, the NCC Alberta's Conservation Volunteer Program Manager, for setting up a Ghost Horse Hills butterfly count, with a school group, landowners, NCC staff and volunteers and inviting us to share our knowledge of butterflies and this project.

Richard and Vera DeSmet for their interest and enthusiasm in enabling students to discover, experience and learn about Lepidoptera and other aspects of biology and natural history. As coordinators of Outdoor Classrooms for School Groups at the Ghost Horse Hills, they are making a huge contribution to student and others in the community. Their hospitality around their table is greatly appreciated when we drop in on them.

Black Witch at the Beaverhill Bird Observatory

David D. Lawrie

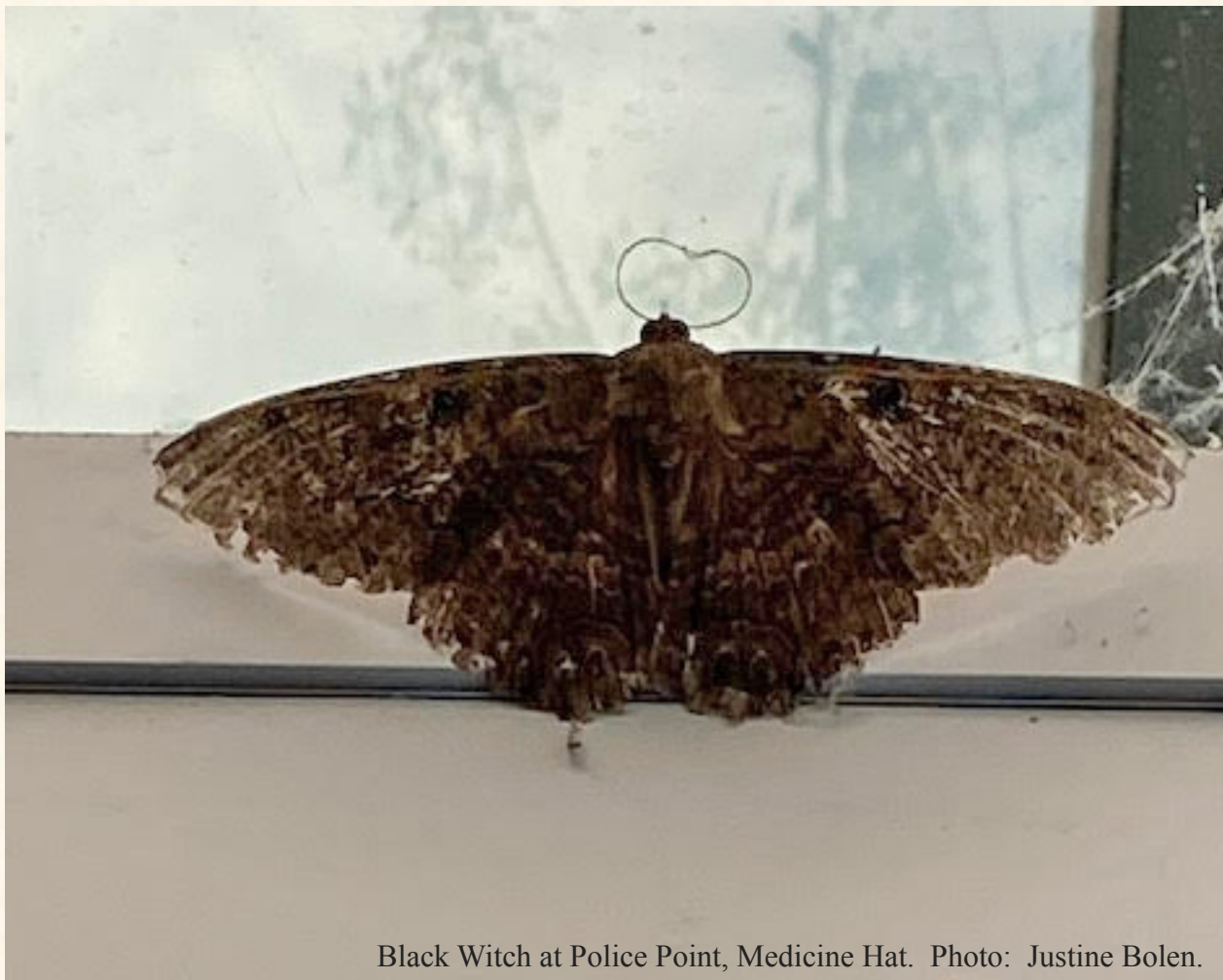
The rumour I heard, that a Black Witch (*Ascalapha odorata*) had been seen at the Beaverhill Bird Observatory this past summer, is now confirmed. On the morning of July 24, 2021, a Black Witch was observed resting on one of the bat houses at the Observatory by the “bat crew” – Erin Low, Celina Gerlich and Kayley Burke. Celina took a few pictures and her observation is now on iNaturalist at: <https://inaturalist.ca/observations/98783615>



Black Witch resting on bat house M08. The house is a bit less than 2' (60 cm) wide, giving a wingspan (tip to tip) of at least 6" (15 cm).
Photo by Celina Gerlich.

Many thanks to Celina and Erin (and Sara Pearce Meijerink) for communicating with me about this observation.

Jan Scott also reported Black Witch to ALG via email this summer. The moth was above the door of the Interpretive Centre at Police Point Park, in Medicine Hat, on July 28, 2021. Unfortunately Jan didn't get to see the moth herself. This observation is not yet on iNaturalist.



Black Witch at Police Point, Medicine Hat. Photo: Justine Bolen.

The Black Witch is essentially a tropical moth that is a very powerful flyer that often strays (or explores?) areas far outside of its usual range. They can turn up pretty much anywhere in North America. They generally show up late July and into August in Alberta. I suspect that this past hot summer was good for their dispersal north.

More information on Black Witches is available here:

<https://search.museums.ualberta.ca/g/2-3869/9-7639>

<http://mothphotographersgroup.msstate.edu/species.php?hodges=8649>

More information on the Beaverhill Bird Observatory is available here:

<http://www.beaverhillbirds.com>

Dry Island Buffalo Jump Provincial Park

Butterfly Count 2021

Claudia Lipski

Every year since 1999, there has been a formal butterfly count held at Dry Island Buffalo Jump Provincial Park. Dr. Charley Bird began this study, invited others, and in recent years the number of participants often exceeded 50. They have ranged in age from three to 87 years. Folks came from all over the province for the event, to take part in the count and to enjoy the camaraderie of fellow naturalists. What an event!

The Alberta Lepidopterists' Guild and Buffalo Lake Nature Club have teamed up to ensure that both the research and annual public count begun by Dr. Charley Bird, could continue.



In 2020, participant numbers were kept low due to a combination of health restrictions and a washout on the access road. Eighteen people took part in 2020.

In 2021, the count was scheduled to take place on July 4, in keeping with Dr. Bird's tradition to host it on the first Sunday following July 1st. Alas, the weather did not cooperate that weekend. The washout had been repaired, but clouds were hanging heavily with a forecast of rain. Everyone knows that the bentonite soils and steep road make the lower parking lot inaccessible when wet, so the groups opted for an informal count to take place during the week, as enthusiasts had time, with a more structured informal count to take place on the following Sunday, July 11. Claudia Lipski did visit the count site briefly on July 4, sighted one butterfly, and exited as rain seemed imminent. Robert Brown was at the park on July 10 and completed a count along with Amanda Brown and Sophie Eyo. See a synopsis of his report below.

On July 11, David Lawrie, Vic Romanyshyn, Shaye Hill and Claudia Lipski visited DIBJPP and conducted an informal count. It was a fine day for a butterfly count. The temperature at 10 AM was 17°C. As we gathered at the upper parking lot, we were given the opportunity to study a dozen caterpillars that Dr. David Lawrie had brought along in a butterfly cage. He was on his way to Calgary and had not found a reliable 'caterpillar sitter' to leave them with, so brought them along on this road trip. As park visitors exited their vehicles, they were invited to come over and see the caterpillars. It was a new experience for them and they were fascinated, watching the caterpillars move and feed on leaves. Dr. Lawrie fielded many questions, and folks continued on their way, excited to have learned a bit about some little things in nature.

The group then decided to walk the road down to the lower parking lot, scouting out butterflies in the varying habitats along the way. The species and numbers are reported below. We were having such success at finding different butterfly species, which were identified by Vic and David, that we had to keep pushing ourselves to get down to the river at a reasonable time. Half way down the long road, with the temperature creeping up, Claudia suggested that she hike back up and bring down a vehicle, to facilitate a less onerous return to the top. The suggestion was vetoed and we all continued down to the river in our search for other butterfly species. By the time we reached the river it was nearing 2 PM and it felt as if it were 35°C. We had completed the count in the various habitats, were hot and tired, and had a long hike back to the upper parking lot. Claudia did not say, 'I told you so,' so with a fine show of camaraderie and support, the only way to go was up. Shaye's sighting, twice, of a long-tailed weasel allowed for a distraction from the heat and the steep climb, but we were suffering. A few vehicles were heading down the hill and as one pickup truck passed, the driver was recognized and hailed. Fortunately, Brian Biggs did stop when summoned and graciously agreed to give we weary butterfly count enthusiasts a ride up to our vehicles. We were thankful! Brian and his grandson were shown the caterpillars and given a soda pop as a thank you

for their assistance.

All in all, this butterfly count day was a success and we have a report of species and numbers for 2021. We hope that next year we can return to a more formal count, barring restrictions and a threat of rain, and hope that many others will participate in continuing Dr. Charley Bird's legacy of researching the butterfly populations at Dry Island Buffalo Jump Provincial Park. See you next year on Sunday, July 3! Below are the results for 2021.

		<u>July 10</u>	<u>July 11</u>
<i>Thymelicus lineola</i>	European Skipper	20	20
<i>Polites peckius</i>	Peck's Skipper	1	
<i>Papilio machaon</i>	Old World Swallowtail	4	10
<i>Papilio canadensis</i>	Canadian Tiger Swallowtail	2	
<i>Pieris rapae</i>	Cabbage White		5
<i>Pontia occidentalis</i>	Western White	1	
<i>Colias philodice</i>	Clouded Sulphur	12	10
<i>Lycaena hyllus</i>	Bronze Copper		1
<i>Plebejus melissa</i>	Melissa Blue		5
<i>Icaricia saepiolus</i>	Greenish Blue	1	
<i>Liminitis arthemis</i>	White Admiral	4	8
<i>Speyeria cybele</i>	Great Spangled Fritillary	4	8
<i>Speyeria callippe</i>	Callippe Fritillary		1
<i>Speyeria atlantis</i>	Atlantis Fritillary	4	
<i>Speyeria hesperis</i>	Northwestern Fritillary	1	10
<i>Vanessa atalanta</i>	Red Admiral		2
<i>Chlosyne acastus</i>	Acastus Checkerspot	1	
<i>Phyciodes cocyta</i>	Northern Crescent	50	18
<i>Coenonympha californica</i>	Common Ringlet	15	10
<i>Cercyonis pegala</i>	Common Wood Nymph	8	20
Species seen:		15	14
Total Individuals:		129	128



Checklist of butterflies by Robert Brown, Amanda Brown, and Sophie Eyo. July 10, 2021 (* denotes photographed):

European Skipper	20
Peck's Skipper*	1
Old World Swallowtail group (didn't land– couldn't get exact ID)	4
Canadian Tiger Swallowtail (didn't land)	2
Western White*	1
Clouded Sulphur*	12
Blues (unidentified, suspect Greenish Blues)	1
Great spangled Fritillary*	4
Northwestern Fritillary	1
Atlantis Fritillary*	4
(the three species of fritillary listed were netted or photographed—many other frits seen but not unidentified)	
Northern Crescent* (no Tawny seen)	50
Acastus Checkerspot*	1
White Admiral	4
Common Ringlet*	15
Common Wood Nymph*	8

Notes: Temperature around 30°C. Crowded with people and vehicles (are boom boxes still popular?). I expect many butterflies were chased away from the trails by the crowds of people. There was one group of approximately 40-50 people. I have no idea what they were doing but they all had a sheet of paper in hand.



Dr. Charley Bird telling a good story at the 2019 Count

The Mystery Caterpillars

Kira Vanderveen

At the University of Alberta Botanic Garden greenhouse, hundreds of unknown larvae were found infesting two plants. Both plants affected were Siberian Elm, *Ulmus pumila* bonsai, leaving many neighboring plants unaffected. Through some help from Felix Sperling, we discovered that they were *Polygonia* larvae. Thankful that we did not have a severe pest infestation in the greenhouse, we decided to rear the caterpillars to adulthood to identify the species.

Two of the largest larvae were collected from the host plant and were continually supplied leaves from the *Ulmus pumila* specimen. Two days later, one of the two caterpillars successfully pupated, with the other dying mid-pupation. After nine more days, the adult emerged and was identified as *Polygonia faunus*, the Green Coma. Following identification, we released the butterfly into the surrounding forest area.



Alberta Butterfly Roundup: 2021 Update

John Acorn

The Alberta Butterfly Roundup began in 2015, and its purpose is to reconfirm the existence of all of the species of butterflies known from Alberta. As we get down to the true rarities, confirmation is becoming increasingly difficult and infrequent, but we do have two species to add to our total this year:

Pale Swallowtail (*Papilio eurymedon*): See the following article by David Scott for the full story.

Sylvan Hairstreak (*Satyrium sylvinus*): See the following article by David Lawrie for this full story as well.

The following list includes all of the species that we still need to find, so please feel free to use it to guide your adventures in the coming season.

Species Still to be Confirmed

The following group probably have resident populations, or populations that expand north into southern Alberta some years but not others:

Clodius Parnassian (*Parnassius clodius*): July, Waterton back country, known from Goat Lake

Pine White (*Neophasia menapia*): September, dry subalpine pine forests

Edith's Copper (*Lycaena editha*), July, mountain meadows

Lilac-bordered Copper (*Lycaena nivalis*): August, southwest corner, meadows

Hedgerow Hairstreak (*Satyrium saepium*): August, southwest, dry slopes with *Ceanothus* (soap bush) plants

Juniper Hairstreak (*Mitoura gryneus*): June, southwest corner, near junipers

Moss' Elfin (*Calliphrys mossii*): May, southwest corner

Echo Azure (*Celastrina echo*): May, southwest corner

Dingy Fritillary (*Boloria improba*): July, northern Rockies, alpine areas with willows

Oreas Anglewing (*Polygonia oreas*): October, southwest corner

Eyed Brown (*Lethe eurydice*): July, sedge meadows, eastern parklands

Strecker's Giant Skipper (*Megathymus streckeri*), June, Milk River valley, with yuccas

Small Checkered Skipper (*Pyrgus scriptura*): July, extreme southeast

Oslar's Roadside Skipper (*Amblyscirtes oslari*): May, Milk River drainage

The remaining species are either migrants or vagrants, which only appear in Alberta when conditions favour a mass movement from the south:

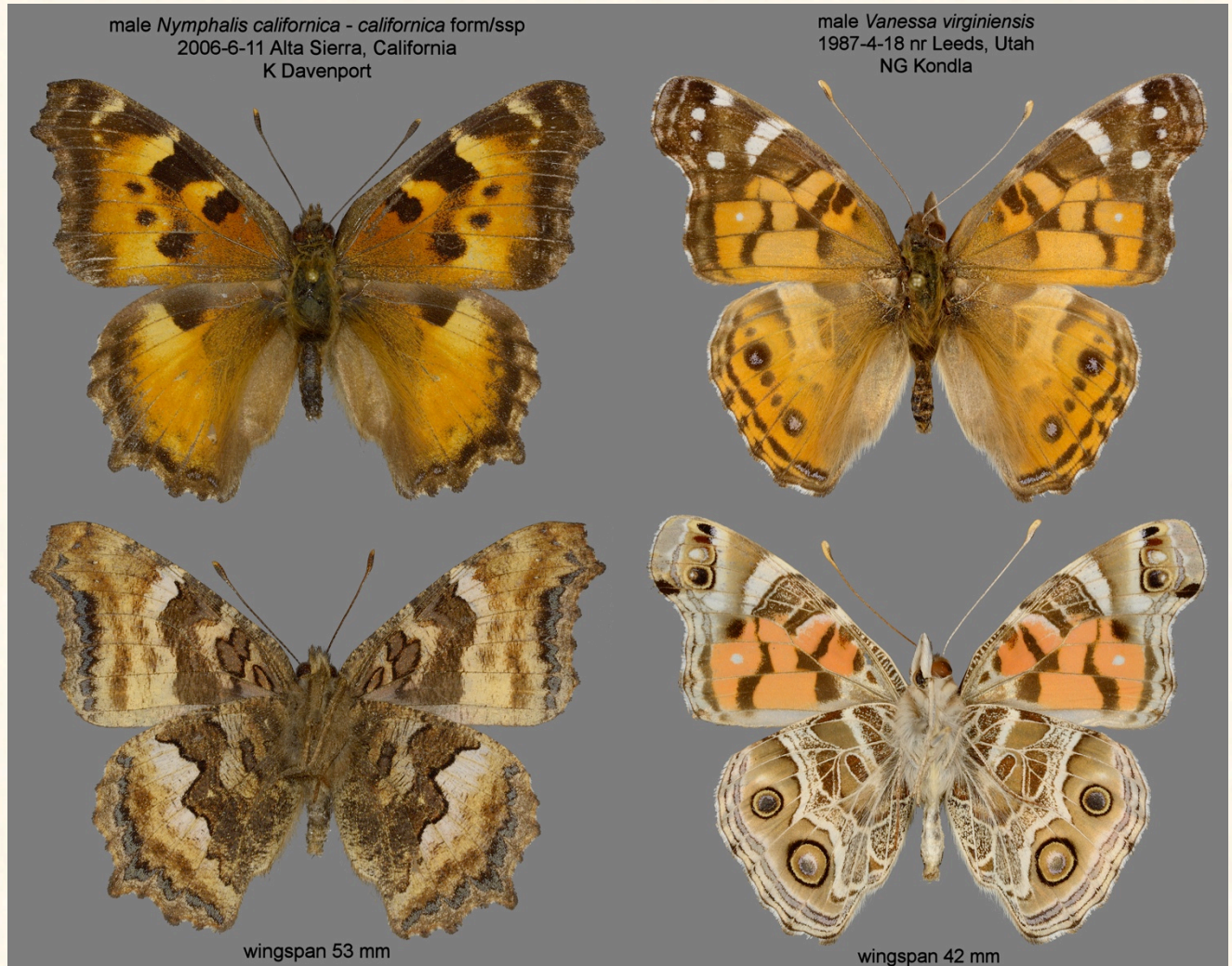
Southern Dogface (*Zerene cessionia*), August, one record from near Didsbury

American Lady (*Vanessa virginiensis*): occasional migrant

West Coast Lady (*Vanessa annabella*): occasional migrant

California Tortoiseshell (*Nymphalis californica*): occasional migrant

Question Mark (*Polygonia interrogationis*): occasional migrant



Two migrants to watch for. Photos by Norbert Kondla

A Pale Swallowtail at Waterton Lakes National Park

David Scott

On Saturday, June 26, 2021, twelve people took part in a Nature Lethbridge field trip to the province's southwest corner. Asher Warkentin of Pincher Creek and I were co-leading the excursion. We began the day at a couple of stops near the town of Mountain View, then proceeded to Waterton Lakes National Park by 11:00. Our first stop was Cameron Falls. After a few minutes spent in the falls' refreshing spray, we proceeded south toward Upper Waterton Lake, along the west side of the townsite. In search of anything of interest, we watched a Rufous Hummingbird display, admired some Mountain Lady's-Slippers, and photographed a Northern Checkerspot and a Field Crescent. A few swallowtails, which appeared to be Canadian Tiger Swallowtails, had been fluttering about as well. Then, an odd swallowtail passed the group. Asher and I are most familiar with Alberta's avifauna, but we'd recently been spending some time dabbling in butterflies, and both of us were vaguely aware of an unusual swallowtail species that lacked yellow in the wings. We knew we were looking at something different, so we were quick to pull out our cameras. Asher's camera was fast to focus, and so he managed to snap a couple of shots of the butterfly in flight. It's a good thing he did, because though we followed the swallowtail for a couple of hundred metres toward the lake, it never landed, and we promptly lost track of it. (We had also left the group behind and felt that, as trip leaders, we should perhaps not abandon the group for long!) When I arrived home later in the day, I consulted *Alberta Butterflies*, by Bird et al., and suggested to Asher that we may have found a Pale Swallowtail, *Papilio eurymedon*. Details of the butterfly captured in Asher's photos, including, notably, the wide black bands on the wings, pointed strongly toward that conclusion. We were very happy to have our suspicions confirmed by members of the ALG, as well as on iNaturalist, where our record is currently the only one of this species in Alberta!



Photo by Asher Warkentin

The Sylvan Hairstreak (*Satyrrium sylvinus**) in Alberta

David D. Lawrie



It is always exciting to think you've found a new species of butterfly for the province, and that is exactly what Gerry Hilchie, Vic Romanyshyn and I thought this summer when we each managed to find specimens of *Satyrrium sylvinus*. The Sylvan Hairstreak was predicted to occur in Alberta by Bird *et al.* (1994), but at that time there were no known Alberta records, and I hadn't heard of any confirmation since then. Gerry had found a somewhat worn hairstreak on the Crowsnest Creek road in the Crowsnest Pass on July 28, 2014, that was most likely *S. sylvinus*, but a bit hard to tell due to its worn condition. I was skeptical. So, the three of us have been looking for it (and any other interesting critters) each time we visited this southwest corner of Alberta.

On July 15, 2021, we were again visiting the Castle Mountain Resort area. Hiking down on the North Haig Lake trail Gerry caught a nice fresh and easily identified male Sylvan Hairstreak. I then caught a female a bit lower down the trail. Not to be out done, Vic caught a male right in the RV parking area right at the bottom. The next day, July 16, Gerry caught another male at on the Crowsnest Creek road in the Crowsnest Pass. This, for me, was confirmation of his 2014 find. So that's two locations confirmed for a species that was "expected, but not confirmed" by Bird *et al.* (1994). Super Cool!

Being quite excited about these finds I mentioned them to John Acorn who said, "You know, I have a hairstreak from down there..." Sure enough, John's

***A quick note on the spelling: This is the correct spelling, based on the. *Annotated Checklist of the Moths and Butterflies (Lepidoptera) of Canada and Alaska (2018, Pensoft Publishers)* by Pohl *et al.* Alberta Butterflies used "sylvinum", but proper gender agreement of the genus *Satyrrium* and the descriptive species name requires "sylvinus". Similarly for *S. acadica* vs. *academicum*. Latin is complicated, and "taxonomic" Latin even more so.**

specimen is another *S. sylvinus*, this time from “Lynx Creek, a tributary of the Castle River” and collected August 24, 2002. This spot is roughly midway between our two sites. Hmmm, perhaps not such a find by us...

I then did a number of online collection searches. To my surprise, only the E. H. Strickland Entomological Museum at the U. of A. gave any Alberta records for *S. sylvinus*. See here: <https://search.museums.ualberta.ca/g/2-2004/9-167614>. All three records are by S. Shigematsu on July 31, 1977 from “West Castle”, a fairly vague location, but essentially the same place where we found ours this past summer, about 44 years earlier though! These had likely been originally misidentified as *Satyrium acadica*, and therefore missed inclusion in Bird *et al.* (1994). Gary Anweiler made the current identification of the Strickland specimens, post 1994, and likely sometime in the 2010’s. This led me to do some more research and sure enough, Norbert Kondla has an observation on iNaturalist: <https://inaturalist.ca/observations/95656330>. This time, August 1, 2000 and in the middle Kootenay Pass, a bit to the south of the Castle Mountain Resort. This was the only Alberta record on iNaturalist until now. Mine is now submitted awaiting ID confirmation. Gerry’s, John’s and Vic’s may follow...

I also checked all the butterfly count records for Waterton NP that I could find online. No record of *S. sylvinum*. Which surprises me a bit. Definitely a species to watch for in Waterton.

So much for a new find! Sigh. At least we (Gerry, Vic & I) made it into the Alberta Butterfly Roundup as the first confirmation of this species in Alberta since the round up started in 2015. I HOPE!

I’ve plotted all the records I am aware of on Map 1. The Shigematsu (1977) and the Hilchie, Lawrie and Romanyshn records (2021) have been combined as a single dot covering the general area of the (now) Castle Mountain resort. While our 2021 records have quite accurate locations, back in 1977, Sigematsu’s location of “West Castle” could cover a much larger area. Similarly, the dot for Hilchie’s records (2014 & 2021) would be more accurately portrayed as an ellipse, running roughly N to S, narrower in the E-W direction.

Since there are so few records of this butterfly in Alberta, I’m including pictures of all the so far unreported specimens mentioned in this article (Table 1). For comparison, a male *Satyrium acadica* is also included. For me, the much smaller amount of orange on the ventral surface of *S. sylvinus* is the key to separating the two species. Additional differences may be noted from the pictures.

In conclusion, *S. sylvinus* is now known from 4 different fairly widely separated localities in SW AB, two of which (Acorn & Hilchie) have not been reported previously, to the best of my knowledge. All of these sites have fairly large areas of various willow species nearby. It should be watched for in SW AB (first half of July likely best), particularly in the Waterton NP area and in the Crow’s Nest

Pass, to the north of Hwy 3 (Island and Crowsnest Lakes). Finding it in either of these areas would extend its known range in Alberta.

Many thanks to Gerry & Vic for the fantastic trip and great thanks to John and Greg Pohl for their help in tracking down previous records.

Literature Cited:

Bird, C.D., G.J. Hilchie, N.G. Kondla, E.M. Pike and F.A.H. Sperling. 1995. *Alberta Butterflies*. Provincial Museum of Alberta, Edmonton, Alberta. 347 pp.

Map 1 - *S. sylvinus* in AB, 2021

Larger dots are used to indicate both more than 1 occurrence and the approximate range where the Sylvan Hairstreak was found. See text for more details.

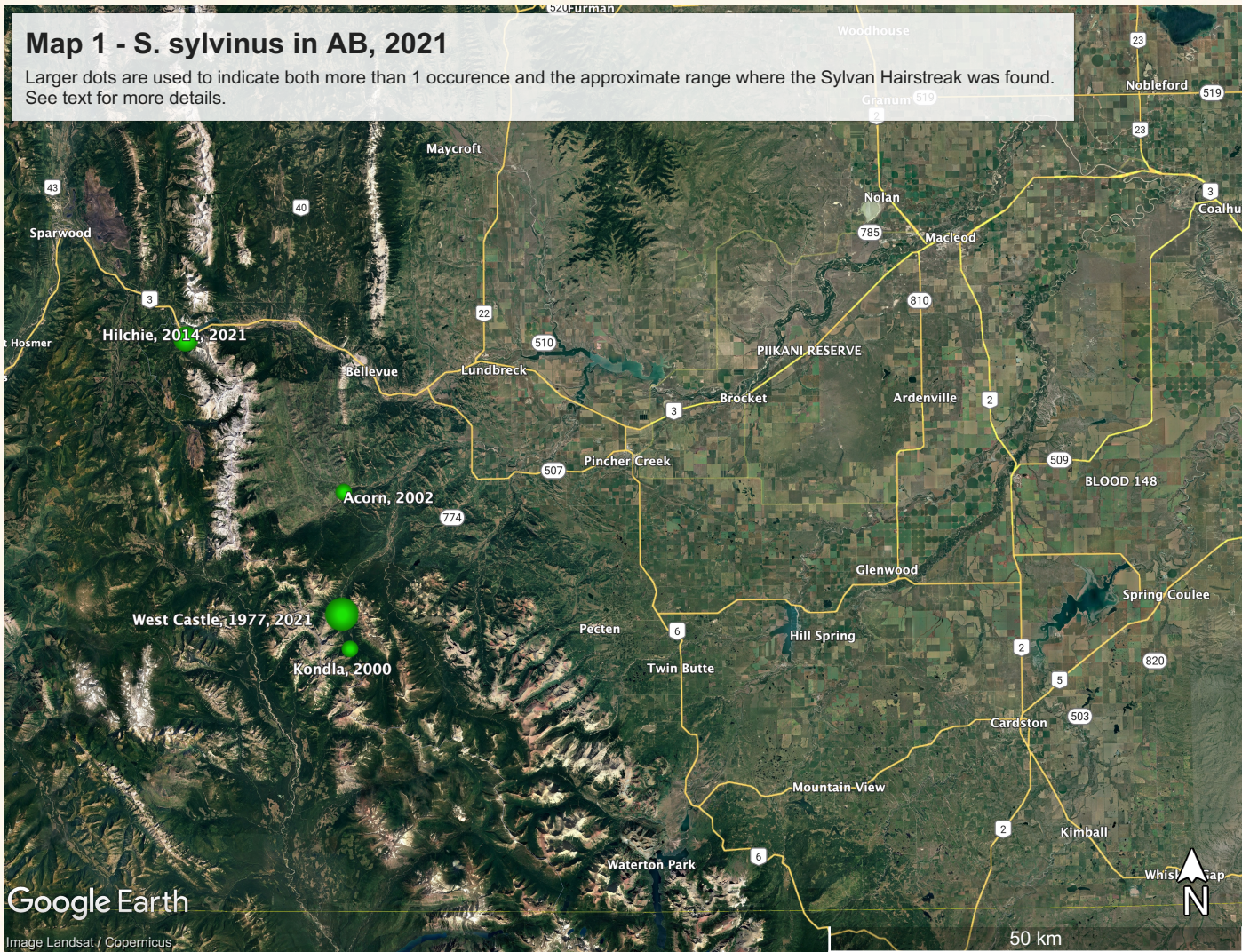
















Table 1 – *S. sylvinus* and *S. acadica*

<i>Satyrrium sylvinus</i> – Sylvan Hairstreak			
Locality	Dorsal	Ventral	Notes
CANADA: Alberta; Castle Mountain Resort, el. 1430 m 49.316 °N, 114.415 °W July 15, 2021			male North Haig Lake Trail G.J. Hilchie
			female North Haig Lake Trail D. Lawrie
			male RV/Trailer area at base V. Romanyshyn
CANADA: Alberta; Crow's Nest Pass, Island Creek, S Hwy 3, el. 1400 m 49.605 °N, 114.6791 °W July 16, 2021			male general collecting along PLUZ road G.J. Hilchie
CANADA: Alberta; Crow's Nest Pass, Island Creek, S Hwy 3, el. 1384 m 49.618 °N, 114.671 °W July 28, 2014			male creek meadows G.J. Hilchie
CANADA: Alberta; Lynx Creek (Castle R. Tributary) el. 1370 m 49.452 °N, 114.413 °W August 24, 2002			male J.H. Acorn
<i>Satyrrium acadica</i> – Acadian Hairstreak			
CANADA: Alberta; Red Deer River at Steveville Bridge (35 km NE of Brooks) el. 640 m 50.841 °N, 111.613 °W July 13, 2000			male roadside clover at campsite D. Lawrie

Waterton Lakes National Park Butterfly Count 2021

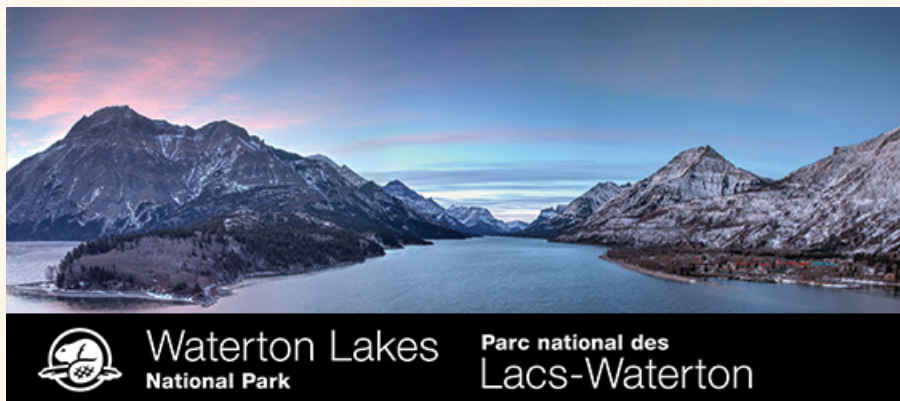
Diane Pachal

**Visitor Experience Team Leader III
(Volunteer Program Coordinator)**

With two teams (20 participants, including 16 volunteers), on a somewhat windy day, we were able to net and identify 32 species this year; slightly above the 20-year average. This consisted of 209 individual butterflies, which is the highest recorded since the all-time high of 551 individuals in 2014 (49 participants), and up quite a lot from recent years. However, compared to the 20-year average, it is slightly lower.

This year it was wonderful to start off the bioblitz with a few words from the park's indigenous knowledge weaver, Carleigh Grier-Stewart, who told us the Blackfoot word for butterfly is apánii; pronounced like “a bunny.” We sought out the more sheltered meadows and were delighted with what we netted. Among the showiest apánii recorded this count were four anise swallowtails (first apánii photo at top, by volunteer John Dubbelboer), one mourning cloak, five white admirals (second photo), one Christina's sulphur and eight species of fritillaries (third photo).

Thank you to the identification experts, Kim Pearson and volunteer Mira Vanhala, who made it possible to host a Butterfly BioBlitz this year; the first since the 20th Anniversary in 2019. The results were compiled by Kim and Carleigh, with Kim providing the highlights.



Selected Photos from ALG Members



An interesting larval food record for two Green Commas (*Polygonia faunus*) that developed on willow (*Salix discolor*). Photo by Trudy Haracsi



Syngnatha octoscripta in the clutches of a crab spider, with startled look in its eye. Photo by Melissa Penney

Selected Photos from ALG Members

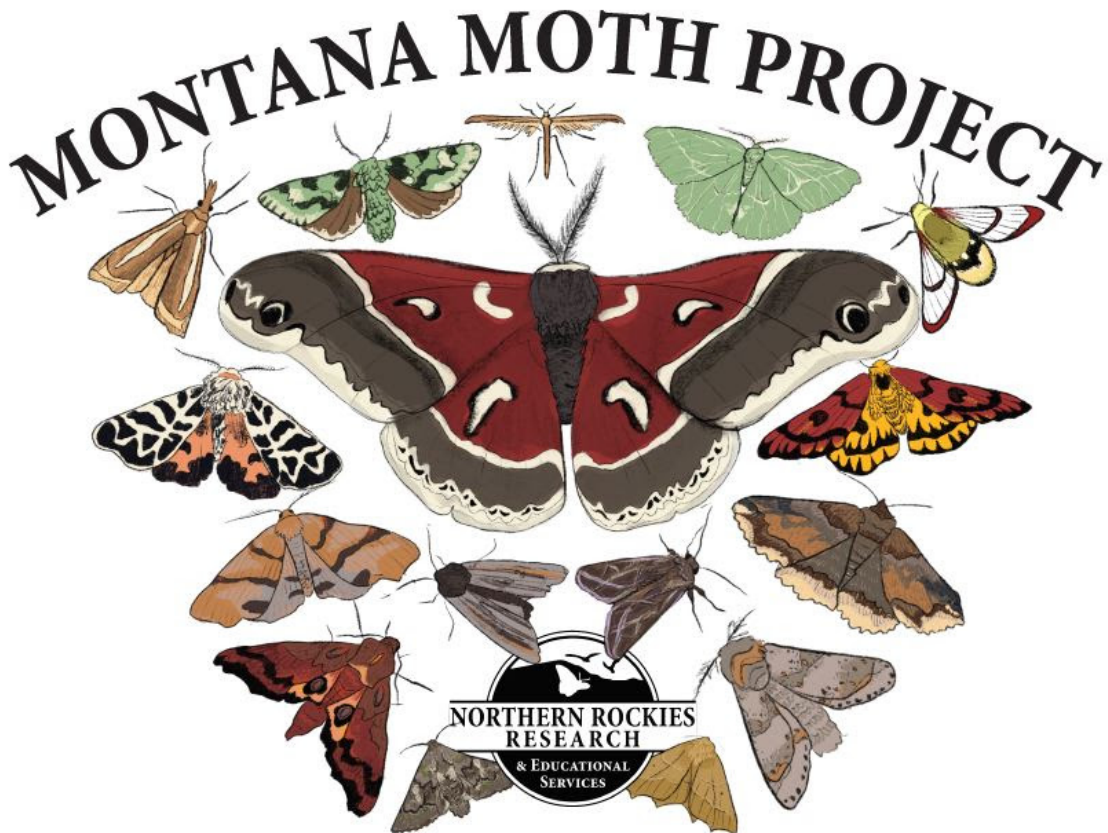


To our great surprise (and in some cases dismay) several of our reared *Polyphemus* cocoons hatched this same summer! None of us had heard of that before in Alberta! This suggests the possibility of a second brood of *Polyphemus* in some years. (photos: J. Acorn)

Montana Moth Project 2021 Field Season Summary

Marian Lyman

The Montana Moth Project (MMP) is a research initiative developed by Northern Rockies Research and Educational Services (NRRES) aimed at documenting and investigating Montana's moth fauna through original research and citizen science efforts. This year, the MMP team had a particularly productive field season thanks, in part, to the addition of a Billings-based staff member and a citizen science collaboration with the Montana Audubon Center, which allowed for dedicated, regular sampling efforts in the south-central part of the state. Meanwhile, NRRES Executive Director, Mat Seidensticker, single-handedly sampled more than 15 counties across Big Sky country, including unique habitats like the Centennial Sandhills and the Ross Creek giant cedar grove. In just two years, the MMP team has sampled 22 of Montana's 56 counties at least once (including Glacier, Toole, and Hill, all of which border Alberta to the South) and plans to sample an additional 10 counties next year. Perhaps more importantly, though, the MMP fostered important collaborations with multiple organizations, federal agencies, and private landowners that have resulted in productive sampling and research opportunities.



These efforts resulted in thousands of specimens, most of which were sent to MMP partner Chuck Harp, Research Associate and Collections Manager at Colorado State University's C.P. Gillette Museum of Arthropod Diversity. The moths were then identified and databased, providing critical vouchers for future reference and research purposes, including taxonomic revisions. (Micro specimens were sent to Chris Grinter, Collections Manager of Entomology at the California Academy of Sciences). The MMP's holdings at the Gillette Museum, which represent the largest collection of Montana moths in the world, contain hundreds of county and dozens of state records, including what may be a new species of *Egira*. Some of the more interesting finds came from surveys conducted as part of a Wild Montana-sponsored grant project in the Pryor Mountain foothills, which boasts the only high desert habitat in the state. These include the flower moth *Schinia snowi*, the large crambid *Evergestis consimilis*, and the hooded owlet *Cucullia mcdunnoughi*, all of which are records for the state and may represent possible range expansions.

Other MMP finds that may be of interest to the ALG include:

Rhyacionia neomexicana (Yellowstone Co. April 2021)

Cryptocala acadiensis (Carbon Co. July 2021)

Globia subflava (Golden Valley Co., August 2021)

Chloridea subflexa (Yellowstone Co., October 2021)

Chloridea virescens (Yellowstone Co., October 2021)

Pero washakiensis (Carbon Co., Pryor Mtn foothills, June 2021)

Protophygia album (Carbon Co.)

Protophygia querula (Carbon Co.)



A Selection of Norbert Kondla's Fritillary Photographs

Continuing a project begun in 2017, I am borrowing here from Norbert Kondla's work at the flickr site: <https://www.flickr.com/photos/118126948@N03/> with a selection from his various fritillary photo. Norbert has given me permission, and I consider this a fine opportunity to share some of Norbert's images.

John Acorn, Editor

from older file, January 2011
Three specimens illustrated in Alberta Butterflies 1995

Boloria alaskensis. male
1980-7-8 Adams Lookout, Alberta leg GJ Hilchie



Clossiana improba nunatak male
1976-7-6 Prospect Mtn., Alberta leg EM Pike



Clossiana improba nunatak female
1982-7-12 Horn Ridge, Alberta leg GJ Hilchie



female *Clossiana* (aka *Boloria*) *albata*
1989-7-18 Mt. Tripoli, Alberta
NG Kondla



wingspan 41 mm

male *Clossiana* (aka *Boloria*) *albata*
1989-7-18 Mt. Tripoli, Alberta
NG Kondla



wingspan 40 mm

male *Clossiana* (aka *Boloria*) *astarte*
2000-8-1 Red Mtn NW of Lillooet, British Columbia
DL Threatful



wingspan 39 mm

male *Clossiana bellona jenistai*
2016-7-23 nr Donalds, Alberta
NG Kondla



wingspan 41 mm

male *Clossiana grandis* aka *Boloria chariclea grandis*
1980-7-1 nr Fort Nelson, British Columbia
TC Kondla



wingspan 37 mm

aberrant *Clossiana (chariclea) grandis*
1984-7-26 Porcupine Hills, Alberta
NG Kondla



wingspan 40.5 mm

holotype of *Clossiana epithore sigridae*



BC, St. Elias Mountains
Tats Lake el. 770m
22 JUL 1992 C.S. Guppy
west end of lake, and
southwest side of lake
59° 37' N by 137° 43' W
lush herbaceous meadow

Holotype

ROYAL BRITISH
COLUMBIA MUSEUM
ENT992-22323

female *Boloria/Clossiana eunomia/triclaris* ssp
2014-6-23 nr Rimbey, Alberta



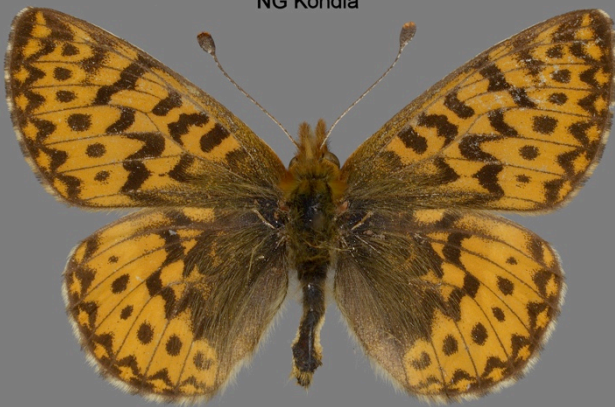
wingspan 37 mm

female *Boloria/Clossiana eunomia/triclaris* ssp
2014-6-23 nr Rimbey, Alberta



wingspan 37 mm

male *Clossiana freija* ssp
1982-5-22 Eagle Butte, Cypress Hills, Alberta
NG Kondla



wingspan 38 mm

Clossiana saga aka *Boloria frigga saga*
2014-6-27 west of Bluffton, Alberta



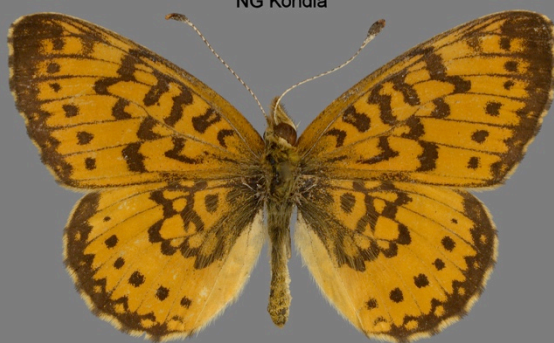
wingspan 42 mm

female *Clossiana improba* nr *nunatak*
1978-7-8 Pink Mountain, British Columbia
NG Kondla



wingspan 37.5 mm

male *Clossiana myrina*
1988-5-28 nr Redwater, Alberta
NG Kondla



wingspan 38 mm

Clossiana myrina variation
from older file, January 2011

tollandensis

2004-7-24
Hinton, Alberta
Leg S. Bonar



1991-6-16
Nordegg, Alberta
Leg NG Kondla



1956-6-29
Tolland, Colorado
Leg D Eff
Topotype *tollandensis*
for comparison



atrocostalis

1988-5-29
Nr Redwater, Alberta
Leg NG Kondla



1978-7-12
Nr Wainwright, Alberta
Leg NG Kondla



1970-7-29
Hancock, New York
Leg R Dirig
Near-topotype *myrina*
for comparison



tollandensis

2004-7-24
Hinton, Alberta
Leg S. Bonar



1991-6-16
Nordegg, Alberta
Leg NG Kondla



1956-6-29
Tolland, Colorado
Leg D Eff
Topotype *tollandensis*
for comparison



atrocostalis

1988-5-29
Nr Redwater, Alberta
Leg NG Kondla



1978-7-12
Nr Wainwright, Alberta
Leg NG Kondla



1970-7-29
Hancock, New York
Leg R Dirig
Near-topotype *myrina*
for comparison





Speyeria edwardsii	Speyeria idalia	Speyeria nevadensis chlicolinenensis	Speyeria leto	Speyeria cybele pseudocarpentieri
Speyeria (zerene) nr sinope	Speyeria (zerene) garretti	Speyeria atlantis hollandi	Speyeria hesperis brico	Speyeria aphrodite whitehousei
Speyeria momonia eurynome (large prairie variant)	Speyeria hydaspe	Speyeria momonia erinna	Speyeria nevadensis semivirida	Speyeria momonia

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<i>Speyeria edwardsii</i>	<i>Speyeria leto</i>	<i>Speyeria cybele</i>	<i>Speyeria aphrodite</i>	<i>Speyeria 'zerene'</i>
<i>Speyeria atlantis</i>	<i>Speyeria hesperis</i>	<i>Speyeria hesperis</i>	<i>Speyeria 'zerene'</i>	<i>Speyeria momonia</i>
<i>Speyeria momonia</i>	<i>Speyeria hydaspe</i>	<i>Speyeria hydaspe</i>	<i>Speyeria nevadensis</i> aka <i>calippe</i>	<i>Speyeria momonia</i>

Aberrant *Speyeria aphrodite*

gynandromorph
Whitford Lake, Alberta
J Beck

oddly marked
Bellis, Alberta
NG Kondla



wingspan 52 mm

wingspan 54 mm

aberrant *Speyeria mormonia*
1979-8-20 nr Rumsey, Alberta



wingspan 48.5 mm

female *Euptoieta claudia*
2007-9-2 Calgary, Alberta
NG Kondla



wingspan 58 mm