

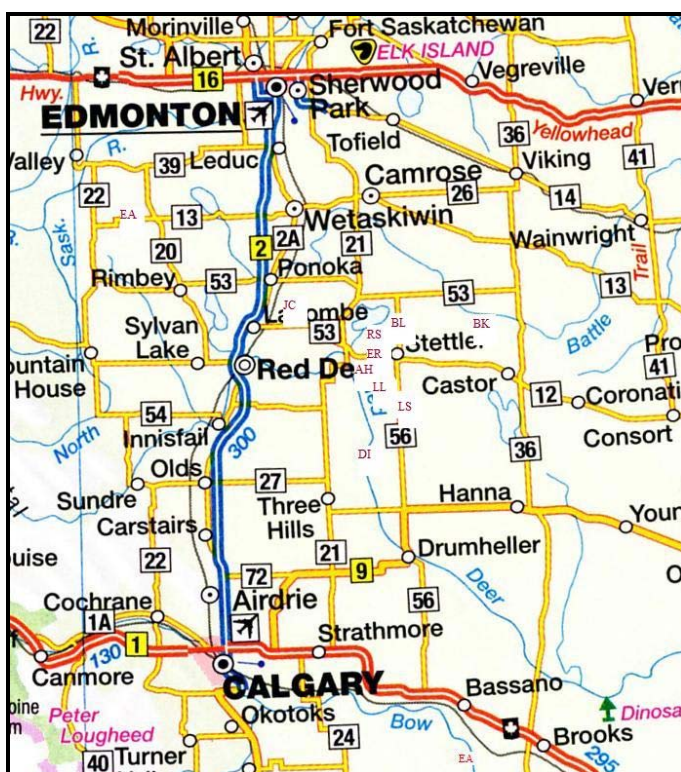
## MOTH INVENTORIES OF TWELVE MAJOR STUDY AREAS IN SOUTH-CENTRAL ALBERTA: ANALYSIS

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Inventory research, starting in 1999 and continuing through 2008, has been carried out on the moths of twelve major study areas in south-central Alberta. With the exception of a semi-urban site in Erskine, all sites were in areas where the vegetation had been relatively undisturbed. Realizing that about 95% of the Aspen Parkland has been disturbed by agriculture or other activities, and some of the remainder will soon be disturbed, the purpose of the research was to document the native moth biodiversity while there was still time to do so. It is strongly recommended that government and other agencies like the Alberta Conservation Association, Ducks Unlimited and Nature Conservancy Canada continue to protect the undisturbed areas (Parks, Conservation Areas, Natural Areas, etc.) under their care and also that more areas be selected for preservation.



The eleven study areas are marked in red on the above map. The areas are: AH – the former Allan Hall Acreage, 3 km S of Nevis; BK – Big Knife Provincial Park, N of Halkirk; BL – Buffalo Lake Conservation Area, N of Stettler; DI – Dry Island Buffalo Jump Provincial Park, E of Huxley; EA – East Arrowwood Coulee, NE of Arrowwood; EP the Bird quarter on East Poplar Creek, NW of Winfield; ER – Bird residence, 5 Maple Close, Erskine; LL – the former Lloyd Lohr farm, SE of Erskine; LF – Lowden Springs Conservation Area, S of Stettler; RS – Rochon Sands Provincial Park, N of Erskine; and TB – Tolman Bridge. One area (ER) is in a semi-urban setting in Erskine, one (EP) is in mixed woods NW of Rimbey, and one (EA) is in the Prairies south of Bassano; all of the remainder are in Aspen Parkland. It wasn't until now that enough sampling had been done to warrant the present analysis. It is hoped that more research will be carried out in 2008.

## HABITATS

In simple terms, the Aspen Parkland is a mosaic of aspen groves surrounded by areas of grassland. However, there is much diversity when one looks in detail at the habitats found in each area and each habitat has its own characteristic plant species. Due to topography, soil type, soil moisture and exposure few sites have exactly similar habitats. The following table illustrates the various habitats present in the study areas.

### HABITATS IN STUDY AREAS

1999-2008, South-central Alberta

Habitats	AH	BK	BL	DI	JC	EA	EP	ER	LF	LS	RS	TB
Acer negundo								X				
Artemisia spp.		X	X	X		X				X		X
Badlands				X								X
Cactus	X	X		X		X						X
Chokecherry/saskatoon	X	X	X	X	X	X	X	X			X	X
Creek/river		X		X		X	X					X
Elaeagnus commutata	X	X	X	X						X		
Garden/lawn								X				
Marsh	X		X									
Mesic prairie/grassland	X	X	X	X	X	X				X		
Mixed woods		X		X	X		X					
Old fields			X				X			X		
Picea glauca				X	X		X	X				
Pinus contorta					X		X					
Populus balsamifera woods						X	X					
Populus tremuloides woods	X	X	X	X	X		X	X	X		X	
Riverine forest				X		X	X					X
Salix spp.		X	X		X		X		X		X	
Short grass prairie				X		X						X
Steep N-facing slope				X								
Steep S-facing slope				X								
Steep W-facing slope						X						X
Symphoricarpos occidentalis	X	X	X	X	X	X	X			X		X
<b>Totals (23)</b>	<b>7</b>	<b>10</b>	<b>9</b>	<b>15</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>9</b>

Moths with one or a small number of food plants (oligophagy) tend to be found in fewer areas than those that have a wider range of foodplants (polyphagy). Areas with many habitats tend to have many species/greater biodiversity, similarly areas with few habitats tend to have few species/lesser biodiversity.

### SIMILARITY OF THE STUDY AREAS

The study areas have been compared on the basis of simple Percentage Similarity as seen in the following table.

	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
AH	0	58.45%	61.40%	20.31%	49.63%	39.89%	40.00%	55.97%	38.92%	43.09%	47.35%	43.58%
BK	58.45 %	0	57.58%	36.49%	50.93%	37.52%	46.46%	55.33%	35.25%	36.51%	53.76%	43.61%
BL	61.40 %	57.58%	0	50.00%	50.07%	38.70%	46.23%	60.12%	36.56%	39.46%	54.23%	44.92%
JC	20.31 %	36.49%	50.00%	0	31.08%	26.82%	36.18%	35.94%	36.80%	24.00%	39.00%	25.68%
DI	49.63 %	50.93%	50.07%	31.08%	0	38.73%	36.95%	48.32%	26.16%	33.49%	43.31%	47.33%
EA	39.89 %	37.52%	38.70%	26.82%	38.73%	0	27.57%	37.36%	26.93%	35.65%	37.80%	38.87%
EP	40.00 %	46.46%	46.23%	36.18%	36.95%	27.57%	0	50.89%	29.91%	22.40%	45.15%	28.82%
ER	55.97 %	55.33%	60.12%	35.94%	48.32%	37.36%	50.89%	0	35.83%	34.70%	58.65%	41.31%
LF	38.92 %	35.25%	36.56%	36.80%	26.26%	26.93%	29.91%	35.83%	0	28.64%	38.90%	25.89%
LS	43.09 %	36.51%	39.46%	24.00%	33.49%	35.65%	22.40%	34.70%	28.64%	0	34.63%	36.59%
RS	47.25 %	53.76%	54.13%	39.00%	43.31%	37.80%	45.15%	58.65%	38.90%	34.63%	0	39.57%
TB	43.58 %	43.61%	44.92%	25.68%	47.33%	38.87%	28.82%	41.31%	25.89%	36.59%	39.57%	0

### SPECIES ENCOUNTERED

The following table shows the species encountered in each area.

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
5	<i>Eriocrania semipurpurella</i> (Steph.)							1	1				
6	<i>Acanthopteroctetes bimaculata</i> Davis			1									
19	<i>Sthenopis purpurascens</i> (Pack.)	1	1	1		1		1	1			1	
23	<i>Gazoryctra hyperboreus</i> Mösch.							1					
29	<i>Gazoryctra novigannus</i> (B. & Benj.)	1	1	1	1	1		1	1	1	1	1	
39-58	<i>Ectodoemia</i> sp.							1					
184	<i>Lampronia aenescens</i> (Wlsm.)	1						1			1		
185	<i>Lampronia sublustris</i> Braun		1					1					
186	<i>Lampronia humilis</i> (Wlsm.)							1?					
	<i>Adela</i> (Cauchas) sp.					1							
334	<i>Amydria effrentella</i> Clem.	1	1	1		1					1		1
399	<i>Tinea irrepta</i> Braun	1	1	1	1	1	1	1	1		1	1	1
412	<i>Niditinea orleansella</i> (Cham.)		1					1	1			1	

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
420	<i>Monopis rusticella</i> (Hbn.)						1	1					
421	<i>Monopis spilotella</i> Tengström	1	1	1		1	1	1	1	1	1	1	
not in	<i>Monopis laevigella</i> (D. & S.)	1		1	1			1	1		1	1	
471	<i>Lyonetia saliciella</i> Bsk.							1					
484-582	<i>Bucculatrix</i> sp.					1	1						
587	<i>Caloptilia alnivorella</i> (Cham.)			1	1	1		1	1				
589	<i>Caloptilia anthobaphes</i> (Meyr.)					1		1	1			1	
594.1	<i>Caloptilia betulivora</i> McD.		1			1		1	1				
595	sp. nr. <i>Caloptilia bimaculatella</i> (Ely)		1			1							
639	<i>Caloptilia stigmatella</i> (F.)			1	1	1		1	1				
639	sp. nr. <i>Caloptilia stigmatella</i> (F.)							1					
640	<i>Caloptilia strictella</i> (Wlk.)							1					
645	sp. nr. <i>Caloptilia syringella</i> (F.)									1			
645	<i>Caloptilia syringella</i> (F.)							1					
647	<i>Micrurapteryx salicifoliella</i> (Cham.)							1					
669	<i>Parornix conspicuella</i> (Dietz)		1	1	1	1		1	1			1	
692	<i>Acrocercops astericola</i> (F. & B.)		1	1		1		1					
	<i>Phyllonorycter</i> spp.	1				1		1	1			1	
798	<i>Phyllonorycter apparella</i> (H.-S.)?		1	1				1					1
855	<i>Agonopterix gelidella</i> (Bsk.)							1					
876	<i>Agonopterix rosaciliella</i> (Bsk.)		1		1			1	1				
878	<i>Agonopterix canadensis</i> (Bsk.)			1			1	1	1		1		
889	<i>Agonopterix argillacea</i> (Wlsm.)		1	1	1	1	1	1	1			1	
908	<i>Depressariodes ciniflonella</i> (Lienig & Zell.)	1	1	1	1	1	1	1	1	1		1	
910	<i>Martyrhilda fulva</i> (Wlsm.)	1		1	1	1	1				1		
911	<i>Bibarrambra allenella</i> (Wlsm.)							1					
912	<i>Semioscopis packardella</i> (Clem.)	1	1	1	1	1		1	1			1	
913	<i>Semioscopis merricella</i> (Dyar)		1		1			1					
914	<i>Semioscopis inornata</i> Wlsm.	1	1	1	1		1	1	1	1		1	
915	<i>Semioscopis megamicrella</i> Dyar		1	1	1	1		1	1	1		1	
916	<i>Semioscopis aureorella</i> Dyar	1	1	1	1	1		1	1	1		1	
918	<i>Depressaria atrostrigella</i> Clarke			1		1	1				1		1
922	<i>Depressaria pastinacella</i> (Dup.)		1		1		1		1			1	1
926	<i>Depressaria alienella</i> Bsk.	1		1		1		1	1			1	
942	<i>Nites grotella</i> (Rob.)		1										
944	<i>Nites betulella</i> (Bsk.)							1					
987	<i>Ethmia monticola</i> (Wlsm.)						1						
1055	<i>Brymblia quadrimaculella</i> (Cham.)							1					
1056	<i>Denisia haydenella</i> (Cham.)							1					
1058	<i>Polix coloradella</i> (Wlsm.)			1		1			1				

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
1077	<i>Perittia cygnodiella</i> (Bsk.)											1	
1083	<i>Elachista orestella</i> Bsk.							1					
1088.01	<i>Elachista virgatula</i> Kaila					1							
1113	<i>Elachista maritimella</i> McD.							1					
1138.1	<i>Glyphidocera hurlberti</i> Adamski	1	1	1		1	1	1	1	1	1	1	1
1221	<i>Holcocera immaculella</i> McD. ?	1	1	1		1		1	1				
1156	<i>Hypatopa titanella</i> McD.		1			1	1	1				1	
1271	<i>Coleophora pruniella</i> Clem.	1			1			1	1			1	
1283	<i>Coleophora cretaticostella</i> Clem.	1	1	1									
1313	<i>Coleophora rosaevorella</i> McD.					1							
1316	<i>Coleophora rosacella</i> Clem.	1	1	1			1		1				
1321	<i>Coleophora mcdunnoughiella</i> Oudejans						1						
1352	<i>Coleophora sparsipulvella</i> Cham.					1			1				
1367	<i>Coleophora brunneipennis</i> Braun			1					1			1	
1385	<i>Coleophora maritella</i> McD.											1	
1387	<i>Coleophora mayrella</i> (Hbn.)							1					
1388	<i>Coleophora trifolii</i> (Curt.)	1	1	1	1	1	1	1	1		1	1	1
1399	<i>Batrachedra praeangustata</i> (Haw.)			1		1		1	1				
1423	<i>Mompha albapalpella</i> (Cham.)			1				1					
not in	<i>Mompha raschkiella</i> (Zell.)							1					
1457	<i>Mompha tricristatella</i> (Cham.)		1	1				1					
1458	<i>Mompha unifasciella</i> (Cham.)			1				1	1				
1461	<i>Blastodacna curvilineella</i> (Cham.)							1				1	
1515	<i>Limnaecia phragmitella</i> Staint.	1		1		1	1	1	1			1	1
1615	<i>Walshia miscecolorella</i> (Cham.)	1				1	1		1		1		1
1655	<i>Scythris eboracensis</i> (Haw.)					1							
1662	<i>Asymmetrura impositella</i> (Zell.)							1					
1665	<i>Scythris mixaula</i> (Meyr.)			1									
1734	<i>Aristotelia devexella</i> Braun	1		1		1	1						
1738	<i>Aristotelia fungivorella</i> (Clem.)							1	1	1	1		
1761	<i>Aristotelia roseosuffusella</i> (Clem.)					1		1					
1762	<i>Aristotelia rubidella</i> (Clem.)					1							1
	<i>Aristotelia</i> type B?						1						
1771	<i>Evippe prunifoliella</i> Cham.						1?						
1792	<i>Coleotechnites atrupictella</i> (Dietz)				1	1		1	1				
1796	<i>Coleotechnites blastovora</i> McLeod		1	1	1	1	1	1	1	1		1	1
1826	<i>Coleotechnites piceaella</i> (Kft.)		1			1		1	1				
	<i>Telphusa</i> sp.							1					
1865	<i>Neotelphusa praefixa</i> (Braun)							1					
	<i>Xenolechia</i> ?			1					1				

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
1875	<i>Xenolechia aethiops</i> (Humph. & Westw.)							1					
1880	<i>Xenolechia velatella</i> (Bsk.)		1	1	1	1	1	1	1		1	1	
1881	<i>Teleiodes</i> ?							1					
1898	<i>Lita sexpunctella</i> (F.)				1								
1902	<i>Lita variabilis</i> (Bsk.)		1	1		1			1		1		1
1946	<i>Gelechia lynceola</i> Zell.	1	1	1	1	1	1	1	1	1		1	
	<i>Gnorimoschema</i> indet.		1	1				1			1		
1985	<i>Gnorimoschema gallaeasterella</i> (Kellcott)	1	1	1				1		1			
1986	<i>Gnorimoschema gallaesolidaginis</i> (Riley)		1	1								1	
2000	<i>Gnorimoschema septentrionella</i> Fyles	1	1	1		1		1	1	1	1		
2008	<i>Gnorimoschema vastificum</i> Braun	1?	1								1		
2040	<i>Caryocolum cassella</i> (Wlk.)		1	1	1	1							
	<i>Chionodes</i> ?			1		1		1				1	
2069.11	<i>Chionodes sattleri</i> Hodges					1		1	1				
2071.1	<i>Chionodes landryi</i> Hodges		1			1							
2090	<i>Chionodes lugubrella</i> (F.)									1			
2093	<i>Chionodes mediofuscella</i> (Clem.)	1	1	1	1	1	1	1	1		1	1	
2099	<i>Chionodes obscurusella</i> (Cham.)		1			1	1	1	1				
2111	<i>Chionodes psilopterus</i> (B. & Bsk.)	1	1	1	1	1	1	1	1		1	1	
2117	<i>Chionodes terminimaculella</i> (Kft.)	1	1	1	1	1		1	1			1	
	<i>Syncopacma</i> sp.			1?									
2123	<i>Chionodes viduella</i> (F.)			1		1							
2127	<i>Filatima abactella</i> (Clarke)	1	1	1	1	1	1	1	1	1	1	1	1
2193	<i>Aroga</i> near <i>paraplutella</i> (Bsk.)					1							1
2225	<i>Battaristis concinusella</i> (Cham.)		1										
2235	<i>Anacampsis fragariella</i> Bsk.				1	1							
2243	<i>Anacampsis niveopulvella</i> (Cham.)			1	1	1		1	1			1	1
2267	<i>Helcystogramma fernaldella</i> (Bsk.)		1	1	1	1	1	1	1		1	1	1
2291	<i>Dichomeris bilobella</i> (Zell.)									1			
2300	<i>Dichomeris levisella</i> Fyles						1	1		1			
2302	<i>Dichomeris setosella</i> (Clem.)		1		1	1		1		1		1	
2303	<i>Dichomeris simpliciella</i> Bsk.		1			1	1		1				
2308	<i>Dichomeris purpureofusca</i> (Wlsm.)	1	1	1		1					1		
2313	<i>Alucita montana</i> Barnes & Lindsey	1	1	1		1	1		1	1	1	1	1
2313	<i>Alucita adriendenisi</i> B. Landry & J.-F. Landry		1					1					1
2318	<i>Bondia comonana</i> (Kft.)						1	1					
2319	<i>Bondia crescentella</i> (Wlsm.)					1	1	1	1				
not in	<i>Wockia asperipunctella</i> (Bruand)							1					
2334	<i>Ochromolopis ramapoella</i> (Kft.)	1	1	1		1	1	1				1	
2360	<i>Rhizognothis interrupta</i> (Wlsm.)							1					

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
2363	<i>Plutella porectella</i> (L.)	1	1						1				
2365	<i>Plutella</i> (Greya) <i>vanella</i> Wlsm.							1	1				
2366	<i>Plutella xylostella</i> (L.)	1	1	1	1	1	1	1	1		1	1	1
2371	<i>Ypsolopha canariella</i> (Wlsm.)	1	1	1	1	1	1	1	1	1	1	1	1
2376	<i>Ypsolopha dentiferella</i> (Wlsm.)	1	1	1	1	1	1	1	1	1	1	1	1
2380	<i>Ypsolopha falciferella</i> (Wlsm.)		1	1	1	1	1	1	1			1	1
2392	<i>Ypsolopha senex</i> (Wlsm.)								1				
2413	<i>Swammerdamia caesiella</i> (Hbn.)	1						1					
	<i>Euhypnometoides</i> sp.							1					
2426	<i>Euhypnometoides gracilariella</i> (Bsk.)				1			1					
	<i>Argyresthia</i> sp.					1		1					
2449	<i>Argyresthia conjugella</i> Zell.	1				1	1	1	1			1	
2457	<i>Argyresthia goedartella</i> (L.)							1					
2467	<i>Argyresthia oreasella</i> (Clem.)		1	1		1		1	1	1			
2474	<i>Argyresthia pygmaeella</i> (Hbn.)		1					1					
2509	<i>Schreckensteinia festaliella</i> (Hbn.)							1					
2513	<i>Pennisetia marginata</i> (Harr.)								1				
2543	<i>Sessia tibialis</i> (Harr.)												1
2555	<i>Synanthedon fatifera</i> Hodges							1					
2572	<i>Synanthedon proxima</i> (Hy. Edw.)												1
2581	<i>Synanthedon polygona</i> (Hy. Edw.)					1							
	<i>Prochoreutis</i> n. sp. nr <i>myllerana</i>							1					
2635	<i>Caloreas occidentella</i> (Dyar)							1					
2651	<i>Choreutis diana</i> (Hbn.)				1			1					
2675	<i>Acosus centerensis</i> (Lint.)							1			1		
2676	<i>Acosus populi</i> (Wlk.)		1				1	1				1	1
2693	<i>Prionoxystus robiniae</i> (Peck)							1					
2706	<i>Bactra furfurana</i> (Haw.)			1							1		1
2707	<i>Bactra verutana</i> Zell.	1		1					1		1	1	
2743a	<i>Endothenia nubilana</i> (Clem.)		1	1		1	1	1	1	1	1	1	1
2745	<i>Endothenia albolineana</i> (Kft.)					1		1	1			1	
2753	<i>Apotomis capreana</i> (Hbn.)	1	1	1		1		1					
2755	<i>Apotomis funerea</i> (Meyr.)				1			1	1				
2765	<i>Apotomis deceptana</i> (Kft.)		1	1	1		1	1	1	1	1		
2766	<i>Apotomis dextrana</i> McD.	1	1	1	1	1	1	1	1	1	1	1	
2769	<i>Pseudosciaphila duplex</i> (Wlsm.)	1	1	1	1	1		1	1			1	1
2770	<i>Orthotaenia undulana</i> (D. & S.)	1	1	1	1	1	1	1	1	1	1	1	1
	<i>Olethreutes inornatana</i> or <i>quadrifidus</i>		1	1		1		1	1				
2788	<i>Olethreutes inornatana</i> (Clem.)					1							
2794	<i>Olethreutes quadrifidus</i> (Zell.)				1	1					1	1	

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
2821	<i>Olethreutes appendicea</i> (Zell.)	1	1			1		1	1				
2835	<i>Olethreutes galaxana</i> Kft.	1		1		1			1				1
2839	<i>Olethreutes puncticostana</i> (Wlk.)		1		1			1					
2848	<i>Olethreutes bipartitana</i> (Clem.)	1		1				1	1				
2859	<i>Olethreutes cespitana</i> (Hbn.)												1
2860	<i>Hedya separatana</i> (Kft.)		1				1	1	1				
2861	<i>Hedya ochroleucana</i> (Frölich)	1	1	1	1	1		1	1	1	1	1	1
2862	<i>Hedya nubiferana</i> (Haw.)	1	1	1		1					1		1
2900	<i>Petrova burkeana</i> (Kft.)		1			1		1	1				
2905	<i>Barbara mappana</i> Free.							1					
2911	<i>Phaneta awemeana</i> (Kft.)	1	1					1					
2913	<i>Phaneta umbrastriana</i> (Kft.)	1		1									
2916	<i>Phaneta formosana</i> (Clem.)							1	1			1	
2926	<i>Phaneta verna</i> Miller		1	1				1					
2929	<i>Phaneta ochroterminana</i> (Kft.)		1									1	
2933	<i>Phaneta marmontana</i> (Kft.)	1	1	1				1	1		1	1	
2937	<i>Phaneta parmatana</i> (Clem.)	1		1		1		1			1		
2940	<i>Phaneta convergana</i> (McD.)		1	1									
2947	<i>Phaneta influana</i> (Heinr.)					1			1				
2949	<i>Phaneta lapidana</i> (Wlsm.)	1						1				1	
2951	<i>Phaneta ornata</i> (Heinr.)		1										
2952	<i>Phaneta elongana</i> (Wlsm.)						1	1					
2956	<i>Phaneta tarandana</i> (Mösch.)		1	1		1							1
2965	<i>Phaneta fertoriana</i> (Heinr.)		1	1		1	1				1	1	
2966	<i>Phaneta crassana</i> (McD.)												1
2969	<i>Phaneta indagatricana</i> (Heinr.)	1	1	1	1	1	1	1	1		1		
2972	<i>Phaneta dorsiatomana</i> (Kft.)	1	1		1	1							
2973	<i>Phaneta striatana</i> (Clem.)	1		1		1			1		1		
2977	<i>Phaneta modicellana</i> (Heinr.)					1			1				
2980	<i>Phaneta pallidicostana</i> (Wlsm.)	1	1	1		1	1		1		1	1	
2983	<i>Phaneta salmicolorana</i> (Heinr.)	1											
2984	<i>Phaneta artemisiana</i> (Wlsm.)	1											
2985	<i>Phaneta infimbriana</i> (Dyar)	1	1	1	1	1	1		1	1			1
2986	<i>Phaneta octopunctana</i> (Wlsm.)			1		1							1
3005	<i>Phaneta offectalis</i> (Hulst)		1	1								1	
	<i>Eucosma</i> n. sp.		1						1				1
	<i>Eucosma</i> n. sp. 1 Wright					1							
3014	<i>Eucosma ridingsana</i> (Rob.)	1	1	1		1	1		1	1	1		
3031	<i>Eucosma serpentana</i> (Wlsm.)		1	1		1	1		1		1		1
3032	<i>Eucosma ophionana</i> McD.					1	1						



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
3035	<i>Eucosma morrisoni</i> (Wlsm.)		1	1		1					1		1
3035	form of <i>Eucosma morrisoni</i> (Wlsm.)			1									
3037	<i>Eucosma agricolana</i> (Wlsm.)	1	1	1		1	1		1		1	1	1
3039	nr <i>Eucosma barbara</i> Miller										1		
3042	<i>Eucosma vagana</i> McD.						1			1			
3049	<i>Eucosma serapicana</i> (Heinr.)						1						
3104	<i>Eucosma mediostriata</i> (Wlsm.)					1							
3116	<i>Eucosma dorsisignatana</i> (Clem.)	1	1	1		1		1					1
3116a	<i>Eucosma similiana</i> (Clem.)			1									
3119	<i>Eucosma juncitciliana</i> (Wlsm.)	1	1	1		1					1	1	
3133	<i>Eucosma consobrinana</i> Heinr.					1	1						
3142	<i>Eucosma cataclystana</i> (Wlk.)	1	1	1		1	1		1		1		1
	<i>Eucosma</i> or <i>Pelochrista</i>					1	1						
not in	<i>Pelochrista kingi</i> Wright					1							
not in	<i>Pelochrista gelattana</i> Wright					1							
	<i>Pelochrista</i> n. sp. 3 Wright						1						
3149	<i>Pelochrista argenteana</i> (Wlsm.)		1			1	1						1
3151a	<i>Pelochrista scintillana</i> (Clem.)					1					1		1
3156	<i>Pelochrista occipitana</i> (Zell.)						1						
3161	<i>Pelochrista fuscosparsa</i> (Wlsm.)					1							
3173	<i>Epiblema abruptana</i> (Kft.) ?												1
3185	<i>Epiblema benignatum</i> (McD.)					1					1		
3205	<i>Epiblema resumptana</i> (Wlk.)										1		
3209	<i>Notocelia purpurissitana</i> Heinr.			1		1			1				
3211	<i>Notocelia culminana</i> (Wlsm.)	1	1	1	1	1	1	1	1	1	1		
	<i>Sonia</i> n. sp.						1						
3223	<i>Gypsonoma fasciolana</i> (Clem.)	1	1	1	1	1		1	1	1	1	1	1
3227	<i>Gypsonoma substitutionis</i> Heinr.	1	1	1	1	1		1	1	1			
3228	<i>Gypsonoma salicolana</i> (Clem.)				1			1					
3229	<i>Gypsonoma adjuncta</i> Heinr.					1		1	1			1	
3230	<i>Proteoteras aesculana</i> Riley		1			1			1				
3232	<i>Proteoteras willingana</i> (Kft.)								1				
3240	<i>Zeiraphera canadensis</i> Mutuura & Free.							1	1				
3242	<i>Zeiraphera fortunana</i> (Kft.)							1	1				
3248	<i>Pseudexentera oregonana</i> (Wlsm.)	1	1	1	1	1	1	1	1	1		1	
3269	<i>Griselda radicana</i> Heinr.					1		1	1				
3276	<i>Rhopobota naevana</i> (Haw.)			1		1		1					
3283	<i>Epipotia solandriana</i> (L.)		1					1					
3288	<i>Epipotia castaneana</i> (Wlsm.)	1	1	1		1		1	1	1	1	1	
3296	<i>Epipotia albicapitana</i> (Kft.)					1						1	

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
3302	<i>Epinotia rectiplicana</i> (Wlsm.)							1	1				
3306	<i>Epinotia nisella</i> Cl.	1	1	1	1	1	1	1	1	1		1	1
3306	<i>Epinotia nisella</i> Cl. form							1	1				1
3307	<i>Epinotia criddleana</i> Kft.	1	1	1	1	1		1	1	1		1	1
3310	<i>Epinotia transmissana</i> (Wlk.)	1	1				1	1					
3324	<i>Epinotia columbia</i> sensu R.L. Brown					1							
3342	<i>Epinotia lomonana</i> (Kft.)	1	1	1		1	1		1			1	1
3344	<i>Epinotia medioplagata</i> (Wlsm.)							1					
3345	<i>Epinotia cruciana</i> (L.)							1					
3351	<i>Epinotia lindana</i> (Fern.)	1	1	1		1		1	1	1		1	1
3354	<i>Ancylis nubeculana</i> (Clem.)					1							
3355	<i>Ancylis subaequana</i> (Zell.)		1	1		1		1	1			1	
3358	<i>Ancylis discigerana</i> (Wlk.)		1					1					
3366	<i>Ancylis laciniana</i> (Zell.)							1	1			1	
3374	<i>Ancylis comptana</i> (Frölich)	1		1		1		1	1				
3379	<i>Ancylis diminutana</i> (Haw.)							1			1		
3382	<i>Ancylis unguicella</i> (L.)		1		1	1							1
3384	<i>Ancylis mediofasciana</i> (Clem.)	1	1	1	1	1		1				1	
3386	<i>Ancylis tineana</i> (Hbn.)					1		1					
3391	<i>Hystrichophora stygiana</i> (Dyar)	1	1	1		1	1						1
3396	<i>Hystrichophora ochreicostana</i> (Wlsm.)					1							
3399	<i>Hystrichophora vestaliana</i> (Zell.)					1							
3404	<i>Dichrorampha simulana</i> (Wlsm.)					1		1					
3406	<i>Dichrorampha bittana</i> (Bsk.)					1	1						
3412	<i>Dichrorampha sedatana</i> (Bsk.)					1							
3428	<i>Grapholita packardi</i> Zell.							1	1				
3437	<i>Grapholita lunatana</i> Wlsm.				1			1	1				
3439	<i>Grapholita interstinctana</i> (Clem.)							1					
3455	<i>Cydia strobilella</i> (L.)					1		1					
3460	<i>Cydia ingrata</i> (Heinr.)				1	1		1				1	
3463	<i>Cydia populana</i> (Bsk.)	1				1		1	1			1	
3465	<i>Cydia flexiloqua</i> (Heinr.)	1		1		1	1	1	1	1		1	
3466	<i>Cydia youngana</i> (Kft.)		1						1	1			
3467	<i>Cydia nigricana</i> (F.)					1		1		1			
3476	<i>Cydia prosperana</i> (Kft.)							1					
3480	<i>Cydia lautiuscula</i> (Heinr.)							1	1			1	
3502	<i>Croesia albicomana</i> (Clem.)	1	1	1		1	1	1	1	1	1	1	1
3504	<i>Croesia curvalana</i> (Kft.)		1										
3506	<i>Acleris macdunnoughi</i> Obr.			1				1		1		1	
3508	<i>Acleris caliginosana</i> (Wlk.)							1	1				

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
3514	<i>Acleris cervinana</i> (Fern.)		1		1		1	1	1			1	
3518	<i>Acleris braunana</i> (McD.)							1					
3520	<i>Acleris obligatoria</i> (Park & Raz.)		1		1			1	1			1	
3521	<i>Acleris semiannula</i> (Rob.)								1				1?
3522	<i>Acleris implexana</i> (Wlk.)								1?				
3525	<i>Acleris forbesana</i> (McD.)	1	1	1	1	1	1	1	1				
3529	<i>Acleris oxycoccana</i> (Pack.)			1		1		1	1			1	
3531	<i>Acleris hastiana</i> (L.)							1	1				
3533	<i>Acleris celiana</i> (Rob.)							1					
3533	<i>Acleris celiana</i> f. <i>albilineana</i>							1					
3536	<i>Acleris robinsoniana</i> (Fbs.)	1	1	1	1	1		1	1			1	1
	<i>Acleris nigrolinea</i> /maximana complex							1				1	
3540	<i>Acleris logiana</i> (Cl.)							1				1	
3541	<i>Acleris flavivittana</i> (Clem.)							1					
3548	<i>Acleris variana</i> (Fern.)		1		1	1		1	1		1		
3549	<i>Acleris maccana</i> (Tr.)		1		1			1	1			1	
3552	<i>Acleris scabrana</i> (D. & S.)		1?					1					
	<i>Acleris bowmanana</i> /hudsoniana complex						1	1	1				
3553	<i>Acleris bowmanana</i> (McD.)			1				1	1	1		1	
3556	<i>Acleris nigrolinea</i> (Rob.)	1	1	1	1			1	1	1		1	
3557	<i>Acleris maximana</i> (B. & Bsk.)				1			1	1			1	
3559	<i>Acleris emargana</i> (F.)			1		1		1					
3561	<i>Acleris hudsoniana</i> (Wlk.) complex		1	1	1			1	1				1
3565	<i>Eulia ministrana</i> (L.)		1					1	1				
3568	<i>Eana argentana</i> (Cl.)			1	1	1	1	1	1	1			
3570	<i>Eana osseana</i> (Scop.)							1					
3580	<i>Decodes horarianus</i> (Wlsm.)	1		1		1		1	1			1	1
	<i>Decodes mcdunnoughi</i> Powell							1					
3589	<i>Anopina wellingtoniana</i> (Kft.)		1	1	1			1				1	
3595	<i>Pandemis canadana</i> Kft.	1	1	1		1	1	1	1	1	1	1	1
3621	<i>Argyrotaenia quadrifasciana</i> (Fern.)		1	1		1			1				
3625	<i>Argyrotaenia mariana</i> (Fern.)		1	1			1	1				1	
3635	<i>Choristoneura rosaceana</i> (Harr.)	1	1	1	1	1	1	1	1	1	1	1	
3637	<i>Choristoneura conflictana</i> (Wlk.)	1	1	1	1	1	1	1	1		1	1	
3638	<i>Choristoneura fumiferana</i> (Clem.)		1	1		1		1	1				1
3648	<i>Archips argyrospila</i> (Wlk.)		1	1		1		1	1	1		1	1
3658	<i>Archips purpurana</i> (Clem.)	1				1			1			1	
3661	<i>Archips cerasivorana</i> (Fitch)			1		1	1				1		
3664	<i>Archips striana</i> (Fern.)							1					
3665	<i>Archips alberta</i> (McD.)							1					



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
4727	<i>Eudonia albertainalis</i> (Dyar)							1					
4737	<i>Eudonia lugubralis</i> (Wlk.)								1				
4748	<i>Munroessa icciusalis</i> (Wlk.)							1					
4755	<i>Synclita oblitalis</i> (Wlk.)	1	1					1	1			1	
4759	<i>Paraponyx maculalis</i> (Clem.)			1				1					
4773	<i>Petrophila kearfottalis</i> (B. & McD.)	1		1	1	1			1		1	1	1
4826	<i>Mimoschinia rufofascialis</i> (Steph.)					1	1						
4897	<i>Evergestis pallidata</i> (Hufn.)	1	1					1	1				
4935	<i>Saucrobotys fumoferalis</i> (Hulst)							1					
4950	<i>Fumibotys fumalis</i> (Gn.)	1	1	1			1					1	
4951	<i>Perispasta caeculalis</i> Zell.	1	1	1	1	1	1	1	1			1	1
4953	<i>Phlyctaenia coronata</i> (Hufn.)				1			1	1			1	
4957	<i>Mutuuraia mysippusalis</i> (Wlk.)		1	1		1	1	1				1	
4958	<i>Anania funebris</i> Ström.							1		1			
4974	<i>Achyra bifidalis</i> (F.)		1			1							1
4987	<i>Sitochroa chortalis</i> (Grt.)	1	1	1		1			1	1	1	1	1
4995	<i>Loxostege lepidalis</i> (Hulst)		1										
5004	<i>Loxostege sticticalis</i> (L.)	1	1	1	1	1	1	1	1		1	1	1
5017	<i>Loxostege cereralis</i> (Zell.)	1		1	1	1	1				1		1
5032	<i>Pyrausta nicalis</i> (Grt.)	1	1	1		1	1	1	1			1	
5034	<i>Pyrausta signatalis</i> (Wlk.)	1				1					1		
5056	<i>Pyrausta generosa</i> (G. & R.)					1		1					
5058	<i>Pyrausta orphisalis</i> Wlk.					1							
5065	<i>Pyrausta scurralis</i> (Hulst)		1	1									
5068	<i>Pyrausta unifascialis</i> (Pack.)		1	1		1		1			1		1
5074	<i>Pyrausta fodinalis</i> (Led.)	1	1	1	1	1			1	1	1	1	1
5075	<i>Pyrausta socialis</i> (Grt.)	1	1	1		1							1
5079	<i>Udea rubigalis</i> (Gn.)	1						1					
5099	<i>Udea itysalis</i> (Wlk.)	1			1	1		1	1	1		1	1
5101	<i>Udea radiosalis</i> Mösch.					1							
5128	<i>Choristostigma plumbosignalis</i> (Fern.)	1	1	1		1		1	1	1		1	
5135	<i>Mecyna submedialis</i> (Grt.)	1	1	1	1	1	1		1		1	1	1
5137	<i>Mecyna mustelinalis</i> (Pack.)	1	1	1		1	1						1
5156	<i>Nomophila nearctica</i> Mun.		1			1	1	1	1	1	1	1	1
5255	<i>Diastictis ventralis</i> (G. & R.)					1							
5276	<i>Herpetogramma abdominalis</i> (Zell.)											1	
5299	<i>Acentria ephemerella</i> (Denis & Schiffermüller)	1	1		1	1			1		1	1	1
5316	<i>Donacaula melinella</i> (Clem.)	1	1	1			1	1	1		1		1
5319	<i>Donacaula longirostrella</i> (Clem.)		1	1							1		1
5339	<i>Crambus pascuellus</i> (L.)	1					1	1					

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
5343a	<i>Crambus perlellus innotatellus</i> Wlk.	1	1	1	1	1	1	1	1	1	1	1	1
5344	<i>Crambus unistriatellus</i> Pack.			1				1	1				
5345a	<i>Crambus whitmerellus browni</i> Klots	1		1		1		1	1		1		1
5347	<i>Crambus awemellus</i> McD.							1					
5352	<i>Crambus trichusalis</i> (Hulst)		1			1							
	<i>Crambus ainsliellus</i> Klots/ <i>leachellus</i> (Zinck.)	1	1	1		1		1	1			1	1
5354	<i>Crambus ainsliellus</i> Klots	1	1			1	1		1		1	1	
5365	<i>Crambus girardellus</i> Clem.	1		1				1					
5379	<i>Neodactria luteolella</i> Clem.	1	1	1	1	1			1		1	1	1
5391	<i>Chrysoteuchia topiaria</i> (Zell.)	1	1	1	1	1	1	1	1	1	1	1	1
5393	<i>Raphiptera argillaceella</i> (Pack.)												1
5394	<i>Platytes vobisne</i> Dyar					1							
5395	<i>Agriphila biarmica</i> (Tengström)							1					
5399	<i>Agriphila ruricolella</i> (Zell.)	1	1	1	1	1	1	1	1	1	1	1	1
5403	<i>Agriphila vulgivagella</i> (Clem.)		1	1		1	1	1			1	1	1
5404	<i>Agriphila attenuata</i> Grote		1				1	1			1		1
5408	<i>Catoptria latiradiella</i> (Wlk.)					1		1					1
	<i>Pediasia aridella edmontella</i> & <i>laciniellus</i>	1	1	1	1	1	1	1	1	1	1	1	1
5411	<i>Pediasia truncatella</i> (Zett.)		1					1					
5413	<i>Pediasia trisecta</i> (Wlk.)	1	1	1		1	1	1	1		1	1	1
5415	<i>Pediasia ericella</i> (B. & McD.)	1	1	1		1		1			1	1	
5416	<i>Pediasia abnaki</i> Klots				1			1					1
5417	<i>Pediasia dorsipunctella</i> (Kft.)	1	1	1	1	1	1	1	1	1	1	1	1
5439b	<i>Thaumtops pexella coloradella</i> Kft.			1					1			1	
5441a	<i>Thaumtops fernaldella nortella</i> Kft.		1			1					1		1
5453	<i>Tehama bonifatella</i> (Hulst)							1					
5455	<i>Euchromius californicalis</i> (Pack.)			1		1	1						1
5474	<i>Acigona comptulatis</i> (Hulst)	1	1	1		1			1			1	
5510	<i>Pyralis farinalis</i> L.						1		1				
5518	<i>Aglossa cuprina</i> Zell.												1
5533	<i>Herculia olinalis</i> (Gn.)	1		1					1				
5585	<i>Toripalpus trabalis</i> (Grt.)					1	1						1
5606	<i>Tetralopha asperatella</i> (Clem.)	1	1	1	1	1		1	1			1	
5655	<i>Acrobasis tricolorella</i> Grt.	1	1	1		1			1		1	1	1
5718	<i>Myelopsis subtetricella</i> (Rag.)	1	1	1	1	1		1	1	1		1	1
5719	<i>Myelopsis minutularia</i> (Hulst)					1	1		1			1	1
5721	<i>Apomyeloidis bistriatella</i> (Hulst)	1	1	1	1	1		1	1	1		1	
	<i>Pima boiduvaliella</i> & <i>fulvirugella</i>	1				1	1		1				1
5758	<i>Interjectio niwiella</i> (Hulst)												1
5759	<i>Ambesa laetella</i> Grt.		1			1							1

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
5764	<i>Catastia actualis</i> (Hulst)	1				1	1					1	
5783	<i>Ortholepis pasadamia</i> (Dyar)							1		1			
5787	<i>Meroptera pravella</i> (Grt.)	1	1	1	1	1	1	1	1			1	
5792	<i>Nephopterix fernaldella</i> (Rag.)					1	1				1		
5799	<i>Nephopterix basilaris</i> Zell.	1	1	1	1	1			1			1	1
5812	<i>Telethusia ovalis</i> (Pack.)	1		1		1		1	1				
5824	<i>Pyla aequivoca</i> Heinr.			1									
5827	<i>Pyla aenigmatica</i> Heinr.	1	1	1	1	1			1				1
5829	<i>Pyla fusca</i> (Haw.)		1		1	1	1	1	1			1	1
5831	<i>Pyla hanhamella</i> Dyar					1							
5841	<i>Dioryctria abietivorella</i> (Grt.)		1	1				1	1				
5843	<i>Dioryctria reniculelloides</i> Mutuura & Mun.		1			1	1	1	1				1
5844	<i>Dioryctria pseudotsugella</i> Mun.		1										
5870	<i>Sarata caudelella</i> (Dyar)			1		1							
5886	<i>Lipographis fenestrella</i> (Pack.)		1			1					1		1
5918	<i>Hulstia undulatella</i> (Clem.)	1		1		1	1		1		1	1	1
5936	<i>Homoeosoma stipiticellum</i> Grt.					1							
5946	<i>Phycitoides mucidellum</i> (Rag.)	1	1			1	1		1		1	1	1
5968	<i>Zophodia grossulariella</i> (Hbn.)	1	1	1	1	1	1	1	1	1	1	1	
5971	<i>Melitara dentata</i> (Grt.)	1				1							1
5999	<i>Eulogia ochrifrontella</i> (Zell.)	1	1			1		1	1	1		1	
6007c	<i>Vitula seratilineella</i> Rag.	1	1			1	1	1	1				
6014	<i>Caudellia nigrella</i> (Hulst)							1					
6038	<i>Anerastia lotella</i> (Hbn.)		1	1	1	1			1	1		1	1
6053	<i>Peoria approximella</i> (Wlk.)		1			1	1						1
	Indet Pterophorids	1	1	1		1	1	1	1		1	1	1
6092	<i>Geina tenuidactyla</i> (Fitch)							1					
6094	<i>Capperia ningoris</i> (Wlsm.)		1					1					
6102	<i>Dejongia lobidactyla</i> (Fitch)		1			1		1	1				1
6107	<i>Gillmeria pallidactyla</i> (Haw.)			1		1	1	1			1		1
6109	<i>Platyptilia carduidactyla</i> (Riley)		1					1					
6118	<i>Platyptilia pica</i>				1			1	1	1			
6130	<i>Paraplatyptilia albiciliata</i> (Wlsm.)		1										
6149	<i>Stenoptilia coloradensis</i> Fern.							1			1		
6166	<i>Oidaematophorus mathewianus</i> (Zell.)	1	1	1		1		1	1		1		
6170	<i>Oidaematophorus phaceliae</i> McD.							1					
6171	<i>Oidaematophorus griseescens</i> Wlsm.					1							
6185	<i>Hellinsia brucei</i> (Fern.)			1			1	1					
6203	<i>Hellinsia homodactylus</i> (Wlk.)			1		1		1					
6205	<i>Hellinsia pectodactylus</i> (Staudinger)	1	1	1				1	1	1		1	

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
6213	<i>Hellinsia lactodactylus</i> (Cham.)											1	
6232	<i>Hellinsia arion</i> (B. & L.)	1	1	1						1			
6234	<i>Emmelina monodactyla</i> (L.)		1										
6235	<i>Habrosyne scripta</i> (Gosse)		1	1	1		1	1	1			1	
6237	<i>Pseudothyatira cymatophoroides</i> (Gn.)	1						1					1
6240	<i>Euthyatira pudens</i> (Gn.)		1	1	1	1		1	1		1	1	
6248	<i>Ceranemota albertae</i> Clarke	1	1	1	1	1	1		1		1	1	1
6251	<i>Drepana arcuata</i> Wlk.		1		1			1					1
6252	<i>Drepana bilineata</i> (Pack.)		1		1	1	1	1					1
6253	<i>Eudeilinea herminiata</i> (Gn.)							1	1			1	
6255	<i>Oreta rosea</i> (Wlk.)	1	1			1		1				1	
6256	<i>Archiearis infans</i> (Mösch.)							1					
6270	<i>Protitame virginalis</i> (Hulst)	1	1	1	1	1		1	1	1		1	
6272	<i>Eumacaria latiferrugata</i> (Wlk.)					1	1		1				1
6279	<i>Macaria occiduaria</i> (Pack.)	1	1	1		1	1	1	1	1	1	1	
6283	<i>Itame sulphurea</i> Pack.	1		1				1					
6286	<i>Macaria brunneata</i> (Thunb.)							1					
6389	<i>Digrammia decorata</i> (Grossb.)												1
6290	<i>Macaria loricaria</i> (Evers.)	1	1	1	1	1		1	1	1	1	1	
6292	<i>Macaria exauspicata</i> (Wlk.)	1	1			1		1	1			1	
6304	<i>Macaria bitactata</i> (Wlk.)	1		1		1	1		1		1		1
6326	<i>Macaria aemulataria</i> (Wlk.)	1						1					
6330	<i>Semiothisa ulsterata</i> (Pears.)							1					
6344	<i>Macaria signaria</i> (Hbn.)		1		1	1		1	1				
6346a	<i>Macaria unipunctaria perplexa</i> (McD.)							1					
6373	<i>Digrammia denticulata</i> Grt.	1	1	1	1	1	1			1	1	1	1
6380	<i>Digrammia californiaria</i> (Pack.)			1		1	1						1
6389	<i>Digrammia decorata</i> (Grossb.)		1										1
6394	<i>Digrammia rippertaria</i> (Dup.)		1	1		1		1	1			1	1
6396	<i>Digrammia neptaria</i> (Gn.)		1	1		1	1		1		1	1	1
6397	<i>Digrammia mellistrigata</i> (Grt.)	1	1	1					1		1	1	1
6399	<i>Digrammia subminiata</i> (Pack.)												1
64298	<i>Orthofidonia exornata</i> (Wlk.)							1					
6431	<i>Hesperumia sulphuraria</i> Pack.	1	1			1	1					1	1
6436	<i>Ematurga amitaria</i> (Gn.)									1			
6570	<i>Aethalura intertexta</i> (Wlk.)		1					1					
6588	<i>Iridopsis larvaria</i> (Gn.)							1				1	
6597	<i>Ectropis crepuscularia</i> (D. & S.)		1		1		1	1	1			1	
6598	<i>Protoboarmia porcelaria</i> (Gn.)				1	1		1	1			1	1
6639	<i>Eufidonia discospilata</i> (Wlk.)							1					



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
6640	<i>Biston betularia</i> (L.)	1	1	1		1	1	1	1	1		1	1
6651	<i>Lycia ursaria</i> (Wlk.)	1	1	1	1		1	1	1	1	1	1	1
6654	<i>Hypagyrtis unipunctata</i> (Haw.)		1			1				1		1	
6665	<i>Erannis tiliaria</i> (Harr.)	1	1	1				1	1	1		1	
6666	<i>Lomographa semiclarata</i> (Wlk.)			1	1	1		1				1	
6677	<i>Cabera erythemaria</i> Gn.	1	1	1	1	1	1	1	1	1	1	1	1
6678	<i>Cabera variolaria</i> Gn.	1	1	1		1	1	1	1	1	1	1	1
6715	<i>Aspitates aberratus</i> (Hy. Edw.)	1	1	1		1	1				1		1
6726	<i>Euchlaena obtusaria</i> (Hbn.)	1	1	1		1		1	1	1	1	1	1
6729	<i>Euchlaena johnsonaria</i> (Fitch)	1	1	1	1	1	1	1	1		1	1	1
6731	<i>Euchlaena madusaria</i> (Wlk.)	1	1			1							1
6734	<i>Euchlaena marginaria</i> (Minot)	1	1	1		1	1	1		1		1	1
6737	<i>Euchlaena tigrinaria</i> (Gn.)	1	1	1	1	1	1	1	1	1	1	1	1
6740	<i>Xanthotype urticaria</i> Swett	1		1		1		1	1				1
6743	<i>Xanthotype sospeta</i> (Drury)		1	1	1	1	1	1	1	1	1	1	1
6753	<i>Pero honestaria</i> (Wlk.)						1						
6755	<i>Pero morrisonaria</i> (Hy. Edw.)	1	1	1	1	1	1	1	1		1	1	1
6796	<i>Campaea perlata</i> (Gn.)	1	1	1	1	1		1	1	1			
6797	<i>Ennomos magnaria</i> Gn.	1	1	1		1	1	1	1	1		1	
6798	<i>Ennomos subsignaria</i> (Hbn.)						1						
6799	<i>Spodolepis substriaria</i> (Hulst)				1								
6817	<i>Selenia alciphearia</i> (Wlk.)	1	1	1	1			1	1	1		1	
	<i>Selenia alciphearia</i> or <i>kentaria</i>			1			1	1					
6818	<i>Selenia kentaria</i> (G. & R.)		1	1	1			1	1	1		1	
6819	<i>Metanema inatomaria</i> Gn.	1	1	1	1	1		1	1			1	
6820	<i>Metanema determinata</i> Wlk.	1	1	1	1	1	1	1	1	1		1	1
6821	<i>Metarranthis warnerae</i> (Harv.)												1
6822	<i>Metarranthis duaria</i> (Gn.)	1	1	1	1	1	1	1	1	1	1	1	1
6836	<i>Anagoga occiduaria</i> (Wlk.)	1	1	1		1	1	1	1	1		1	
6837	<i>Probole alienaria</i> (H.-S.)	1	1	1		1	1	1	1			1	1
6838	<i>Probole amicaria</i> (H.-S.)	1	1	1	1	1	1	1	1			1	1
6842	<i>Plagodis phlogosaria</i> (Gn.)	1	1	1	1	1		1	1	1		1	
6844	<i>Plagodis alcoolaria</i> (Gn.)				1			1					
6860	<i>Neoterpes trianguliferata</i> (Pack.)						1						
6863	<i>Caripeta divisata</i> Wlk.		1		1	1		1					
6885	<i>Besma quercivoraria</i> (Gn.)							1					
6888	<i>Lambdina fiscellaria</i> (Gn.)							1					
6906	<i>Nepytia canosaria</i> (Wlk.)								1				
6912	<i>Sicya macularia</i> (Harr.)	1	1	1	1	1	1	1	1	1		1	
6926	<i>Plataea trilinearia</i> (Pack.)					1							1

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
6954	<i>Synaxis jubararia</i> (Hulst)	1	1	1				1	1	1	1	1	1
6963	<i>Tetracis crocallata</i> Gn.		1	1				1	1		1	1	1
6964	<i>Tetracis cachexiata</i> Gn.						1						1
6982	<i>Prochoerodes transversata</i> (Drury)	1	1	1	1	1	1	1	1	1	1	1	1
7009	<i>Nematocampa resistaria</i> (H.-S.)		1	1	1			1	1	1			
7018	<i>Nemoria unitaria</i> (Pack.)	1	1	1		1			1	1		1	1
7048	<i>Nemoria mimosaria</i> (Gn.)											1	
7058	<i>Synchlora aerata</i> (F.)	1	1	1		1			1		1	1	1
7065	<i>Chaetoscelis bistriaria</i> (Pack.)					1							1
7085	<i>Mesothea incertata</i> (Wlk.)			1				1					
7125	<i>Idaea rotundopennata</i> (Pack.)		1		1	1		1		1		1	1
7139	<i>Cyclophora pendulinaria</i> (Gn.)					1		1					
7159	<i>Scopula limboundata</i> (Haw.)	1	1	1	1	1			1	1		1	1
7162	<i>Scopula ancillata</i> (Hulst)		1										
7164	<i>Scopula junctaria</i> (Wlk.)	1		1		1	1	1	1	1		1	1
7166	<i>Scopula frigidaria</i> Mösch.	1		1	1	1	1	1	1		1	1	
7169	<i>Scopula inductata</i> Gn.	1	1	1		1	1	1	1		1	1	1
7172	<i>Scopula sentinaria</i> (Gey.)					1	1						1
7180	<i>Leptostales ferruminaria</i> (Zell.)		1			1	1						
7182	<i>Dysstroma citrata</i> (L.)	1	1	1	1	1	1	1	1	1		1	
7187	<i>Dysstroma truncata</i> (Hufn.)		1	1				1					
7189	<i>Dysstroma hersiliata</i> (Gn.)	1		1		1		1	1			1	
7194	<i>Dysstroma brunneata</i> (Pack.)					1		1	1				
7199	<i>Eulithis propulsata</i> (Wlk.)	1	1	1	1	1	1	1	1				1
7201	<i>Eulithis testata</i> (L.)		1	1	1			1	1	1	1	1	1
7205	<i>Eulithis flavibrunneata</i> (McD.)	1		1	1			1	1	1			1
7206	<i>Eulithis explanata</i> (Wlk.)		1					1					
7207	<i>Eulithis xyliina</i> (Hulst)	1	1	1		1	1	1	1			1	1
7210	<i>Eustroma semiatrata</i> (Hulst)							1					
7213	<i>Ecliptopera silaceata</i> (D. & S.)			1				1	1			1	
7216	<i>Plemyria georgii</i> Hulst			1				1	1				
7217	<i>Thera juniperata</i> (L.)								1				
7219	<i>Thera otisi</i> (Dyar)					1							1
7229	<i>Hydriomena perfracta</i> Swett			1				1	1			1	
7235	<i>Hydriomena divisaria</i> (Wlk.)		1					1					
7254	<i>Hydriomena ruberata</i> (Frey.)	1	1	1		1		1	1	1	1		
7257	<i>Hydriomena furcata</i> (Thunb.)	1	1	1	1	1		1	1		1		
7285	<i>Triphosa haesitata</i> (Gn.)	1						1	1				
7291	<i>Hydria undulata</i> (L.)	1	1					1	1				
7293	<i>Rheumaptera hastata</i> (L.)							1					

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
7294	<i>Rheumaptera subhastata</i> (Nolcken)												1
7307	<i>Mesoleuca ruficillata</i> (Gn.)					1		1					1
7313	<i>Spargania luctuata</i> (D. & S.)				1			1	1			1	
7316	<i>Perizoma basaliata</i> (Wlk.)		1	1	1	1		1					
7328	<i>Perizoma custodiata</i> (Gn.)		1			1							1
7329	<i>Anticlea vasiliata</i> Gn.	1	1	1	1		1	1	1	1		1	
7330	<i>Anticlea multiferata</i> (Wlk.)							1					
7349	<i>Stamnodes topazata</i> (Stkr.)				1			1					
7368	<i>Xanthorhoe labradorensis</i> (Pack.)		1				1	1					
7370	<i>Xanthorhoe abrasaria</i> (H.-S.)		1		1	1		1					
7371	<i>Xanthorhoe iduata</i> (Gn.)							1					
7384	<i>Xanthorhoe munitata</i> (Hbn.)		1	1				1	1				
7388	<i>Xanthorhoe ferrugata</i> (Cl.)			1				1	1			1	1
7390	<i>Xanthorhoe lacustrata</i> (Gn.)			1	1			1					
not in	<i>Xanthorhoe decoloraria</i> (Esper)			1				1					
7394	<i>Epirrhoe alternata</i> (Müller)	1	1	1		1	1	1	1			1	
7395	<i>Epirrhoe plebeculata</i> (Gn.)				1			1	1	1			
7396	<i>Epirrhoe sperryi</i> Herbulot				1	1		1	1		1		
7399a	<i>Euphyia intermediata</i> (Gn.)	1	1	1	1	1		1	1	1		1	1
7408	<i>Zenophleps alpinata</i> Cass.	1	1	1	1	1	1	1	1	1		1	1
7414	<i>Orthonama obstipata</i> (F.)		1	1					1				
7415	<i>Orthonama evansi</i> (McD.)							1					
7423	<i>Hydrelia albifera</i> (Wlk.)		1	1				1	1				
7425	<i>Venusia cambrica</i> Curt.							1					
7429	<i>Venusia pearsalli</i> (Dyar)		1		1			1					
7430	<i>Trichodezia albovittata</i> (Gn.)							1					
7433	<i>Epirrita autumnata</i> (Bkh.)			1				1					
7437	<i>Operophtera bruceata</i> (Hulst)							1	1	1		1	
7440	<i>Eubaphe mendica</i> (Wlk.)	1				1		1	1	1		1	1
7445	<i>Horisme intestinata</i> (Gn.)	1	1	1	1	1	1	1	1			1	
7446	<i>Horisme incana</i> Swett			1		1	1						1
7449	<i>Eupithecia palpata</i> Pack.							1					
7459	<i>Eupithecia columbiata</i> (Dyar)		1		1			1	1			1	
7476	<i>Eupithecia misturata</i> (Hulst)						1	1					
7483	<i>Eupithecia regina</i> Tayl.	1		1		1				1	1		
7487	<i>Eupithecia subfuscata</i> (Haw.)	1	1	1		1	1	1	1			1	1
7488	<i>Eupithecia tripunctaria</i> H.-S.				1			1					
7489	<i>Eupithecia lariciata</i> Freyer				1			1					
7494	<i>Eupithecia sheppardata</i> McD.								1				
7520c	<i>Eupithecia satyrata dodata</i> Tayl.			1	1			1	1				

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
7522	<i>Eupithecia nimbicolor</i> (Hulst)					1		1					
7524	<i>Eupithecia cimicifugata</i> Pears.				1							1	
7527	<i>Eupithecia ammonata</i> McD.	1											
7528	<i>Eupithecia assimilata</i> Dbldy.		1	1				1	1	1			
7538	<i>Eupithecia gelidata</i> Mösch.											1	
7539	<i>Eupithecia multistrigata</i> (Hulst)					1							
7543	<i>Eupithecia annulata</i> (Hulst)							1					
7548	<i>Eupithecia lachrymosa</i> (Hulst)			1		1			1				1
7449	<i>Eupithecia palpata</i> group					1		1					
7551a	<i>Eupithecia interruptofasciata</i> (Pack.)			1		1							
7552	<i>Eupithecia niphadophilata</i> (Dyar)												1
7564	<i>Eupithecia stellata</i> (Hulst)			1								1	
7574	<i>Eupithecia albicapitata</i> Pack.		1										
7575	<i>Eupithecia mutata</i> Pears.					1							
7594	<i>Eupithecia anticaria</i> Wlk.	1		1					1	1	1		
7605	<i>Eupithecia ravocostaliata</i> Pack.	1	1	1	1	1		1	1	1		1	
7637	<i>Cladara limitaria</i> (Wlk.)				1			1					
7639	<i>Cladara atroliturata</i> (Wlk.)		1		1			1					
7640	<i>Lobophora nivigerata</i> Wlk.	1	1	1	1	1		1	1			1	
7643	<i>Lobophora magnoliotidata</i> (Dyar)			1					1				
7650	<i>Callizia amorata</i> (Pack.)		1					1	1	1		1	
7687	<i>Phyllodesma americana</i> (Harr.)	1	1	1	1	1	1	1	1	1		1	1
7698	<i>Malacosoma disstria</i> Hbn.	1	1	1		1		1	1	1	1	1	1
7702	<i>Malacosoma californicum</i> (Pack.)	1	1	1		1	1		1		1	1	1
7757	<i>Antheraea polyphemus</i> (Cram.)	1	1	1	1		1	1	1	1	1	1	1
7769	<i>Hyalophora gloveri</i> (Stkr.)	1	1	1					1		1		1
7787	<i>Ceratonia undulosa</i> (Wlk.)								1				1
7803	<i>Sphinx vashti</i> Stkr.	1	1	1		1	1		1		1	1	1
7810	<i>Sphinx poecila</i> Stephens							1					
7811	<i>Sphinx luscitiosa</i> Clem.		1						1				
7812	<i>Sphinx drupiferarum</i> J.E. Smith		1			1							1
7821	<i>Smerinthus jamaicensis</i> (Drury)	1	1	1	1	1	1	1	1	1	1	1	1
7822	<i>Smerinthus cerisyi</i> Kby.	1	1	1	1	1	1	1	1	1	1	1	1
7824	<i>Paonias excaecatus</i> (J.E. Smith)	1	1	1	1	1			1		1	1	1
7825	<i>Paonias myops</i> (J.E. Smith)	1	1	1		1	1		1			1	1
7828	<i>Pachysphinx modesta</i> (Harr.)	1	1	1					1	1	1	1	1
7855	<i>Hemaris diffinis</i> (Bdv.)				1								
7893	<i>Hyles gallii</i> (Rottemburg)	1	1	1		1	1	1	1		1		1
7894	<i>Hyles lineata</i> (F.)			1									
7895	<i>Clostera albosigma</i> Fitch	1	1	1	1	1		1	1	1	1	1	1



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
8214	<i>Lophocampa maculata</i> Harr.	1	1	1	1	1	1	1	1	1		1	1
8262	<i>Ctenucha virginica</i> (Esp.)	1	1	1		1		1	1				1
8267	<i>Ciseps fulvicollis</i> (Hbn.)		1						1		1	1	1
8294	<i>Dasychira vagans</i> (B. & McD.)	1	1	1		1	1	1	1	1	1	1	
8304	<i>Dasychira plagiata</i> (Wlk.)					1							
8308	<i>Orgyia antiqua</i>							1					
8322	<i>Idia americalis</i> (Gn.)	1	1	1	1	1	1	1	1	1		1	1
8323	<i>Idia aemula</i> Hbn.			1		1			1			1	
8323.1	<i>Idia</i> sp. nr. <i>aemula</i>							1	1				1
8334	<i>Idia lubricalis</i> (Gey.)					1							1
8338	<i>Phalaenophana pyramusalis</i> (Wlk.)							1					
8354	<i>Zanclognatha lualba</i> (Sm.)	1	1	1		1		1	1	1		1	
8356	<i>Chytolita petrealis</i> Grt.		1	1	1	1		1	1	1		1	1
8359	<i>Macrochilo bivittata</i> (Grt.)	1		1				1	1			1	
8362	<i>Phalaenostola metonalis</i> (Wlk.)	1	1	1	1	1		1		1	1		1
8365	<i>Phalaenostola hanhami</i> (Sm.)					1			1				
8370	<i>Bleptina caradrinalis</i> Gn.		1	1		1	1						1
8397	<i>Palthis angulalis</i> (Hbn.)	1	1	1	1	1		1	1			1	1
8404	<i>Rivula propinqualis</i> Gn.	1	1	1				1	1	1		1	
8413	<i>Mycterophora inexplicata</i> (Wlk.)	1	1	1						1			
8421	<i>Hypenodes fractilinea</i> (Sm.)		1			1		1				1	
8446	<i>Hypena deceptalis</i> (Wlk.)							1					
8450	<i>Bomolocha atomaria</i> Sm.							1	1				
8452	<i>Bomolocha edictalis</i> (Wlk.)		1	1				1	1			1	1
8455	<i>Lomanaltes eductalis</i> (Wlk.)							1					
8461	<i>Hypena humuli</i> Harr.		1			1	1	1	1			1	
8462	<i>Hypena californica</i> Behr								1				
8555	<i>Scoliopteryx libatrix</i> (L.)		1			1		1	1		1		
8631	<i>Synedoida petricola athabasca</i> (Neum.)						1						1
8632	<i>Drasteria hudsonica</i> (G. & R.)			1		1	1						1
8635	<i>Drasteria perplexa</i> (Hy. Edw.)					1							1
8636	<i>Drasteria adumbrata</i> (Behr)					1							
8697	<i>Zale minerea</i> (Gn.)	1	1	1		1	1	1	1			1	1
8731	<i>Euclidea cuspeida</i> (Hbn.)	1	1		1	1		1					1
8738	<i>Caenurgina crassiuscula</i> (Haw.)	1	1	1	1	1	1	1	1	1	1		1
8739	<i>Caenurgina erechtea</i> (Cram.)	1	1	1		1	1		1		1		1
8803	<i>Catocala relictata</i> Wlk.	1	1	1	1	1	1	1	1			1	1
8805	<i>Catocala unijuga</i> Wlk.	1	1	1	1	1	1	1	1	1		1	1
8812	<i>Catocala hermia</i> Hy. Edw.					1	1						1
8817	<i>Catocala briseis</i> Edw.	1	1	1	1	1	1	1	1				1



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
9206	<i>Acronicta vulpina</i> (Grt.)							1	1			1	
9207	<i>Acronicta innotata</i> Gn.		1		1			1					1
9209	<i>Acronicta radcliffei</i> (Harr.)					1	1						
9212	<i>Acronicta grisea</i> (Wlk.)		1	1	1	1		1	1	1		1	1
9224	<i>Acronicta quadrata</i> Grt.					1							1
9226	<i>Acronicta superans</i> Gn.	1	1	1		1			1			1	1
9228	<i>Acronicta furcifera</i> Gn.	1	1	1		1	1		1			1	1
9229	<i>Acronicta hasta</i> Gn.												1
9241	<i>Acronicta fragilis</i> (Gn.)		1	1	1	1		1	1	1		1	
9257	<i>Acronicta impleta</i> Wlk.		1	1			1	1	1	1		1	1
9258	<i>Acronicta sperata</i> Grt.						1						1
9261	<i>Acronicta impressa</i> Wlk.	1	1	1	1	1	1	1	1	1		1	1
9272	<i>Acronicta oblongata</i> (J.E. Smith)	1		1				1					
9280	<i>Simyra henrici</i> (Grt.)	1	1	1			1		1		1	1	1
9284	<i>Agriopodes teratophora</i> (H.-S.)		1			1							1
9286	<i>Harrisimemna trisignata</i> (Wlk.)					1		1	1				
9341	<i>Apamea vultuosa</i> (Grt.)		1	1		1		1					1
9348	<i>Apamea amputatrix</i> (Fitch)	1	1	1		1	1	1	1		1	1	1
9351	<i>Apamea alia</i> (Gn.)			1		1	1		1				
9353	<i>Apamea inordinata</i> (Morr.)						1					1	1
9359	<i>Apamea commoda</i> (Wlk.)	1	1	1	1	1	1	1	1	1	1	1	1
9362	<i>Apamea remissa</i> (Hbn.)			1				1	1	1	1	1	1
9364	<i>Apamea sordens</i> (Hufn.)	1	1	1		1	1	1	1	1	1	1	1
9365	<i>Apamea scoparia</i> (Hufn.)	1	1	1	1	1	1	1	1		1	1	1
9367a	<i>Apamea cogitata</i> (Sm.)	1		1			1	1	1		1	1	1
9369	<i>Apamea inficita</i> (Wlk.)	1	1	1	1	1	1	1	1	1	1	1	1
9374	<i>Apamea niveivenosa</i> (Grt.)	1	1	1		1			1		1	1	
9382	<i>Apamea devastator</i> (Brace)	1	1	1		1	1	1	1	1	1	1	1
9383	<i>Apamea longula</i> (Grt.)					1							1
9391	<i>Luperina passer</i> (Gn.)	1	1				1	1	1		1	1	1
9394	<i>Apamea contradicta</i> (Sm.)												1
9396	<i>Eremobina claudens</i> (Wlk.)	1		1		1		1	1			1	1
9412.1	<i>Oligia subjuncta</i> (Sm.)	1	1	1	1			1	1		1	1	
9417	<i>Oligia egens</i> (Wlk.)	1		1		1	1		1		1	1	1
9419	<i>Oligia mactata</i> (Gn.)	1	1	1	1	1		1	1	1		1	1
9420	<i>Oligia illocata</i> (Wlk.)	1	1	1	1	1		1	1	1		1	1
9431	<i>Parastichtis suspecta</i> (Wlk.)	1	1	1				1	1		1	1	1
9434	<i>Spartiniphaga includens</i> (Wlk.)	1	1	1		1		1	1		1	1	1
9437	<i>Chortodes inquinata</i> (Gn.)	1		1				1	1			1	1
9439	<i>Chortodes basistriga</i> (McD.)	1						1	1				



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
9440	<i>Chortodes rufostrigata</i> (Pack.)	1	1	1		1	1		1		1	1	1
9443	<i>Chortodes defecta</i> (Grt.)			1				1	1				1
9450	<i>Archanara subflava</i> (Grt.)	1	1	1			1	1	1	1	1	1	1
9453	<i>Celaena reniformis</i> (Grt.)		1	1			1	1	1	1	1	1	1
9456	<i>Amphipoea interoceanica</i> (Sm.)			1									1
9457	<i>Amphipoea americana</i> (Speyer)	1	1	1	1	1	1	1	1	1		1	1
9472	<i>Papaipema harrisii</i> (Grt.)		1	1			1	1				1	
9515	<i>Hydraecia perobliqua</i> Hamp.	1	1	1			1		1			1	
9525	<i>Bellura obliqua</i> (Wlk.)	1	1	1		1			1		1	1	1
9543	<i>Aseptis characta</i> (Grt.)					1							1
9545	<i>Euplexia benesimilis</i> McD.			1				1					
9547	<i>Phlogophora periculosa</i> Gn.		1					1	1				
9549	<i>Enargia decolor</i> (Wlk.)	1	1	1	1	1		1	1			1	1
9550	<i>Enargia infumata</i> (Grt.)	1	1	1	1	1		1	1	1	1	1	
9555	<i>Ipimorpha pleonectusa</i> Grt.	1	1	1	1	1		1	1	1		1	
9556	<i>Chytonix palliatricula</i> (Gn.)					1						1	
9564	<i>Andropolia contacta</i> (Wlk.)		1	1		1							1
9575	<i>Rhizagrotis cloanthoides</i> (Grt.)												1
9579	<i>Hyppa contrasta</i> McD.			1	1			1		1		1	
9626	<i>Trachea delicata</i> (Grt.)								1				1
9640	<i>Amphipyra glabella</i> (Morr.)												1
9647	<i>Proxenus miranda</i> (Grt.)	1	1	1	1	1	1	1	1	1	1	1	1
9649	<i>Proxenus mendosa</i> McD.	1	1		1	1	1					1	1
9654	<i>Platyperigea meralis</i> (Morr.)					1	1						1
9656	<i>Platyperigea montana</i> (Bremer)	1	1	1	1	1	1	1	1	1	1	1	1
9681.1	<i>Elaphria alapallida</i> (Pogue & Sullivan)					1						1	1
9690	<i>Conditia videns</i> (Gn.)												1
9832	<i>Escaria homogena</i> McD.										1		
9873	<i>Xylena nupera</i> (Lint.)					1	1	1	1			1	
9874	<i>Xylena curvimacula</i> (Morr.)	1	1	1	1	1	1	1	1	1		1	1
9875	<i>Xylena thoracica</i> (Putnam-Cramer)	1	1	1				1	1			1	1
9876	<i>Xylena cineritia</i> (Grt.)	1	1	1	1		1	1	1	1		1	1
9878	<i>Lithomoia germana</i> (Morr.)		1	1		1		1	1			1	1
9881	<i>Homoglaea hircina</i> Morr.	1	1	1	1			1	1		1	1	
9884	<i>Litholomia napaea</i> (Morr.)	1	1	1	1	1		1	1	1	1	1	1
9888	<i>Lithophane innominata</i> (Sm.)		1	1				1	1			1	
9889	<i>Lithophane petulca</i> Grt.)							1					
9891	<i>Lithophane amanda</i> (Sm.)							1	1			1	1
9909	<i>Lithophane tepida</i> Grt.				1	1		1					
9913	<i>Lithophane georgii</i> Grt.					1					1		

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
9915	<i>Lithophane grotei</i> (Riley)		1										
9917	<i>Lithophane fagina</i> Morr.				1		1	1					1
9922	<i>Lithophane pexata</i> Grt.							1					
9933	<i>Eupsilia vinulenta</i> (Grt.)		1						1				
9935	<i>Eupsilia tristigmata</i> (Grt.)		1	1			1	1	1		1	1	
9939	<i>Eupsilia devia</i> (Grt.)							1					
9952	<i>Eucirroedia pampina</i> (Gn.)	1	1	1	1	1	1	1	1			1	1
9957	<i>Sunira bicolorago</i> (Gn.)		1	1				1	1				
9960	<i>Sunira verberata</i> (Sm.)		1	1				1	1			1	1
9962	<i>Anathix puta</i> (G. & R.)	1	1	1	1	1		1	1	1		1	1
9963	<i>Anathix aggressa</i> (Sm.)			1									
9965	<i>Xanthia tatago</i> Laf. & Mik.	1	1	1		1		1	1			1	1
9967	<i>Hillia iris</i> (Zett.)	1	1					1					
9970	<i>Fishia discors</i> (Grt.)					1							
9974	<i>Fishia enthea</i> Grt.												1
9976	<i>Platypolia anceps</i> (Steph.)	1	1	1				1	1			1	
9980	<i>Xylotype acadia</i> B. & Benj.							1					
9987	<i>Mniotype ducta</i> (Grt.)			1		1		1					1
9988	<i>Mniotype tenera</i> (Sm.)			1									1
9990	<i>Sutyna profunda</i> (Sm.)		1	1				1				1	
9993	<i>Brachylomia populi</i> (Stkr.)	1	1	1	1	1	1	1	1	1		1	
9998	<i>Brachylomia algens</i> (Grt.)		1			1		1	1	1	1	1	
9999	<i>Brachylomia discinigra</i> (Wlk.)			1		1							
10008	<i>Feralia comstocki</i> (Grt.)				1			1					
10011	<i>Brachylomia borealis</i> (Sm.)		1										
10028	<i>Pleromelloida conserta</i> (Grt.)	1	1		1	1				1	1	1	1
10035	<i>Noctua pronuba</i> (B. & McD.)		1			1	1						
10055	<i>Apharetra dentata</i> (Grt.)					1							
10059	<i>Homohadena badistriga</i> (Grt.)		1			1		1					1
10062	<i>Homohadena stabilis</i> Sm.	1	1	1		1			1		1		1
10065	<i>Homohadena infixata</i> (Wlk.)	1	1	1		1		1	1	1		1	1
10067	<i>Adita chionanthi</i> (J.E. Smith)	1		1	1		1		1			1	1
10099	<i>Oncocnemis saundersiana</i> Grt.)			1									
10108	<i>Oncocnemis viriditincta</i> Sm.			1									
10124	<i>Oncocnemis cibalis</i> Grt.	1	1			1						1	1
10130.1	<i>Oncocnemis pallidior</i> (Barnes)					1							1
10135	<i>Oncocnemis riparia</i> Morr.					1							1
10140	<i>Oncocnemis poliochroa</i> Hamp.		1	1								1	
10143	<i>Oncocnemis mackieii</i> (B. & Benj.)	1	1	1		1	1		1				1
10190	<i>Cucullia speyeri</i> Lint.						1						



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
10372	<i>Lacinipolia anguina</i> (Grt.)	1	1		1	1	1	1	1			1	1
10381	<i>Lacinipolia naevia</i> (Sm.)					1							
10394	<i>Lacinipolia vicina</i> (Grt.)	1		1		1		1	1		1	1	1
10395	<i>Lacinipolia pensilis</i> (Grt.)												1
10397	<i>Lacinipolia renigera</i> (Steph.)	1	1	1	1	1	1	1	1	1	1	1	1
10405	<i>Lacinipolia lorea</i> (Gn.)	1	1	1	1	1	1	1	1	1	1	1	1
10406	<i>Lacinipolia olivacea</i> (Morr.)	1	1	1	1	1		1	1	1		1	1
10428	<i>Dargida procincta</i> (Grt.)	1				1			1			1	1
10431	<i>Faronta diffusa</i> (Wlk.)	1	1	1		1	1		1	1	1	1	1
10436	<i>Aletia oxygala</i> (Grt.)	1	1	1	1	1	1	1	1	1	1	1	1
10438	<i>Pseudaletia unipuncta</i> (Haw.)								1				1
10442	<i>Leucania anteoclarata</i> Sm.					1							
10446	<i>Leucania multilinea</i> Wlk.	1	1	1		1	1	1	1	1		1	1
10447	<i>Leucania commoides</i> Gn.	1	1	1		1	1	1	1	1	1	1	1
10449	<i>Leucania insueta</i> Gn.	1	1	1		1	1	1	1	1	1		1
10471	<i>Stretchia plusiaeformis</i> Hy. Edw.	1	1	1			1		1	1	1	1	1
10490	<i>Orthosia revicta</i> (Morr.)	1	1	1	1	1	1	1	1	1		1	1
10493	<i>Orthosia segregata</i> (Sm.)	1	1	1	1	1	1	1	1	1	1	1	1
10493	<i>Orthosia segregata</i> f. <i>negussa</i> Sm.	1	1	1		1	1	1	1	1	1	1	1
10495	<i>Orthosia hibisci</i> (Gn.)	1	1	1	1	1	1	1	1			1	1
10501	<i>Crocigrapha normani</i> (Grt.)						1						1
10513	<i>Egira dolosa</i> (Grt.)	1	1	1	1	1	1	1	1	1	1	1	1
10523	<i>Tholera americana</i> (Sm.)					1							
10524	<i>Nephelodes minians</i> Gn.	1	1	1	1	1	1	1	1		1	1	1
10530	<i>Anhimella contrahens</i> (Wlk.)		1						1				1
10532	<i>Homorthodes furfurata</i> (Grt.)					1							
10547	<i>Protorthodes utahensis</i> (Sm.)											1	
10563	<i>Protorthodes oviduca</i> (Gn.)	1	1	1	1	1	1	1	1	1	1	1	1
10641	<i>Agrotis vetusta</i> Wlk.		1									1	1
10645	<i>Agrotis orthogonia</i> Morr.	1	1	1		1			1				1
10650	<i>Agrotis robustior</i> (Sm.)					1							1
10651	<i>Agrotis venerabilis</i> Wlk.	1	1	1	1	1	1	1	1	1	1	1	1
10652	<i>Agrotis vancouverensis</i> Grt.	1	1	1		1	1	1	1		1	1	1
10658	<i>Agrotis stigmata</i> Morr.		1									1	
10659	<i>Agrotis volubilis</i> Harv.								1				
10660	<i>Agrotis obliqua</i> (Sm.)					1	1		1			1	
10663	<i>Agrotis ipsilon</i> (Hufn.)						1		1				
10670	<i>Feltia jaculifera</i> (Gn.)	1	1	1		1	1	1	1	1	1	1	1
10676	<i>Feltia herilis</i> (Grt.)	1	1	1	1		1	1	1	1	1	1	
10698.2	<i>Trichosilia mollis</i> (Wlk.)					1		1					1

MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
10701.1	<i>Euxoa adumbrata</i> (Ev.)		1	1		1			1			1	1
10701.2	<i>Euxoa auxiliaris</i> (Grt.)	1	1	1		1	1		1		1		1
10702	<i>Euxoa divergens</i> (Wlk.)	1	1	1	1	1	1	1	1		1	1	1
10705	<i>Euxoa messoria</i> (Harr.)	1	1	1		1			1	1		1	1
10715	<i>Euxoa scandens</i> (Riley)			1					1				
10723	<i>Euxoa tristicula</i> (Morr.)	1	1	1	1	1	1	1	1	1	1	1	1
10728	<i>Euxoa pestula</i> Sm.			1									1
10738	<i>Euxoa mimallonis</i> (Grt.)		1	1					1			1	1
10749	<i>Euxoa intrita</i> (Morr.)			1				1	1		1	1	
10755	<i>Euxoa declarata</i> (Wlk.)	1	1	1	1	1	1	1	1			1	1
10756	<i>Euxoa campestris</i> (Grt.)	1	1	1		1		1	1	1		1	1
10769	<i>Euxoa nevada</i> (Sm.)					1							
10777	<i>Euxoa aequalis</i> (Harv.)	1		1		1			1				1
10780	<i>Euxoa comosa</i> (Morr.)		1			1							1
10794	<i>Euxoa setonia</i> McD.		1			1							1
10798	<i>Euxoa basalis</i> (Grt.)	1	1	1		1	1		1		1	1	1
10801	<i>Euxoa ochrogaster</i> (Gn.)	1	1	1	1	1	1	1	1	1	1	1	1
10804	<i>Euxoa plagigera</i> (Morr.)				1	1							1
10805	<i>Euxoa tessellata</i> (Harr.)	1	1	1		1	1		1				1
10807	<i>Euxoa albipennis</i> (Grt.)	1	1	1		1			1			1	1
10813	<i>Euxoa medialis</i> (Sm.)					1	1						1
10817	<i>Euxoa obeliscoides</i> (Gn.)	1		1		1		1	1				1
10826	<i>Euxoa idahoensis</i> (Grt.) group					1							
10826.1	<i>Euxoa castanea</i> Laf.			1									1
10830	<i>Euxoa quadridentata</i> (G. & R.)	1		1		1			1		1	1	1
10833	<i>Euxoa olivalis</i> (Grt.)					1							
10834	<i>Euxoa oblongistigma</i> (Sm.)												1
10836	<i>Euxoa dargo</i> (Stkr.)											1	
10838	<i>Euxoa detersa</i> (Wlk.)	1							1			1	
10842	<i>Euxoa tronella</i> (Sm.)												1
10845	<i>Euxoa difformis</i> (Sm.)								1				
10852	<i>Euxoa auripennis</i> Lafontaine										1		
10852/4	<i>Euxoa auripennis</i> Lafontaine/servita (Sm.)	1	1	1		1					1	1	1
10854	<i>Euxoa servita</i> (Sm.)			1									1
10860	<i>Euxoa perolivalis</i> (Sm.)												1
10861	<i>Euxoa ridingsiana</i> (Grt.)	1	1	1	1	1		1	1		1	1	1
10861.1	<i>Euxoa maimes</i> (Sm.)			1				1				1	1
10864	<i>Euxoa flavicollis</i> (Sm.)	1									1		1
10891	<i>Ochropleura implecta</i> Laf.	1	1	1		1		1	1				1
10894	<i>Protogygia querula</i> (Dod)					1							1



MONA #	NAME IN MONA (HODGES)	AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
11047	<i>Parabagrotis exertistigma</i> (Morr.)						1						
11049.1	<i>Pronoctua peabodyae</i> (Dyar)												1
11051	<i>Ufeus satyricus</i> Grt.	1				1		1	1			1	
11064	<i>Pyrrhia exprimens</i> (Wlk.)							1					
11068	<i>Helicoverpa zea</i> (Boddie)												1
11072	<i>Heliiothis phloxiphagus</i> G. & R.										1		
11077	<i>Heliiothis ononis</i> (F.)			1									
11164	<i>Schinia florida</i> (Gn.)	1		1									
11175	<i>Schinia meadi</i> (Grt.)		1								1		1
11192	<i>Schinia cumatilis</i> (Grt.)			1		1	1						1
	TOTALS	431	539	543	274	578	340	648	542	236	283	446	470

### SPECIES RICHNESS

Species richness is defined as the number of species within a region. Based on the totals in the above table the area with the greatest species richness is EP, followed in descending order by DI, BL, ER, BK, TB, RS, AH, EA, LS, JC and LF. There is, of course, a more or less direct correlation between species richness and the number of habitats present in a given area, i.e. the greater the species richness, the greater the number of habitats. It follows that the greater the number of habitats therefore the greater the number of food plants, hence the greater the potential for an area to be suitable for a larger number of moth species.

### STUDY DAYS/TRAP NIGHTS

AH	BK	BL	JC	DI	EA	EP	ER	LF	LS	RS	TB
42	28	48	43	40	26	202	175	40	32	46	20+

The number of study days/trap nights involved in each study area is shown in the above table. One would logically expect that the greater number of species will have been found in the areas with the greatest number of study nights and vice versa the least number of species will have been found in the areas with the least number of study day/nights. This has generally been found to be the case. It is clear, however, that more study of EA and JC would be beneficial and it is hoped that this will be done in 2008. In doing so, it will be important to be in the areas at times of the year when previous work may have been under-sampled.

### COMMON AND/OR WIDESPREAD SPECIES

Species can be common or widespread for many reasons, but mainly because they are polyphagous or are able to utilize a wide range of food plants. Approximately 10% of the species encountered in this research were found in 11 or all 12 of the study areas.

### SPECIES ENCOUNTERED IN ONLY ONE AREA

Species can be seldom encountered for many reasons, including their food plants being absent or infrequent, their habitats being scarce, past climatic conditions, predators, at the edge of their range, disease, etc. Some of these species may be rare or endangered. Approximately 21% of the species encountered in the present research were found in only one of the study areas.

### SPECIES FOUND ONLY IN AREAS EP AND ER

Area reports have not yet been prepared for EP and ER, but as the species encountered in each of these areas have been mentioned above and the areas have been compared to the other areas, it has been felt important to mention below the species that have been found only in these two areas.

#### EP - the Bird quarter on East Poplar Creek, 8 km NW of Winfield

Moth species found only at EP (83) - *Ectodoemia* sp., *Lampronia humilis* ?, *Lyonetia saliciella*, *Caloptilia strictella*, *Caloptilia syringella*, *Micrurapteryx salicifoliella*, *Agonopterix gelidella*, *Bibarrambra allenella*, *Nites betulella*, *Denisia haydenella*, *Elachista orestella*, *Elachista maritimella*, *Coleophora mayrella*, *Mompha raschkiella*, *Asymmetrura impositella*, *Telphusa* sp., *Neotelphusa praefixa*, *Xenolechia aethiops*, *Wockia asperipunctella*, *Rhizognothis interrupta*, *Euhyponomeutoides* sp., *Argyresthia goedartella*, *Schreckensteinia festaliella*, *Synanthedon fatifera*, *Prochoreutis* n. sp. nr *myllerana*, *Caloreas occidentella*, *Prionoxystus robiniae*, *Barbara mappana*, *Epinotia medioplagata*, *Epinotia cruciana*, *Grapholita interstinctana*, *Cydia prosperana*, *Acleris braunana*, *Acleris celiana*, *Acleris flavivittana*, *Eana osseana*, *Decodes mcdunnoughi*, *Archips striana*, *Archips alberta*, *Lozotaenia Hesperia*, *Aethes prob sexdentata*, *Platphalonidia* poss. *albertae*, *Eudonia albertalis*, *Munroessa icciusalis*, *Saucrobotys fumoferalis*, *Crambus awemellus*, *Agriphila biarmica*, *Tehama bonifatella*, *Caudellia nigrella*, *Geina tenuidactyla*, *Oidaematophorus phaceliae*, *Archiearis infans*, *Macaria brunneata*, *Semiothisa ulsterata*, *Macaria unipunctaria perplexa*, *Orthofidonia exornata*, *Eufidonia discospilata*, *Besma quercivoraria*, *Lambdina fiscellaria*, *Eustroma semiatrata*, *Rheumaptera hastata*, *Anticlea multiferata*, *Xanthorhoe iduata*, *Orthonama evansi*, *Venusia cambrica*, *Trichodezia albovittata*, *Eupithecia palpata*, *Eupithecia annulata*, *Sphinx poecila*, *Orgyia antiqua*, *Phalaenophana pyramusalis*, *Hypena deceptalis*, *Lomanaltes eductalis*, *Polychrisia esmeralda*, *Autographa sansoni*, *Syngrapha alias*, *Lithophane petulca*, *Lithophane pexata*, *Eupsilia devia*, *Xylotype acadia*, *Diarsia dislocata*, *Aplectoides condita* and *Pyrrhia exprimens*.

The moths of EP were most similar (50.89%) to those of the Bird residence in Erskine, and least similar (34.70%) to those of the Lowden Springs Conservation Area. EP is quite different faunistically and floristically as it has more boreal and foothills elements.

#### ER – the Bird residence, 5 Maple Close, Erskine

Moth species found only at ER (12) - *Ypsolopha senex*, *Pennisetia marginata*, *Proteoteras willingana*, *Acleris implexana* ?, *Adoxophyes negundana*, *Eudonia lugubralis*, *Nepytia canosaria*, *Thera juniperata*, *Eupithecia sheppardata*, *Hypena californica*, *Agrotis volubilis* and *Euxoa difformis*.



The moths of ER were most similar (59.29%) to those of the Buffalo Lake Conservation Area, and least similar (33.73%) to those of the Lowden Springs Conservation Area. ER is faunistically and floristically rich because it has a combination of aspen parkland and semi-urban elements.

### TAXONOMIC WORK STILL NEEDED

While the above list of species may seem large, it should not give the impression that we know all there is to know about the moths that occur in the geographical area involved in the present research. On the contrary, much taxonomic work remains to be done, especially in the microlepidoptera. New species remain to be described and monographic work is needed to straighten out certain species complexes. Barcoding is currently being done on members of some of the problem areas and this may help (<http://www.barcodinglife.com/views/login.php>). A major problem is that there simply are not enough taxonomists to do the work, also that there is not enough government funding to hire taxonomists and to curate the museums that house the insect collections where voucher and study specimens are kept. Groups where taxonomic work is needed, and those working on them, include the following.

Incurvariidae – *Lampronia*, *Cauchas* (Dr. Donald Davis)

Lyonetiidae – *Lyonetia* (Dr. Donald Davis)

Gelechiidae – many genera including *Aroga* (no one is currently studying these)

Coleophoridae – *Coleophora* (Dr. Jean-François Landry)

Tortricidae – *Acleris* (Dr. P. T. Dang), *Sonia* (Dr. Don Wright), *Pelochrista* (Dr. Don Wright), *Eucosma* (Dr. Don Wright), *Olethreutes* (no one is currently working on this genus)

Cochylidae – several genera (Drs. Eric Metzler and John Brown)

Crambidae – *Pediasia* (no one is currently working on the species of this group)

Pterophoridae – several genera (Doug Macaulay)