

**Lepidoptera Survey
of the
Peace River Parkland Subregion
in Northwestern Alberta**

(Research and Collection Permit No. RC05WC002)

Project Update Prepared by
Doug Macaulay, P. Biol.
(Alberta Lepidopterists' Guild)

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Introduction: There is a small area Parkland Natural Region that is located in the northwest corner of Alberta along the banks of the Peace River. During 2005 and 2006 I began surveying Lepidoptera in this area. The habitat targeted was the Peace River Parkland Subregion that consists of open grassland with aspen bluffs. The following is a list of 503 species representing 38 different families.

Current Species List of the Peace River Parkland Subregion (March 15, 2009)

Hepialidae

- 1) *Sthenopis purpurascens* (Pack.)
- 2) *Gazorycta noviganna* (B.; Benj.)

Adelidae

- 3) *Adela purpurea* Wlk.

Tineidae

- 4) *Tinea irrepta* Braun

Psychidae

- 5) *Taleporia* sp.

Bucculatricidae

- 6) *Bucculatrix* sp.

Gracillariidae

- 7) *Caloptilia betulivora* McD.

Gracillariidae

- 8) *Caloptilia negundella* (Cham.)
- 9) *Caloptilia stigmatella* (Fabricius)

Oecophoridae

- 10) *Agonopterix gelidella* (Bsk.)

Elachistidae

- 11) *Agonopterix arnicella / canadensis*
- 12) *Depressariodes ciniflonella* (Lienig & Zell.)

Oecophoridae

- 13) *Semioscopis merricella* Dyar

Elachistidae

- 14) *Elachista ossuaria* Kaila

- 15) *Elachista* spp.

Coleophoridae

- 16) *Coleophora mayrella* (Hbn.)
- 17) *Coleophora trifolii* (Curt.)

Cosmopterigidae

- 18) *Walshia miscecolorella* (Cham.)

Gelechiidae

- 19) *Aristotelia amelanchierella* Braun
- 20) *Evippe* sp.
- 21) *Coleotechnites atrupictella* (Dietz)

Gelechiidae

- 22) *Coleotechnites blastovora* (McLeod)
- 23) *Coleotechnites* spp.
- 24) *Xenolechia aethiops* (Humph. & West.)
- 25) *Prolita variabilis* (Busck)
- 26) *Bryotropha plantariella* (Tengström)
- 27) *Bryotropha similis* (Stainton)
- 28) *Gnorimoschema gallaeasterella* (Kell.)
- 29) *Chionodes lugubrella* (Fab.)
- 30) *Chionodes mediofuscella* (Clem.)
- 31) *Filatima abactella* (Clarke)
- 32) *Dichomeris levisella* (Fyles)

Alucitidae

- 33) *Alucita montana* B. & L.
- 34) *Alucita adriendenisi* Landry & Landry

Carposinidae

- 35) *Bondia comonana* (Kear.)

Plutellidae

- 36) *Plutella vanella* Wlsm.
37) *Plutella xylostella* (L.)

Ypsolophidae

- 38) *Ypsolopha canariella* (Wlsm.)
39) *Ypsolopha dentiferella* (Wlsm.)

Yponomeutidae

- 40) *Argyresthia oreasella* Clem.

Sesiidae

- 41) *Sesia tibialis* (Harris)
42) *Synanthedon fatifera* Hodges
43) *Synanthedon culiciformis* (L.)
44) *Synanthedon novaroensis* (Edw.)

Cossidae

- 45) *Acossus centerensis* (Lint.)
46) *Prionoxystus robiniae* (Peck.)

Tortricidae

- 47) *Apotomis removana* (Kear.)
48) *Pseudosciaphila duplex* (Wlsm.)
49) *Olethreutes glaciana* (Möschler)
50) *Olethreutes turfosana* (Herrich-Schäffer)
51) *Hedya ochroleucana* (Frölich)
52) *Phaneta verna* Miller
53) *Phaneta parmatana* (Clem.)
54) *Phaneta* sp. nr. *tarandana* (Mösch.)
55) *Phaneta misturana* (Hein.) group
56) *Phaneta indagatricana* (Hein.)
57) *Phaneta striatana* (Clem.)
58) *Eucosma ridingsana* (Robinson)
59) *Eucosma serpentana* Wlsm.)
60) *Eucosma morrisoni* (Wlsm.)
61) *Eucosma agricolana* (Wlsm.)
62) *Eucosma recissoriana* Hein.
63) *Eucosma dorsisignatana* (Clem.)
64) *Pelochrista scintillana* (Clem.)
65) *Pelochrista corosana* (Wlsm.)
66) *Notocelia illotana* (Wlsm.)

- 67) *Notocelia culminana* (Wlsm.)

- 68) *Proteoteras aesculana* Riley
69) *Zeiraphera canadensis* Mut. & Free.
70) *Epinotia nisella* (Clerck)
71) *Epinotia criddleana* (Kear.)
72) *Epinotia lindana* (Fernald)
73) *Ancylis nubeculana* (Clem.)
74) *Ancylis comptana* (Froelich)
75) *Ancylis unguicella* (L.)
76) *Ancylis mediofasciana* (Clemens)
77) *Dichrorampha immaculata* (McDunnough)
78) *Dichrorampha bittana* (Busck)
79) *Grapholita packardi* Zeller
80) *Grapholita lunatana* Wlsm.
81) *Cydia multilineana* (Kearfott)
82) *Cydia ingrata* Hein.
83) *Cydia populana* (Busck)
84) *Cydia flexiloqua* (Heinrich)
85) *Acleris albicomana* (Clem.)
86) *Acleris curvalana* (Kear.)
87) *Acleris holmiana* (L.)
88) *Acleris nivisellana* (Wlsm.)
89) *Acleris oxycoccana* (Packard)
90) *Acleris robinsoniana* (Forbes)
91) *Acleris logiana* (Clerck)
92) *Acleris nigrolinea* Busck
93) *Eana argentana* (Clerck)
94) *Pandemis canadana* Kear.
95) *Choristoneura rosaceana* (Harris)
96) *Choristoneura conflictana* (Wlk.)
97) *Choristoneura fumiferana* (Clem.)
98) *Choristoneura pinus* Freeman
99) *Archips argyrospila* (Wlk.)
100) *Archips cerasivorana* (Fitch)
101) *Archips striana* Fernald
102) *Syndemis afflictana* (Wlk.)
103) *Aphelia alleniana* (Fernald)
104) *Clepsis persicana* (Fitch)
105) *Clepsis clemensiana* (Fern.)
106) *Clepsis peritana* (Clem.)
107) *Clepsis penetralis* Razowski
108) *Sparganothis xanthoides* (Wlk.)
109) *Sparganothis unifasciana* (Clem.)
110) *Sparganothis* sp. nr. *unifasciana*
111) *Sparganothis vocaridorsana* Kear.

- 112) Sparganothis senencionana (Wlsm.)
- 113) Platynota idaeuslais (Wlk.)
- 114) Phtheochroa aureoalbida (Wlsm.)

Hesperiidae

- 115) Thorybes pylades pylades (Scudder)
- 116) Erynnis icelus (Scudder)
- 117) Erynnis persius (Scud.)
- 118) Pyrgus communis (Grt.)
- 119) Carterocephalus palaemon mandan (Edw.)
- 120) Oarisma garita (Reak.)
- 121) Hesperia assiniboa (Lyman)
- 122) Polites mystic mystic (Edw.)
- 123) Amblyscirtes vialis (Edw.)

Papilionidae

- 124) Papilio machaon pikei Sperling
- 125) Papilio z. zelicaon Lucas
- 126) Papilio c. canadensis Roth.

Pieridae

- 127) Pontia o. occidentalis (Reak.)
- 128) Pieris o. oleracea Harris
- 129) Pieris rapae (L.)
- 130) Euchloe ausonides mayi Cherm.
- 131) Colias p. philodice God.

Lycaenidae

- 132) Satyrium titus immaculosus (Com.)
- 133) Satyrium liparops (Com.)
- 134) Callophrys a. augustinus (West.)
- 135) Callophrys polia obscura (F.)
- 136) Callophrys eryphon (Bdv.)
- 137) Everes amyntula albrighti Clench
- 138) Celastrina ladon lucia (Kby.)
- 139) Glaucopsyche lygdamus couperi Grt.
- 140) Lycaeides melissa melissa (Edw.)
- 141) Plebejus saepiolus amica (Edw.)
- 142) Agriades glandon rusticus (Edw.)

Nymphalidae

- 143) Polygonia progne (Cram.)
- 144) Nymphalis l-album (Bdv. & Leconte)
- 145) Speyeria cybele pseudocarpenteri (Chem.)
- 146) Speyeria aphrodite manitoba (Cherm.)
- 147) Speyeria atlantis hollandi (Chem.)
- 148) Speyeria hesperis beani (B. & Bnj.)
- 149) Boloria bellona jenistorum (Fabricius)
- 150) Phyciodes batesii lakota Scott.
- 151) Chlosyne gorgone carlota (Reak.)
- 152) Chlosyne palla calydon (Holland)
- 153) Limenitis arthemis rubrofasciata (Drury)

Satyridae

- 154) Coenonympha tullia benjamini McD.
- 155) Erebia discoidalis discoidalis (Kirby)
- 156) Erebia episodea freemani P. Ehrlich
- 157) Oeneis uhleri varuna (Edw.)
- 158) Oeneis alberta alberta Elwes

Limacodidae

- 159) Tortricidia testacea Pack.

Crambidae

- 160) Syncita obliteralis (Wlk.)
- 161) Evergestis simulatilis (Grt.)
- 162) Saucrobotys fumoferalis (Hulst)
- 163) Ostrinia marginalis (Wlk.)
- 164) Perispasta caeculalis Zell.
- 165) Sitochroa chortalis (Grt.)
- 166) Loxostege lepidalis (Hulst)
- 167) Loxostege sticticalis (Linnaeus)
- 168) Loxostege commixtalidis (Wlk.)
- 169) Pyrausta nicalis (Grt.)
- 170) Pyrausta signatalis (Wlk.)
- 171) Pyrausta unifascialis (Pack.)

- 172) Pyrausta unifascialis (Packard)
- 173) Pyrausta fodinalis (Lederer)
- 174) Donacaula melinella (Clem.)
- 175) Pyrausta socialis (Grt.)
- 176) Choristostigma plumbosignalis (Fern.)
- 177) Mecyna mustelinalis (Pack.)
- 178) Diacme elealis (Wlk.)
- 179) Crambus perlellus (Scop.)
- 180) Crambus whitmerellus Klots
- 181) Crambus awemellus McD.
- 182) Crambus leachellus (Zincken)
- 183) Neodactria luteolella "complex" (Zell.)
- 184) Chrysoteuchia topiaria (Zell.)
- 185) Agriphila ruricolellus (Zell.)
- 186) Pediasia dorsipunctella (Kearfott)
- 187) Pyralis farinalis (L.)

Pyralidae

- 188) Dolichomia thymetusalis (Wlk.)
- 189) Pococera asperatella (Clem.)
- 190) Acrobasis tricolorella Grote
- 191) Pima fulvirugella (Rag.)
- 192) Ambesa laetella Grt.
- 193) Meroptera pravella (Grt.)
- 194) Zophodia grossulariella (Hbn.)
- 195) Eulogia ochrifrontella (Zell.)
- 196) Peoria approximella (Wlk.)

Pterophoridae

- 197) Geina tenuidactyla (Fitch)
- 198) Dejongia lobidactylus (Fitch)
- 199) Gillmeria pallidactyla (Haw.)
- 200) Oidaematophorus occidentalis Wlsm.
- 201) Oidaematophorus grisescens Wlsm.
- 202) Oidaematophorus mathewianus (Zell.)
- 203) Hellinsia homodactylus (Wlk.)
- 204) Hellinsia pectodactylus (Staud.)

Thyatiridae

- 205) Habrosyne scripta (Gosse)
- 206) Euthyatira pudens (Gn.)

- 207) Ceranemota albertae Clarke

Drepanidae

- 208) Drepana arcuata Wlk.
- 209) Drepana bilineata (Pack.)

Geometridae

- 210) Speranza amboflava (Fgn.)
- 211) Speranza boreata Fgn.
- 212) Speranza loricaria (Evers.)
- 213) Macaria exauspicata (Wlk.)
- 214) Macaria aemulataria (Wlk.)
- 215) Diggommia denticulata Grt.
- 216) Hesperumia sulphuraria Pack.
- 217) Ematurga amitaria (Gn.)
- 218) Protoboarmia porcelaria (Gn.)
- 219) Biston betularia (L.)
- 220) Lycia ursaria (Wlk.)
- 221) Erannis tiliaria (Harr.)
- 222) Lomographa semiclarata (Wlk.)
- 223) Cabera erythemia Gn.
- 224) Cabera variolaria Gn.
- 225) Aspitates aberratus (Hy. Edw.)
- 226) Euchlaena johnsonaria (Fitch)
- 227) Euchlaena marginaria (Minot.)
- 228) Xanthotype urticaria Swett
- 229) Pero morrisonaria (Hy. Edw.)
- 230) Ennomos magnaria Gn.
- 231) Spodolepis substriataria (Hulst.)
- 232) Selenia kentaria (G. & R.)
- 233) Metanema duaria (Gn.)
- 234) Plagodis pulveraria (L.)
- 235) Probola alienaria H. - S.
- 236) Probola amicaria (H. - S.)
- 237) Plagodis phlogosaria (Gn.)
- 238) Synaxis jubaria (Hulst.)
- 239) Caripeta divisata Wlk.
- 240) Prochoerodes transversata (Drury)
- 241) Synchlora aerata (F.)
- 242) Mesothea incerata (Wlk.)
- 243) Scopula limboundata (Haw.)
- 244) Scopula frigidaria (Mosch.)
- 245) Scopula inductata (Gn.)
- 246) Scopula sentinaria (Gey.)
- 247) Leptostales ferruminaria (Zell.)

- 248) Ecliptopera silacea ([D.; S.])
- 249) Hydria undulata (L.)
- 250) Spargania luctuata ([D.; S.])
- 251) Perizoma custodiata (Gn.)
- 252) Stamnodes topazata (Stkr.)
- 253) Xanthorhoe defensaria (Gn.)
- 254) Xanthorhoe lacustrata (Gn.)
- 255) Epirrhoe plebeculata (Gn.)
- 256) Epirrhoe sperryi Herbulot
- 257) Euphyia unangulata (Haw.)
- 258) Operophtera bruceata (Hulst.)
- 259) Eubaphe mendica (Wlk.)
- 260) Horisme incana Swett
- 261) Eupithecia columbiata (Dyar)
- 262) Eupithecia subfuscata (Haw.)
- 263) Eupithecia intricata (Zett.)
- 264) Eupithecia perfusca (Hulst.)
- 265) Eupithecia albicapitata Pack.
- 266) Eupithecia anticaria (Wlk.)

UranIIDAE

- 267) Callizzia amorata Pack.

Lasiocampidae

- 268) Phyllodesma americanum (Harr.)
- 269) Malacosoma disstria Hbn.
- 270) Malacosoma californicum (Pack.)

SaturnIIDAE

- 271) Antheraea polyphemus (Cram.)
- 272) Hyalophora columbia gloveri
(Stkr.)

Sphingidae

- 273) Sphinx vashti Stkr.
- 274) Sphinx poecila Steph.
- 275) Smerinthus jamaicensis (Drury)
- 276) Smerinthus cerisyi Kby.
- 277) Paonias exaecatus (J.E. Sm.)
- 278) Hemaris diffinis (Bdv.)
- 279) Hyles galli (Rott.)

Notodontidae

- 280) Clostera albosigma Fitch
- 281) Clostera strigosa (Grt.)
- 282) Clostera brucei (Hy. Edw.)

- 283) Clostera apicalis (Wlk.)
- 284) Nadara gibbosa (J.E. Sm.)
- 285) Pheosia rimosata (Pack.)
- 286) Notodonta scitipennis Wlk.
- 287) Notodonta simplaria Graef
- 288) Gluphisia septentrionis Wlk.
- 289) Furcula occidentalis (Lint.)
- 290) Furcula modesta (Hudson)
- 291) Schizura unicornis (J.E. Sm.)

Noctuidae

- 292) Gnophaelia vermiculata (Grt.)
- 293) Crambidia casta (Pack.)
- 294) Hypoprepia miniata (Kby.)
- 295) Clemensia albata Pack.
- 296) Holomelina ferruginosa (Wlk.)
- 297) Parasemia plantaginis (L.)
- 298) Pyrrharctia isabella (Sm.)
- 299) Estigmene acrea (Drury)
- 300) Spilosoma virginica (F.)
- 301) Phragmatobia assimilans Wlk.
- 302) Platarctia parthenos (Harr.)
- 303) Holarctia oblitterata (Stretch)
- 304) Grammia williamsii (Dodge)
- 305) Grammia celia (Saunders)
- 306) Grammia parthenice (Kby.)
- 307) Grammia virgo (L.)
- 308) Lophocampa maculata Harr.
- 309) Ctenucha virginica (Esp.)
- 310) Dasychira vagans (B.; McD.)
- 311) Idia americalis (Gn.)
- 312) Idia aemula (Gn.)
- 313) Phalaenophana pyramusalis
(Wlk.)
- 314) Zanclognatha latalba (Sm.)
- 315) Chytolita petrealis Grt.
- 316) Phalaenostola metonalis (Wlk.)
- 317) Palthus angulalis (Hbn.)
- 318) Hypenodes fractilinea (Sm.)
- 319) Bomolocha palparia (Wlk.)
- 320) Hypena edictalis (Wlk.)
- 321) Hypena humuli Harr.
- 322) Spargaloma sexpunctata Grt.
- 323) Drasteria hudsonica (Grt.; Rob)
- 324) Drasteria adumbrata (Behr)
- 325) Euclida cuspidea (Hbn.)

- 326) *Caenurgina crassiuscula* (Haw.)
 327) *Catocala relicta* Grt.
 328) *Catocala unijuga* Wlk.
 329) *Catocala briseis* Edw.
 330) *Catocala semirelicta* Grt.
 331) *Catocala blandula* Hulst.
 332) *Autographa rubida* Ottol.
 333) *Diachrysia aereoides* Grt.
 334) *Autographa bimaculata* Steph.
 335) *Autographa californica* (Speyer)
 336) *Autographa ampla* (Wlk.)
 337) *Anagrapha falcifera* (Kby.)
 338) *Syngrapha epigaea* (Grt.)
 339) *Plusia putnami* Grt.
 340) *Plusia venusta* Wlk.
 341) *Nycteola cinereana* S. & D.
 342) *Lithacodia albidula* (Gn.)
 343) *Deltote bellicula* Hbn.
 344) *Pseudeustrotia carneola* (Gn.)
 345) *Tarachidia tortricina* (Zell.)
 346) *Raphia frater* Grt.
 347) *Acronicta dactylina* Grt.
 348) *Acronicta lepusculina* Gn.
 349) *Acronicta vulpina* (Grt.)
 350) *Acronicta grisea* Wlk.
 351) *Acronicta quadrata* Grt.
 352) *Acronicta hasta* Gn.
 353) *Acronicta fragilis* (Gn.)
 354) *Acronicta impleta* Wlk.
 355) *Acronicta impressa* Wlk.
 356) *Anterastria teratophora* (H. S.)
 357) *Alypia langtoni* Couper
 358) *Apamea amputatrix* (Fitch)
 359) *Apamea inordinata* (Morr.)
 360) *Apamea commoda* (Wlk.)
 361) *Apamea scoparia* Mik., Must. &
 Laf.
 362) *Apamea dubitans* (Wlk.)
 363) *Apamea inficta* (Wlk.)
 364) *Apamea devestator* (Brace)
 365) *Apamea longula* (Grt.)
 366) *Resapamea passer* (Gn.)
 367) *Oligia mactata* (Gn.)
 368) *Oligia illocata* (Wlk.)
 369) *Spartiniphaga includens* (Wlk.)
 370) *Chortodes basistriga* (McD.)
 371) *Archana subflava* (Grt.)
 372) *Celaena reniformis* (Grt.)
 373) *Amphipoea interoceanica* (Sm.)
 374) *Amphipoea americana* (Speyer)
 375) *Hydraecia perobliqua* Harv.
 376) *Enargia decolor* (Wlk.)
 377) *Enargia infumata* (Grt.)
 378) *Chytonix palliatricula* (Gn.)
 379) *Andropolia contacta* (Wlk.)
 380) *Hyppa contrasta* McD.
 381) *Proxenus miranda* (Grt.)
 382) *Caradrina montana* (Grt.)
 383) *Elaphria alapallida* Pogue &
 Sullivan
 384) *Xylena curvimacula* (Morr.)
 385) *Xylena cineritia* (Grt.)
 386) *Xylena thoracica* (Putnam-
 Cramer)
 387) *Lithomoia germana* (Morr.)
 388) *Homoglaea hircina* Morr.
 389) *Litholomia napaea* (Morr.)
 390) *Lithophane innomoinata* (Sm.)
 391) *Lithophane amanda* (Sm.)
 392) *Lithophane diposita* Morr.
 393) *Lithophane tepida* Grt.
 394) *Lithophane georgii* Grt.
 395) *Lithophane pexata* Grt.
 396) *Eupsilia devia* (Grt.)
 397) *Eucirroedia pampina* (Gn.)
 398) *Sunira verberata* (Sm.)
 399) *Anathix puta* Grote & Robinson
 400) *Hillia iris* (Zett.)
 401) *Platypolia anceps* (Steph.)
 402) *Xylotype arcadia* B. & Benj.
 403) *Branchlomia populi* (Stkr.)
 404) *Feralia comstocki* (Grt.)
 405) *Pleromelloida conserta* (Grt.)
 406) *Sympistis badistriga* (Grt.)
 407) *Sympistis stabilis* Sm.
 408) *Sympistis dinalda* (Sm.)
 409) *Sympistis cibalis* (Grt.)
 410) *Sympistis pallidior* Barnes
 411) *Sympistis riparia* Morr.
 412) *Sympistis major* McD.
 413) *Cucullia intermedia* Speyer
 414) *Anarta trifolii* (Hufn.)

- 415) *Anarta montanica* McD.
 416) *Anarta farnhami* (Grt.)
 417) *Anarta crotchi* (Grt.)
 418) *Scotogramma submarina* (Grt.)
 419) *Scotogramma fervida* B. & McD
 420) *Sideridis rosea* (Harv.)
 421) *Sideridis maryx* (Gn.)
 422) *Mamestra configurata* Wlk.
 423) *Polia nimbosa* (Gn.)
 424) *Polia imbrifera* (Gn.)
 425) *Polia purpurissata* (Grt.)
 426) *Polia propodea* McCabe
 427) *Orthodes goodelli* (Grt.)
 428) *Orthodes obscura* (Sm.)
 429) *Melanchra adjuncta* (Bdv.)
 430) *Melanchra assimilis* (Morr.)
 431) *Lacanobia radix* (Wlk.)
 432) *Spiramater lutra* (Gn.)
 433) *Trichordestra tacoma* (Stkr.)
 434) *Trichordestra dodii* (Sm.)
 435) *Trichordestra liquida* (Grt.)
 436) *Papestra quadrata* (Sm.)
 437) *Papestra cristifera* (Wlk.)
 438) *Lasionycta secedens* (Wlk.)
 439) *Lacinipolia lustralis* (Grt.)
 440) *Lacinipolia anguina* (Grt.)
 441) *Lacinipolia vicina* (Grt.)
 442) *Lacinipolia renigera* (Steph.)
 443) *Lacinipolia lorea* (Gn.)
 444) *Lacinipolia olivacea* (Morr.)
 445) *Faronta diffusa* (Wlk.)
 446) *Mythimna oxygala* (Grt.)
 447) *Leucania multilinea* Wlk.
 448) *Leucania commoides* Gn.
 449) *Leucania insueta* Gn.
 450) *Orthosia revicta* (Morr.)
 451) *Orthosia segregata* (Sm.)
 452) *Orthosia hibisci* (Gn.)
 453) *Egira dolosa* (Grt.)
 454) *Nephelodes minians* Gn.
 455) *Anhimella contrahens* (Wlk.)
 456) *Protorthodes oviduca* (Gn.)
 457) *Agrotis vetusta* Wlk.
 458) *Agrotis venerabilis* Wlk.
 459) *Agrotis volubilis* Harv.
 460) *Agrotis obliqua* (Sm.)
 461) *Feltia jaculifera* (Gn.)
 462) *Feltia herilis* (Grt.)
 463) *Feltia mollis* Wlk.
 464) *Euxoa divergens* (Wlk.)
 465) *Euxoa intrita* (Morr.)
 466) *Euxoa declarata* (Wlk.)
 467) *Euxoa campestris* (Grt.)
 468) *Euxoa comosa altera* McD.
 469) *Euxoa setonia* McD.
 470) *Euxoa ochrogaster* (Gn.)
 471) *Euxoa tessellata* (Harr.)
 472) *Euxoa choris* (Harvey)
 473) *Euxoa idahoensis* (Grt.)
 474) *Euxoa castanea* Laf.
 475) *Euxoa olivalis* (Grt.)
 476) *Euxoa servita* (Sm.)
 477) *Euxoa taura* Sm.
 478) *Euxoa ridingsiana* (Grt.)
 479) *Euxoa flavicollis* Sm.
 480) *Ochropleura implecta* Laf.
 481) *Protogygia querula* (Dod)
 482) *Diarsia rosaria* (Grt.)
 483) *Actebia fennica* (Tauscher)
 484) *Spaelotis bicava* Laf.
 485) *Graphiphora augur* (F.)
 486) *Eurois occulta* (L.)
 487) *Eurois astricta* Morr.
 488) *Xestia normanianus* (Grt.)
 489) *Xestia smithii* (Snellen)
 490) *Agnorisma bugrai* (Kocak)
 491) *Xestia mixta* (Wlk.)
 492) *Xestia imperta* (Hbn.)
 493) *Tesagrotis atrifrons* (G rt.)
 494) *Paradiarsia littoralis* (Pack.)
 495) *Cerastis salicarum* (Wlk.)
 496) *Aplectoides condita* (Gn.)
 497) *Anaplectoides prasina* ([D.; S.])
 498) *Anaplectoides pressus* (Grt.)
 499) *Chersotis juncta* (Grt.)
 500) *Protolampra rufipectus* (Morr.)
 501) *Cryptocala acadiensis* (Bethune)
 502) *Abagrotis placida* (Grt.)
 503) *Ufeus satyricus* Grt.

Notes: Butterflies and skippers were not collected as intensely as were the moths and therefore their species numbers were quite low. Collecting mainly focused on moths that were sampled at night using both UV light traps and the traditional MV sheet trap. Day collecting was conducted using hand nets. Baiting was conducted in late summer using a fermented fruit, beer and a liquor mix. It was then painted on trees and checked at night by hand and with a bait trap. A few species collected during the survey were worthy of mention as either range extensions, new records or as rare and unusual finds in Alberta. Sixty-two species were significant discoveries for the area and are considered either rare or uncommon provincially. Fifty-three represent disjunctive populations and one-hundred fifteen represent significant range extensions. These species will be outlined completely in detail once the survey is complete in 2008.

Results

Table 1. Number of species considered provincially scarce.

Abundant - A	28.00	~ over 100 populations + authors opinion
Common - C	320.00	~ 20 to 50 populations + authors opinion
Uncommon - U	72.00	~ 5 to 20 populations + authors opinion
Rare - R	32.00	~ 1 to 5 populations + authors opinion
??	15.00	~ not enough information on species

Table 2. Number of species with significance populations.

Disjunct	96.00
Range Extension	158.00

Table 3. Localities Surveyed showing specimens, species, collecting trips and regional codes.

#	Locality	Lat Long	Specimens	Species Total	Collecting Trips	Region	Code
1	Peace River, 8 km S.	56.11888°N -117.40721°W	356.00	227.00	15.00	Peace River Wildland Park	PRWP
2	Dunvegan, Hwy 2 @ Peace River	55.92700°N -118.60043°W	264.00	175.00	22.00	Dunvegan Provincial Park	DPP
3	Peace River, west facing slope at N end of town	56.24843°N -117.28784°W	22.00	21.00	4.00	Peace River	PRsw
4	Peace River, backyard	56.24837°N -117.29486°W	20.00	5.00	3.00	Peace River	PRyd
5	Peace River, 2 km SW on S side of Misery Mountain	56.21925°N -117.32883°W	18.00	12.00	3.00	Peace River Misery Mountain	PRMM
5	Peace River, 3 km S off Shaftesbury Trail	56.21925°N -117.32883°W	[REDACTED]		1.00	Peace River Misery Mountain	PRMM
6	Peace River, 12 km S at Strong Creek Campground	56.16500°N -117.41300°W	40.00	32.00	3.00	Strong Creek Campground	SCC
7	Peace River, 23 km S nr. Tangent Park Campground	56.09246°N -117.54224°W	105.00	82.00	8.00	Tangent Park Campground	TPCe
8	Peace River, 23km SW on W bank of Peace River	56.09783°N -117.56889°W	1.00	1.00	1.00	Peace River	TPCw
9	Whitelaw, 21 km S	55.92804°N -117.99512°W	139.00	102.00	8.00	Elk Island Park	EIP
10	Many Island Park @ Peace River	56.32500°N -119.15500°W	4.00	3.00	1.00	Many Island Park	MIP
11	Fairview, 31 km W	56.92804°N -117.99512°W	23.00	17.00	1.00	Pratt's Landing Lookout	PLL
			969.00	677.00			

The following is a list containing notes on the significant macrolepidoptera species found during the survey. The listed below were listed as either uncommon, rare or were recognized because the uniqueness existence of their disjunct population

Common Checkered Skipper (*Pyrgus communis*): A common species found throughout the Peace Parkland wherever its host Scarlet Mallow (*Sphaeralcea coccina*) occurs Bird et al. 1995, Layberry et al. 1998). This population is a significant range extension with the next closest populations being found at Toleman Bridge south of Red Deer, nearly 700 kilometres south of the Dunvegan and Tangent populations.

Plains Skipper (*Hesperia assiniboia*): A rather uncommon species in the Peace Parkland along the Peace River where it is found in grasslands containing its hosts, needle grass (*Stipa* spp.), Fescue (*Festuca* spp.), Blue gramma (*Bouteloua gracilis*), June grass (*Koeleria cristata*), and Brome grass (*Bromus* spp.) (Bird et al. 1995, Layberry et al. 1998, Hervieux 2001). A small population is also found in the Kleskun Hills west of Grande Prairie. These two disjunctive populations are grassland specialists and are near 500 km southeast by Red Deer.

Pike's Old World Swallowtail (*Papilio machaon pikei*): Another relatively common subspecies that is found only in the Peace Parkland. It is an inhabit of river bank ridges and the larvae feed on tarragon (*Artemisia dracunculus*) is the host plant of larvae and they have observed feeding on it a number of times (Sperling 1987, Bird et al. 1995, Layberry et al. 1998, Guppy and Shepard 2001 and Hervieux 2001). Records of adults range all along the Peace River banks from British Columbia into Alberta as far North as Fort Vermilion. An outlying population of this subspecies was also found at the Kleskun Hills, just west of Grande Prairie, by Dr. Felix Sperling in 1982. Adults are observed hill topping along the river banks from late May and throughout June. This is the best place to look for this species and I observed many doing this on the banks near Peace River in 2005 and on the banks of the Smoky River in Peace River Wildland Park in summer 2006. I also observed adults nectaring at Bastard Toadflax (*Commandra umbellata*) last summer (see photo). This species is easily confused with the Anise Swallowtail (*Papilio z. zelicaon*) that I have also flying along the high ridges with this species.

Gorgone Checkerspot (*Chlosyne gorgone carlota*): This is the rarest butterfly found in the Peace Parkland. Populations are localized and tend to exist only within range of their host plant. It is found along the banks in mid May and into late June along the Peace River but only at two locations so far. The known populations are from the south facing slopes at Dunvegan and Green Island. Larval hosts are reported to be sunflowers (*Helianthus* sp.) by Bird et al. (1995) and Layberry et al. (1998). Last summer I observed an adult female and a couple males flying amongst a patch of Common Sunflowers (*Helianthus annuus*). I even observed a female perched on its host (see photo). Males were also observed nectaring at Spreading Dogbane (*Apocynum androsaemifolium*) not far from this patch of sunflowers. In spring of 2007 this species was observed mating on the upper slopes of the Peace River Valley near Dunvegan. Numerous other adults were also observed patrolling the meadows as well.

Northern Checkerspot (*Chlosyne palla calydon*): This species is quite abundant throughout the grassy meadows along the banks of the Peace River. It is found from British Columbia into Alberta all the way north up to Fort Vermilion from late May into early July. Larvae are reported to feed on Indian Paintbrush (*Castilleja* sp.) by Layberry et al. (1998) or other composites such as aster and fleabane (Bird et al. 1995) but this has not been confirmed in this region. As for adults I found them nectaring at Spreading Dogbane (*Apocynum androsaemifolium*) on a number of occasions.

Warm-chevroned Moth (*Tortricidia testacea*): The only member of the moth family Limacodidae, Slug-caterpillar Moths. It is a rare species only known from a few locations

within Alberta. There are three populations of this species known from Edgerton, Lloydminster, and Fort McMurray. In the Peace Parkland two populations are known, one from the Peace Wildland Park and the other from Dunvegan. Adults come to lights and are collected by both mercury vapour and ultra violet light traps in June. Larvae likely feed on Pin Cherry (*Prunus pensylvanica*), Choke Cherries (*P. virginiana*) or perhaps White Birch (*Betula papyrifera*) in the Peace River region.

Himmelman's Plume Moth (*Geina tenuidactyla*): This is likely one of the more difficult species to find unless you go looking specifically for them. They are probably much more common than one thinks but because they are so localized they are rarely encountered. There are only three documented populations of this species including the Peace Wildland Park population, the other two are from the Holmes Crossing Ecological Reserve and Winfield. Adults are found from late June into early July and from my observations only when Spreading Dogbane (*Apocynum androsaemifolium*) is in flower. Moths are diurnal though they can sometimes be attracted to lights. The one patch where I found them in Peace Wildland Park must have had at least twenty to thirty adults fluttering amongst them. The larval host plant is unknown for this species though they may have a relationship with Spreading Dogbane but more research is needed in this area. Adults do feed on nectar and have been observed nectaring at composites. It is likely that adult moths in the Peace region nectar at Spreading Dogbane though a direct observation of this has not been made yet.

Light-ribboned Wave (*Leptostales ferruminaria*): This record represents a substantial range extension for this species because it is approximately 530 kilometres north of the nearest other Alberta population. This is also a rare species and the Peace Wildland record is one of four documented populations in Alberta, the other three are as follows: Big Knife Provincial Park, Dry Island Buffalo Jump Provincial Park and Jenner, Alberta. Adults are diurnal and the specimen I collected was sitting and drinking at a wet spot on a trail in Peace Wildland Park. Adults can be found from early May until mid June across the province. Host plant and biological information for this species is unknown.

The Beggar Moth (*Eubaphe mendica*): This record represents a substantial range extension for this species because it is 400 kilometres north of the closest Alberta population near Edmonton. Outside of the Peace Parkland Natural Region this species is rather common in the Central Parkland Natural Region area. In the Peace region a single population is found at Dunvegan. It is a nocturnal species that flies in June to July and is often attracted to light. However specimens I collected by hand resting on leaves one morning west of the Dunvegan Bridge. It is typically a parkland species however there is a record from Wentzel Lake in the Caribou Wildland Park, approximately 800km northwest of the Dunvegan population. Hosts of this species are reported to be violets (*Viola* sp.) and Maples (*Acer* sp.) by Forbes (1948) and Hanfield (1999). Both of these hosts occur at Dunvegan though the Manitoba Maple (*Acer negundo*) are introduced where the violets are native and are much closer to where the specimens were collected.

Striped Chocolate-tip (*Closteria strigosa*): This is an uncommon moth in Alberta and is found primarily in the Parkland Natural Region and Dry Central Mixedwood Subregion.

The population discovered at Dunvegan is a significant range extension; it is approximately 430 kilometres northwest of the nearest population documented by Redwater. Adults of this species are attracted to light and fly from late May into early July. Larvae are reported to feed on aspen (*Populus tremuloides*) and willow (*Salix* sp.) by Hanfield (1999).

Saltmarsh Tiger (*Estigmene acrea*): Another uncommon species that is found primarily in the Parkland Natural Region and Dry Central Mixedwood Subregion. The Dunvegan population is a substantial range extension from the nearest population by Barrhead and is approximately 330 kilometres northwest. Adults are attracted to light and fly primarily from May into August with a couple records in southern Alberta from April. Larvae are generalists and feed on a wide variety of herbaceous plants.

Celia Tiger (*Grammia celia*): A rare species that inhabits the Parkland and Rocky Mountain Natural Regions. It is known from 6 localities in Alberta, one that is from Dunvegan in the Peace River Parkland Subregion. Other localities include Prospect Mountain, Redcap Mountain and Nordegg in the Rocky Mountain Natural Region and the Stony Plain Reserve and Edgerton in the Parkland Natural Region. This is a nocturnal species that is attracted to lights and is found from May to July. Larval hosts are recorded to be Plantain (*Plantago*) and other herbaceous plants (Schmidt 2000).

Broken-line Hypenodes (*Habenaria fractilinea*): An uncommon species that is rarely collected in Alberta. Its scarcity is likely related to how small it is and is often ignored or missed by collectors. The species is a Parkland Natural Region inhabitant and at the Peace River Wildland Park it is 380 kilometres north of the nearest documented population at Edmonton. The two specimens found at Peace River Wildland Park represent the ninth documented record of this species. The others are from the Upper Foothills Subregion (Nordegg) or from the Central Parkland Subregion (Edmonton, Red Deer, Winfield, Medicine Lake Provincial Recreation Area, Dry Island Buffalo Jump Provincial Park, Big Knife Provincial Park and Rochon Sands Provincial Park). This tiny moth with a 1.4 cm wingspan is attracted to lights and is encountered from early June to early August. Larval biology is unknown.

Charming Underwing (*Catocala blandula*): This species is uncommon in the Parkland Natural Region and the record from Peace River is a significant range extension. It is 270 kilometres from the nearest Alberta population at the Holmes Crossing Ecological Reserve. It is a nocturnal species that is attracted to light and bait. The lone Peace River specimen was collected off bait on the slopes just east of town. In Alberta they found from late July until early September. Larvae are recorded to feed on Hawthorn (*Crataegus*) by Sargent (1976) and on Saskatoon (*Amelanchier alnifolia*) by Hanfield (1999). In the Peace River Parkland Subregion it likely feeds on Saskatoon though Black Hawthorn (*Crataegus douglasii*) is also present in some areas.

Olive-shaded Bird-dropping Moth (*Tarachidia tortricina*): An uncommon species found in the Central Parkland Subregion and Grassland Natural Region of Alberta. There are several populations of this species in Alberta but what makes the Peace Wildland

Park and Dunvegan populations notable is that they are around 400 kilometres away from the nearest other population near Edmonton. This makes the two localities in the Peace River Parkland Subregion substantial range extensions. This species is nocturnal and attracted to lights and flies from May to August. Larvae are recorded to feed on sunflowers (*Helianthus* sp.) though only the Dunvegan site has them.

Cottonwood Dagger Moth (*Acronicta lepusculina*): An uncommon species that is an inhabitant of the Parkland Natural Region. The record from the Peace River Wildland Park is 360 kilometres north of the nearest documented population at Red Water. The two specimens collected also represent the ninth documented population for Alberta with all others being from the Central Parkland Subregion or the Foothills Natural Region near Nordegg. It is a nocturnal species that is attracted to light and it flies from late May into July. Larvae are solitary and feed on poplars, willows and birch (Hanfield 1999). In the Peace Parkland Subregion they likely feed on aspen (*Populus tremuloides*).

Quadrata Dagger Moth (*Acronicta quadrata*): A rare species that inhabits the Parkland Natural Region and the Dry Mixedwood Subregion. There are a total of 6 documented records for Alberta including the two from the Peace River Parkland Subregion. One specimen was collected at Dunvegan and the other two in the Peace River Wildland Park. In other areas of Alberta populations are found at Redwater, Calgary, Dry Island Buffalo Jump Provincial Park, Tolman Bridge and Waterton Lakes National Park. They are a nocturnal species that is attracted to light and they fly from mid June into July. Larvae are recorded to feed on Pin cherry (*Prunus pennsylvanica*), Chokecherry (*P. virginiana*), Saskatoon (*Amelanchier alnifolia*), Trembling aspen (*Populus tremuloides*) and willow (*Salix* sp.) all which are common in the Peace River Parkland Subregion.

Mountain Quaker (*Apamea longula*): This uncommon species that is found in both the Grassland and Parkland Natural Regions. There are seven recorded populations of this species with being from the Peace River Parkland Subregion. Two specimens were collected, one from Dunvegan and the other from Peace River Wildland Park. The other five locations are from southern Alberta and are as follows: Tolman Bridge Recreation Area, Dry Island Buffalo Jump Provincial Park, Dinosaur Provincial Park, Bindloss, and Writing-On-Stone Provincial Park. The nearest population is at Dry Island Buffalo Jump Provincial Park and is 550 kilometres away. This makes the Peace River Parkland Subregion populations substantial range extensions. The adults are nocturnal and fly from mid July into early September July and are attracted to light. There is no information on larval biology.

(*Lithophane diposita*): A rare spring moth known from only one other location. The five other specimens were collected by Kenneth Bowman back in the 1926, 1937, 1938s and 1940 and 1944 in the Edmonton area and have not been found since then. The species had not been observed in Alberta for 63 years. In spring of 2007 I was lucky to find another and knocked it off the wall of the Dunvegan Rest Area using a snowball. This is the second known locality for this species and represents a significant range extension for this species. This species is thought to feed on willow according to an observation by Thaxter in 1877.

Major Beauty (*Oncocnemis major*): This rare species is only known from two localities in Alberta. It was formerly only known from Waterton Lakes National Park but last summer a specimen was found at Dunvegan. The adults are nocturnal and fly in July and are attracted to light. It prefers exposed clay habitats with limited vegetation. The single specimen found at Dunvegan was collected in a UV trap situated on the south facing steep clay banks. There is no information on larval biology.

(*Anarta montanica*): An uncommon species that is a Grassland Natural Region specialist. There are seven localities recorded from Alberta including the two from the Peace River Parkland Subregion. There is one record from the Kleskun Hills and another from Dunvegan. Elsewhere in Alberta this species is known from Onefour, Writing-On-Stone Provincial Park, Sandy Point Recreation Area, Arrowwood, and Dry Island Buffalo Jump Provincial Park. The Kleskun Hills population is approximately 530 kilometres north of the nearest population at Dry Island Buffalo Jump Provincial Park making this locality a substantial range extension. This species is nocturnal and attracted to lights and flies from early May into June. Larval biology is unknown though I suspect it is a badlands specialist based on where all other records were taken. Both Dunvegan and the Kleskun Hills have extensive eroded clay knolls areas where this species was collected.

(*Anarta fervida*): Another rare species that is found primarily in the Grassland Natural Region. There are four known localities for this species, one that is at Dunvegan. The following other three populations are in southern Alberta: Lost River Valley, Dinosaur Provincial Park and Hanna. The Dunvegan record is approximately 650 kilometres north of the nearest population at Hanna making this locality a substantial range extension. This species is nocturnal and attracted to lights and flies from May into August. Larval biology is unknown though I suspect it is a grassland specialist since all four localities come from these types of habitat.

*(Above photo is courteously of Gary Anweiler of the Alberta Lepidopterists' Guild)

Tacoma Cutworm Moth (*Trichordestra tacoma*): This uncommon species is found throughout the Parkland and Foothills Natural Regions and along the southern edge of the Dry Mixedwood Subregion. There are 9 known localities for this species including the population from Dunvegan and Peace River Wildland Park. The other localities range from Waterton National Park along the foothills and up to the Holmes Crossing Ecological Reserve and Edmonton areas. It is a nocturnal species that comes to light and is found from May into July. Larvae are generalists and feed on a varieties of plants. They are recorded to feed on Willows (*Salix* sp.), Fireweed (*Epilobium* sp.), Cherries (*Prunus* sp.), Elders (*Sambucus* sp.), Velvet Leaf Blueberry (*Vaccinium myrtilloides*), Meadowsweet (*Spiraea latifolia*), White birch (*Betula papyrifera*), and Spreading Dogbane (*Apocynum androsaemifolium*) by Handfield (1999) and McCabe (1980). In our region I suspect it likely feeds on Fireweed, cherry, and Spreading Dogbane.

(*Trichordestra dodii*): A common species found in the Central Parkland and Dry Mixedwood Subregions of Alberta. There are several populations of this species in

Alberta but what makes the Peace Wildland Park and Dunvegan populations notable is that they are 360 to 400 kilometres away from the nearest other population near Opal. This makes these two localities in the Peace River Parkland Subregion substantial range extensions. This species is nocturnal and attracted to lights and flies from mid May to mid July. Larval biology is unknown.

(*Euxoa taura*): A rare moth and a significant discovery in the Peace River Parkland Subregion. There are three recorded populations of this species in Alberta including the one found at Dunvegan. The other two populations are from Milk River and Onefour in the Grassland Natural Region, nearly 900 kilometres from the Dunvegan population. This makes these two localities in the Peace River Parkland Subregion substantial range extensions. This species is nocturnal and attracted to lights and flies from mid May to mid July. The seven specimens collected were collected with UV traps and not at MV Sheet traps. It is likely that this species is only attracted to the spectrum emitted by UV lights. This moth prefers dry open areas such as what is found on the southern badlands slopes at Dunvegan and the Peace River Wildland Park. The larval biology of this species is unknown.

(*Protogygia querula*): A rare species found known primarily from the Grassland Natural Area of southern Alberta. Until recently it was only known from five localities, those being, Lost River Valley, Sandy Point Campground, 25km W of Burstall at South Saskatchewan River, Onefour and Dry Island Buffalo Jump Provincial Park. In the last couple of years it was found at Dunvegan and at Peace River Wildland Park. These two populations are nearly 600 kilometres from the nearest colony at Dry Island Buffalo Jump Provincial Park making these two populations significant range extensions. This species is nocturnal and attracted to lights and flies from mid May into July. The species is an inhabitant of badlands habitats that is present at both Peace River Parkland Subregion localities. The larval biology of this species is unknown.

(*Tesagrotis atrifrons*): Is the rare moth and a new record for Alberta from the Peace River Parkland Subregion. There are currently two records for this species in Alberta. The first one is from Waterton Lakes National Park and a lone specimen was collected at the Peace River Wildland Park. This species was known primarily from British Columbia until it was recently collected in Alberta. This population is 820 kilometres away from the nearest other population near Waterton Lakes National Park. This makes the locality in the Peace River Parkland Subregion a substantial range extension. This species is nocturnal and attracted to lights and flies from mid July into August. This moth prefers dry open areas (Miller and Hammond 2000) such as what is Peace River Wildland Park. The larval biology of this species is unknown.

Stirrup Moth (*Chersotis juncta*): A uncommon species found in the Central Parkland Subregion and Grassland Natural Region of Alberta. There are several populations of this species in Alberta but what makes the Peace Wildland Park and Dunvegan populations notable is that they are around 400 kilometres away from the nearest other population near Edmonton. This makes the two localities in the Peace River Parkland Subregion

substantial range extensions. This species is nocturnal and attracted to lights and flies from June to August. Larval biology is unknown

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Appendix I List of Species Found in eleven localities of the Peace River Parkland Ecoregion.

*Abundance rankings: A = abundant, ~over 100 populations documented and authors opinion; C = common, ~20 to 50 documented populations and authors opinion; U = uncommon, ~5 to 20 documented populations and authors opinion; R = rare, ~1 to 5 documented populations and authors opinion.

*Collections references in the following list are as follows: University of Alberta Strickland Museum collection (UASM), Douglas Allan Macaulay private collection (DAM), Canadian National Collection (CNC), Jason Dombroskie private collection (JD); Greg Pohl private collection (POHL); Gary Anweiler private collection (GGAC); Norbert Kondla private collection (NGK); University of Guelph Collection (UGUC); Royal Ontario Museum (ROM); University of Guelph Collection (UGUC); Agriculture and Agri-Food Canada, Saskatoon (AGSASK); Crispin S. Guppy private collection (CSG).

Scarci ty	MONA #	Family	Species	Disjun ct Pop'n	Significa nt Range Extensio n	Coll'n	PRW P	DP P	PRs w	PRy d	PRM M	SC C	TPC e Y	TPC w	EI P	MI P	PL L
C	2847.0 0	Tortricidae	Olethreutes glaciana (Möschler)	NO	NO	DAM											
R	2851.0 0	Tortricidae	Olethreutes turfosana (Herrich-Schäffer)	YES	YES	DAM							Y				
R	2861.0 0	Tortricidae	Hedya ochroleucana (Frölich)	NO	YES	DAM	Y						Y		Y		
C	2926.0 0	Tortricidae	Phaneta verna Miller	??	??	JD											
C	2937.0 0	Tortricidae	Phaneta parmatana (Clem.)	YES	YES	POHL											
U	2956.0 0	Tortricidae	Phaneta sp. nr. tarandana (Mösch.)	NO	YES	DAM	Y	Y									
C	2963.0 0	Tortricidae	Phaneta misturana (Hein.) group	??	??	JD											
C	2969.0 0	Tortricidae	Phaneta indagatricana (Hein.)	YES	YES	POHL											
U	2973.0 0	Tortricidae	Phaneta striatana (Clem.)	YES	YES	POHL											
U	3014.0 0	Tortricidae	Eucosma ridingsana (Robinson)	NO	YES	DAM	Y	Y									
U	3031.0 0	Tortricidae	Eucosma serpentana Wlsm.)	YES	YES	DAM										Y	
U	3035.0 0	Tortricidae	Eucosma morrisoni (Wlsm.)	YES	YES	POHL							Y				
C	3037.0 0	Tortricidae	Eucosma agricolana (Wlsm.)	NO	YES	DAM	Y	Y								Y	
R	3071.0 0	Tortricidae	Eucosma recissoriana Hein.	YES	YES	DAM										Y	
R	3116.0 0	Tortricidae	Eucosma dorsisignatana (Clem.)	NO	YES	DAM	Y						Y				
R	3151.0 0	Tortricidae	Pelochrista scintillana (Clem.)	NO	YES	DAM		Y									
??	3162.0 0	Tortricidae	Pelochrista corosana (Wlsm.)	NO	NO	DAM		Y									
U	3210.0 0	Tortricidae	Notocelia illotana (Wlsm.)	NO	YES	DAM	Y										
C	3211.0 0	Tortricidae	Notocelia culminana (Wlsm.)	YES	NO	POHL											
R	3230.0 0	Tortricidae	Proteoteras aesculana Riley	YES	YES	JD											
U	3240.0 0	Tortricidae	Zeiraphera canadensis Mut. & Free.	YES	YES	POHL											
C	3306.0 0	Tortricidae	Epinotia nisella (Clerck)	NO	NO	DAM	Y	Y					Y				
R	3307.0 0	Tortricidae	Epinotia criddleana (Kear.)	YES	YES	DAM	Y										
r	3351.0 0	Tortricidae	Epinotia lindana (Fernald)	YES	YES	DAM							Y				
U	3354.0 0	Tortricidae	Ancylis nubeculana (Clem.)	NO	YES	DAM	Y						Y				
A	3374.0 0	Tortricidae	Ancylis comptana (Frölich)	NO	YES	JD											
A	3382.0 0	Tortricidae	Ancylis unguicella (L.)	NO	YES	JD							Y				

Scarci ty	MONA #	Family	Species	Disjun ct Pop'n	Significa nt Range Extensio n	Coll'n	PRW P	DP P	PRs w	PRy d	PRM M	SC C	TPC e	TPC w	EI P	MI P	PL L	
C	7574.0 0	Geometridae	<i>Eupithecia albicapitata</i> Pack.	NO	YES	JD												
C	7594.0 0	Geometridae	<i>Eupithecia anticaria</i> (Wlk.)	NO	NO	DAM	Y											
C	7650.0 0	Uraniidae	<i>Callizzia amorata</i> Pack.	NO	NO	DAM	Y											
C	7687.0 0	Lasiocampida e	<i>Phyllodesma americanum</i> (Harr.)	NO	NO	DAM	Y						Y			Y		
C	7698.0 0	Lasiocampida e	<i>Malacosoma disstria</i> Hbn.	NO	NO	DAM	Y											
	7702.0 0	Lasiocampida e	<i>Malacosoma californicum</i> (Pack.)			DAM											Y	
C	7757.0 0	Saturniidae	<i>Antheraea polyphemus</i> (Cram.)	NO	NO	DAM	Y						Y					
C	7769.0 0	Saturniidae	<i>Hyalophora columbia gloveri</i> (Stkr.)	NO	NO	DAM							Y					
C	7803.0 0	Sphingidae	<i>Sphinx vashti</i> Stkr.	NO	NO	DAM, UASM		Y					Y				Y	
	7810.1 0	Sphingidae	<i>Sphinx poecila</i> Steph.			DAM								Y				
C	7821.0 0	Sphingidae	<i>Smerinthus jamaicensis</i> (Drury)	NO	NO	DAM							Y			Y		
C	7822.0 0	Sphingidae	<i>Smerinthus cerisyi</i> Kby.	NO	NO	DAM		Y					Y					
C	7824.0 0	Sphingidae	<i>Paonias exaecatus</i> (J.E. Sm.)	NO	NO	DAM	Y									Y		
C	7855.0 0	Sphingidae	<i>Hemaris diffinis</i> (Bdv.)	NO	NO	DAM											Y	
C	7893.0 0	Sphingidae	<i>Hyles galli</i> (Rott.)	NO	NO	DAM	Y									Y		
C	7895.0 0	Notodontidae	<i>Closteria albosigma</i> Fitch	NO	NO	DAM	Y						Y					
U	7898.0 0	Notodontidae	<i>Closteria strigosa</i> (Grt.)	YES	YES	DAM		Y										
C	7900.0 0	Notodontidae	<i>Closteria brucei</i> (Hy. Edw.)	NO	NO	DAM, UASM	Y						Y					
C	7901.0 0	Notodontidae	<i>Closteria apicalis</i> (Wlk.)	NO	NO	DAM							Y					
C	7915.0 0	Notodontidae	<i>Nadata gibbosa</i> (J.E. Sm.)	NO	NO	DAM	Y											
C	7922.0 0	Notodontidae	<i>Pheosia rimosa</i> (Pack.)	NO	NO	UASM			Y									
C	7926.0 0	Notodontidae	<i>Notodonta scitipennis</i> Wlk.	NO	NO	DAM	Y											
C	7928.0 0	Notodontidae	<i>Notodonta simplaria</i> Graef	NO	NO	DAM, UASM	Y	Y					Y					
C	7931.0 0	Notodontidae	<i>Glaphisia septentrionis</i> Wlk.	NO	NO	DAM		Y					Y					
C	7939.0 0	Notodontidae	<i>Furcula occidentalis</i> (Lint.)	NO	NO	DAM, UASM	Y	Y					Y					
C	7941.0 0	Notodontidae	<i>Furcula modesta</i> (Hudson)	NO	NO	DAM		Y										
C	8007.0 0	Notodontidae	<i>Schizura unicornis</i> (J.E. Sm.)	NO	NO	DAM	Y						Y					

Scarcity	MONA #	Family	Species	Disjunct Pop'n	Significant Range Extension	Coll'n	PRWP	DPP	PRsw	PRyd	PRM	SCC	TPCe	TPCw	EIP	MIP	PLL
C	9193.00	Noctuidae	Raphia frater Grt.	NO	NO	DAM	Y	Y									
C	9203.00	Noctuidae	Acronicta dactylina Grt.	NO	NO	DAM	Y					Y					
U	9205.00	Noctuidae	Acronicta lepusculina Gn.	YES	YES	DAM	Y										
C	9206.00	Noctuidae	Acronicta vulpina (Grt.)	NO	NO	DAM	Y										
C	9212.00	Noctuidae	Acronicta grisea Wlk.	NO	NO	DAM						Y					
U	9224.00	Noctuidae	Acronicta quadrata Grt.	YES	YES	DAM	Y	Y									
C	9229.00	Noctuidae	Acronicta hasta Gn.	NO	NO	DAM						Y					
C	9241.00	Noctuidae	Acronicta fragilis (Gn.)	NO	NO	DAM	Y										
C	9257.00	Noctuidae	Acronicta impleta Wlk.	NO	NO	DAM	Y					Y					
C	9261.00	Noctuidae	Acronicta impressa Wlk.	NO	NO	DAM, UASM		Y									
R	9284.00	Noctuidae	Anterastria teratophora (H. S.)	YES	YES	DAM											Y
C	9318.00	Noctuidae	Alypia langtoni Couper	NO	NO	JD			Y								
	9348.00	Noctuidae	Apamea amputatrix (Fitch)			DAM						Y					
C	9353.00	Noctuidae	Apamea inordinata (Morr.)	NO	NO	DAM	Y	Y									
C	9359.00	Noctuidae	Apamea commoda (Wlk.)	NO	NO	DAM			Y								
C	9365.00	Noctuidae	Apamea scoparia Mik., Must. & Laf.	NO	NO	DAM		Y				Y					
C	9367.00	Noctuidae	Apamea dubitans (Wlk.)	NO	NO	DAM	Y										
C	9369.00	Noctuidae	Apamea inficta (Wlk.)	NO	NO	DAM	Y	Y									
C	9382.00	Noctuidae	Apamea devestator (Brace)	NO	NO	DAM	Y	Y					Y				
C	9383.00	Noctuidae	Apamea longula (Grt.)	YES	YES	DAM	Y	Y									
C	9391.00	Noctuidae	Resapamea passer (Gn.)	NO	NO	DAM		Y									
C	9419.00	Noctuidae	Oligia mactata (Gn.)	NO	NO	DAM	Y		Y								
C	9420.00	Noctuidae	Oligia illocata (Wlk.)	NO	NO	DAM							Y				
	9434.00	Noctuidae	Spartiniphaga includens (Wlk.)			DAM							Y				
C	9439.00	Noctuidae	Chortodes basistriga (McD.)	NO	NO	DAM		Y					Y		Y		
	9450.00	Noctuidae	Archana subflava (Grt.)			DAM									Y		
C	9453.00	Noctuidae	Celaena reniformis (Grt.)	NO	NO	DAM		Y							Y		

Scarci ty	MONA #	Family	Species	Disjunct Pop'n	Significant Range Extension	Coll'n	PRW P	DP P	PRs w	PRy d	PRM M	SC C	TPC e	TPC w	EIP	MI P	PLL
	9455.00	Noctuidae	<i>Amphipoea interoceanica</i> (Sm.)			DAM										Y	
C	9457.00	Noctuidae	<i>Amphipoea americana</i> (Speyer)	NO	NO	DAM		Y									
	9515.00	Noctuidae	<i>Hydraecia pero obliqua</i> Harv.			DAM										Y	
A	9549.00	Noctuidae	<i>Enargia decolor</i> (Wlk.)	NO	NO	DAM		Y	Y								
C	9550.00	Noctuidae	<i>Enargia infumata</i> (Grt.)	NO	NO	DAM	Y	Y									
C	9556.00	Noctuidae	<i>Chytonix palliatricula</i> (Gn.)	NO	NO	DAM	Y										
C	9564.00	Noctuidae	<i>Andropolia contacta</i> (Wlk.)	NO	NO	DAM	Y										
C	9578.10	Noctuidae	<i>Hyppa contrasta</i> McD.	NO	NO	DAM	Y										
C	9647.00	Noctuidae	<i>Proxenus miranda</i> (Grt.)	NO	NO	DAM	Y	Y									
C	9660.99	Noctuidae	<i>Caradrina montana</i> (Grt.)	NO	NO	DAM	Y										
U	9682.20	Noctuidae	<i>Elaphria alapallida</i> Pogue & Sullivan	NO	NO	DAM, UASM	Y										
C	9874.00	Noctuidae	<i>Xylena curvimacula</i> (Morr.)	NO	NO	DAM		Y						Y			
C	9876.00	Noctuidae	<i>Xylena cineritia</i> (Grt.)	NO	NO	DAM								Y			
	9875.00	Noctuidae	<i>Xylena thoracica</i> (Putnam-Cramer)			DAM		Y						Y			
C	9878.00	Noctuidae	<i>Lithomoia germana</i> (Morr.)	NO	NO	DAM		Y						Y			
C	9881.00	Noctuidae	<i>Homoglaea hircina</i> Morr.	NO	NO	DAM		Y									
C	9884.00	Noctuidae	<i>Litholomia napaea</i> (Morr.)	NO	NO	DAM, UASM		Y						Y			
C	9888.00	Noctuidae	<i>Lithophane innomoinata</i> (Sm.)	NO	NO	DAM		Y									
C	9891.00	Noctuidae	<i>Lithophane amanda</i> (Sm.)	NO	NO	DAM		Y									
R	9892.00	Noctuidae	<i>Lithophane diposita</i> Morr.	YES	YES	DAM		Y									
	9909.00	Noctuidae	<i>Lithophane tepida</i> Grt.			DAM								Y			
C	9913.00	Noctuidae	<i>Lithophane georgii</i> Grt.	NO	NO	DAM, UASM		Y									
C	9922.00	Noctuidae	<i>Lithophane pexata</i> Grt.	NO	NO	DAM		Y									
	9939.00	Noctuidae	<i>Eupsilia devia</i> (Grt.)			DAM								Y			
C	9952.00	Noctuidae	<i>Eucirroedia pampina</i> (Gn.)	NO	NO	DAM	Y								Y		
C	9960.00	Noctuidae	<i>Sunira verberata</i> (Sm.)	NO	NO	DAM								Y			
	9962.00	Noctuidae	<i>Anathix puta</i> Grote & Robinson			DAM									Y		

Scarci ty	MONA #	Family	Species	Disjun ct Pop'n	Significa nt Range Extensio n	Coll'n	PRW P	DP P	PRs w	PRy d	PRM M	SC C	TPC e Y	TPC w	EI P	MI P	PL L
C	9967.00	Noctuidae	<i>Hillia iris</i> (Zett.)	NO	NO	DAM											
C	9976.00	Noctuidae	<i>Platypolia anceps</i> (Steph.)	NO	NO	DAM							Y				
C	9980.00	Noctuidae	<i>Xylotype arcadia</i> B. & Benj.	NO	NO	DAM							Y				
C	9993.00	Noctuidae	<i>Branchlomia populi</i> (Stkr.)	NO	NO	DAM		Y							Y		
C	10008.00	Noctuidae	<i>Feralia comstocki</i> (Grt.)			DAM							Y				
	10027.00	Noctuidae	<i>Pleromelloida conserta</i> (Grt.)			DAM							Y				
C	10059.00	Noctuidae	<i>Sympistis badistriga</i> (Grt.)	NO	YES	DAM		Y									
	10062.00	Noctuidae	<i>Sympistis stabilis</i> Sm.			DAM									Y		
C	10065.90	Noctuidae	<i>Sympistis dinalda</i> (Sm.)	YES	YES	DAM		Y									
C	10124.00	Noctuidae	<i>Sympistis cibalis</i> (Grt.)	YES	YES	DAM							Y				
C	10130.00	Noctuidae	<i>Sympistis pallidior</i> Barnes	YES	YES	DAM	Y	Y							Y		
C	10135.00	Noctuidae	<i>Sympistis riparia</i> Morr.	YES	YES	DAM	Y								Y		
R	10135.10	Noctuidae	<i>Sympistis major</i> McD.	YES	YES	DAM		Y							Y		
C	10194.00	Noctuidae	<i>Cucullia intermedia</i> Speyer	NO	NO	DAM, UASM		Y									
C	10223.00	Noctuidae	<i>Anarta trifolii</i> (Hufn.)	NO	YES	DAM		Y					Y		Y		
U	10228.00	Noctuidae	<i>Anarta montanica</i> McD.	YES	YES	DAM		Y									
C	10232.00	Noctuidae	<i>Anarta farnhami</i> (Grt.)	NO	NO	DAM	Y										
C	10233.00	Noctuidae	<i>Anarta crotchi</i> (Grt.)	NO	YES	DAM, UASM		Y							Y		
C	10238.00	Noctuidae	<i>Scotogramma submarina</i> (Grt.)	YES	YES	DAM		Y									Y
U	10239.00	Noctuidae	<i>Scotogramma fervida</i> B. & McD	YES	YES	GGAC		Y									
C	10265.00	Noctuidae	<i>Sideridis rosea</i> (Harv.)	NO	NO	DAM	Y	Y				Y					
C	10268.00	Noctuidae	<i>Sideridis maryx</i> (Gn.)			DAM							Y				
C	10271.00	Noctuidae	<i>Mamestra configurata</i> Wlk.	NO	NO	DAM		Y									
C	10275.00	Noctuidae	<i>Polia nimbosa</i> (Gn.)	NO	NO	DAM	Y								Y		
C	10276.00	Noctuidae	<i>Polia imbrifera</i> (Gn.)	NO	NO	DAM	Y										
C	10280.00	Noctuidae	<i>Polia purpurissata</i> (Grt.)	NO	NO	DAM	Y	Y									
	10281.30	Noctuidae	<i>Polia propodea</i> McCabe			DAM							Y				

Scarci ty	MONA #	Family	Species	Disjun ct Pop'n	Significa nt Range Extensio n	Coll'n	PRW P	DP P	PRs w	PRy d	PRM M	SC C	TPC e	TPC w	EI P	MI P	PL L
C	10289. 00	Noctuidae	<i>Orthodes goodelli</i> (Grt.)	NO	NO	DAM	Y								Y		
C	10290. 00	Noctuidae	<i>Orthodes obscura</i> (Sm.)	NO	NO	DAM	Y	Y							Y		
C	10292. 00	Noctuidae	<i>Melanchra adjuncta</i> (Bdv.)	NO	NO	DAM	Y										
C	10295. 00	Noctuidae	<i>Melanchra assimilis</i> (Morr.)	NO	NO	DAM	Y										Y
C	10298. 00	Noctuidae	<i>Lacanobia radix</i> (Wlk.)	NO	NO	DAM		Y					Y				
C	10301. 00	Noctuidae	<i>Spiramater lutra</i> (Gn.)	NO	NO	DAM, UASM		Y					Y				
U	10303. 00	Noctuidae	<i>Trichordestra tacoma</i> (Stkr.)	YES	YES	DAM	Y	Y									
U	10305. 00	Noctuidae	<i>Trichordestra dodii</i> (Sm.)	YES	YES	DAM	Y	Y							Y		Y
C	10308. 00	Noctuidae	<i>Trichordestra liquida</i> (Grt.)	NO	NO	DAM		Y									
C	10310. 00	Noctuidae	<i>Papestra quadrata</i> (Sm.)	NO	NO	DAM		Y					Y				
C	10312. 00	Noctuidae	<i>Papestra cristifera</i> (Wlk.)	NO	NO	DAM	Y										
C	10315. 00	Noctuidae	<i>Lasionycta secedens</i> (Wlk.)	NO	NO	DAM	Y										
C	10370. 00	Noctuidae	<i>Lacinipolia lustralis</i> (Grt.)	NO	NO	DAM		Y									
C	10372. 00	Noctuidae	<i>Lacinipolia anguina</i> (Grt.)	NO	NO	DAM		Y									
C	10394. 00	Noctuidae	<i>Lacinipolia vicina</i> (Grt.)	NO	NO	DAM	Y		Y								
C	10397. 00	Noctuidae	<i>Lacinipolia renigera</i> (Steph.)	NO	NO	DAM	Y	Y									
C	10405. 00	Noctuidae	<i>Lacinipolia lorea</i> (Gn.)	NO	NO	DAM		Y									
C	10406. 00	Noctuidae	<i>Lacinipolia olivacea</i> (Morr.)	NO	NO	DAM		Y									
C	10431. 00	Noctuidae	<i>Faronta diffusa</i> (Wlk.)	NO	NO	DAM	Y	Y									
C	10436. 00	Noctuidae	<i>Mythimna oxygala</i> (Grt.)	NO	NO	DAM		Y					Y		Y		
C	10446. 00	Noctuidae	<i>Leucania multilinea</i> Wlk.	NO	NO	DAM		Y								Y	
C	10447. 00	Noctuidae	<i>Leucania commoides</i> Gn.			DAM								Y			
C	10449. 00	Noctuidae	<i>Leucania insueta</i> Gn.	NO	NO	DAM	Y	Y									
C	10490. 00	Noctuidae	<i>Orthosia revicta</i> (Morr.)	NO	NO	DAM		Y					Y				
C	10493. 00	Noctuidae	<i>Orthosia segregata</i> (Sm.)	NO	NO	DAM		Y					Y				
	10495. 00	Noctuidae	<i>Orthosia hibisci</i> (Gn.)			DAM								Y			
	10513. 00	Noctuidae	<i>Egira dolosa</i> (Grt.)			DAM								Y			

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