MOTHS OF THE GAETZ LAKES SANCTUARY, A SECOND REPORT

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THE AREA

The City of Red Deer is blessed by having a number of parks and areas where the native vegetation and associated birds, mammals, insects and other forms of life are protected. The most outstanding of these is Waskasoo Park, located in the Red Deer River Valley in the northeastern part of the City. Included within the Park are the Gaetz Lakes Sanctuary and the associated Kerry Wood Nature Centre. The Sanctuary, which is 118 hectares in size, encloses the two Gaetz Lakes which are surrounded by a mixed forest of aspen, balsam poplar and white spruce and a meadow on the western side. Information on the Sanctuary can be found on the internet at www.waskasoopark.ca and in various nature guides and books dealing with Alberta's parks.

Lists of the birds, mammals, flowering plants and various other organisms that occur in the Sanctuary have been prepared, and may be found on the abovementioned web site, but no inventories exist of the moths. In an attempt to partially remedy this, the writer held a 10 July 2002 moth clinic, attended by Judy Boyd, Janet Coatham, Eileen Ford, Sylvia Glass, Gail Hughes, Margaret Koontz and Bea Pierce. Included in the clinic, and after the onset of darkness, was the manning of a mercury vapor light and sheet (in mixed woods) as well as the setting up of two ultraviolet light traps (one in mixed woods, another in grassland). The moths that were captured by these means were examined the next morning and, after that, were mounted, labeled and then identified. The remainder of this report contains a list of the moths that were found that night. A similar study was carried out on the night of August 13, 2003. Those in attendance at that time were Judy & Larry Boyd, Bob Krutchen, Dorothy Haslett and Cherlyn Forth.

A preliminary report on material studied during 2002 was completed on March 21, 2003 (Bird 2003). The present paper incorporates the information in the previous one and adds information on material studied in 2003. It also includes a number of redeterminations and additions to the information in the earlier report.

BACKGROUND

Provincial Parks and other areas where natural vegetation is protected are of great value as their flora and fauna is typical of what was in Alberta before widespread agricultural activities which resulted in a replacement of many native species by weedy species associated with cultivated grains and hay crops. As a result, many of Alberta's "rare and endangered" species are now found only, or mainly, in such protected areas.

The writer, now retired and living in Erskine, Alberta, has had a long-time interest in the natural flora and fauna of the province. In the spring of 2000, he commenced an examination of the moths of south-central Alberta, the purpose of which was to document the species present in various natural areas. He is a member of the Alberta Lepidopterist's Guild, the purpose of which is to encourage the study of Alberta's moths and butterflies.

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

SPECIMEN DISPOSITION

All specimens collected by the writer presently reside in his collection but they will eventually be donated to one or more of the University of Alberta Strickland Museum, the Northern Forest Research Centre in Edmonton, and the Canadian National Collection in Ottawa.

THE FOLLOWING CHECKLIST

The order and terminology, are that of R.W. Hodges (1983) except where recent changes in taxonomy have occurred. While most of the larger (macromoths) are relatively well known, the same cannot be said for many of the smaller (micromoths) ones. Identifications, especially of the latter, can be difficult or are at present impossible, until such time as revisionary studies are made. Also, genitalic dissection and examination is necessary for positive identification in some groups. For these reasons, some of the determinations found herein should be regarded as tentative. The scientific names of the species are followed by the day-month-year of the collection and the number of individuals mounted; an "SR" indicates a sight record. Common names are mentioned in those cases where such names exist.

Kenneth Bowman's (1951) list of the Lepidoptera of Alberta presents all species known at that time and gives the distribution of each according to 21 Areas. His areas 5, 8 and 10 essentially cover all of south-central Alberta, with the Gaetz Lakes Sanctuary being in Area 8. Most of Bowman's records are from his Area 10, which includes Edmonton, so many of the species found in the following list are additions to his Area 8.

HEPIALIDAE – Ghost Moths or Swifts

19. Sthenopsis purpurascens (Pack.) (Large Ghost Moth) – 10-VII-2002 1.

COLEOPHORIDAE – Casebearer Moths

Coleophora spp. – 10-VII-2002 2. These specimens are currently being examined by Dr. Jean-François Landry.

MOMPHIDAE – Momphid Moths

1458. Mompha unifasciella (Cham.) – 10-VII-2002 1.

COSMOPTERYGIDAE – Cosmpoterygid Moths

1615. Walshia miscecolorella (Clem.) – 10-VII-2002 1.

GELECHIIDAE – Gelechiid Moths

Species unknown – 10-VII-2002 2.
1946. Gelechia lynceela Zell. – 10-VII-2002 1.

ALUCITIDAE – Many-plume Moths

2313. Alucita hexadactyla L. (The Six Plume Moth) – 13B-VIII-2003 1. Research by Bernard Landry and Jean-François Landry has shown that true *hexadactyla* does not occur in North America and that a number of new species occur in Alberta. Their paper is now awaiting publication.

PLUTELLIDAE – Plutellid Moths

2366. Plutella xylostella (L.) (Diamondback Moth) – 13B-VIII-2003 1.
2371. Ypsolopha canariella (Wlsm.) – 13B-VIII-2003 1.

COSSIDAE – Carpenterworm Moths

2676. Acossus populi (Wlk.) (Aspen Carpenterworm) – 10-VII-2002 1.

TORTRICIDAE – Tortricid Moths

2743a. Endothenia nubilana (Clem.) – 13B-VIII-2003 1.
2755. Apotomis funerea (Meyr) – 10-VII-2002 1.
2788. Olethreutes inornatana (Clem.) – 10-VII-2002 2.
Olethreutes sp. – 10-VII-2002 1.
2900. Petrova burkeana (Kft.) – 10-VII-2002 1.
3465. Cydia flexiloqua (Heinr.) – 10-VII-2002 3.
3466. Cydia youngana (Kft.) – 10-VII-2002 1.
3502. Croesia albicomana (Clem.) – 10-VII-2002 1.
3568. Eana argentana (Cl.) – 10-VII-2002 1.
3595. Pandemis canadana Kft. (Green Aspen Leaftier) – 10-VII-2002 2.
3635. Choristoneura rosaceana (Harr.) – 10-VII-2002 1.
3682. Clepsis persicana (Fitch) (White Triangle Tortix) – 10-VII-2002 1.
3684. Clepsis clemensiana (Fern.) – 13A-VIII-2003 1.
3720. Sparganothis reticulatana (Clem.) – 13B-VIII-2003 1.

COCHYLIDAE – Cochylid Moths

3792. Phtheochroa waracana (Wlsm.) – 10-VII-2002 2.

PYRALIDAE – Pyralid or Snout Moths

4716. Scoparia biplagialis Wlk. – 13A-VIII-2003 1.
5004. Loxostege sticticalis (L.) (Beet Webworm) – 10-VII-2002 2.
5034. Pyrausta signatalis(Wlk.) – 10-VII-2002 1.
5135. Mecyna submedialis (Grt.) – 10-VII-2002 1.
5299. Acentria ephemerella (Denis & Schiffermüller) – 13A-VIII-2003 1, 13B-VIII-2003 1. A new species for Alberta (Pohl et al. submitted), though it has now been found in numerous places in the province.
5316. Donacaula melinella (Clem.) – 13B-VIII-2003 1.
5343a. Crambus perlellus innotatellus Wlk. – 10-VII-2002 1.
5391. Chrysoteuchia topiaria (Zell.) (Cranberry Girdler) – 10-VII-2002 2.
5397. Agriphila plumbifimbriella (Dyar) – 10-VII-2002 1.
5413. Pediasia trisecta (Wlk.) (Sod Webworm Moth) – 13A-VIII-2003 1, 13B-VIII-2003 2.
5417. Pediasia dorsipunctella (Kft.) – 10-VII-2002 2.
5841. Dioryctria abietivorella (Grt.) (Fir Coneworm) – 10-VII-2002 1.
5999. Eulogia ochrifrontella (Zell.) – 10-VII-2002 1.

PTEROPHORIDAE – Plume Moths

6094. Capperia ningoris (Wlsm.) – 10-VII-2002 1.

DREPANIDAE. – Hooktip Moths

6255. Oreta rosea (Wlk.) (Rose Hooktip) – 10-VII-2002 1.

GEOMETRIDAE – Inchworm or Geometrid Moths

6677. Cabera erythemaria Gn. (Yellow-dusted Cream Moth) – 10-VII-2002 2.
6678. Cabera variolaria Gn. (The Vestal or Pink-Striped Willow Spanworm) – 10-VII-2002 1.
6726. Euchlaena obtusaria (Hbn.) (Obtuse Euchlaena) – 10-VII-2002 2.
6737. Euchlaena tigrinaria (Gn.) (Variable Thorn or Mottled Euchlaena) – 10-VII-2002 1.
6743. Xanthotype sospeta (Drury) (The Crocus Geometer) – 10-VII-2002 1.
6755. Pero morrisonaria (Hy. Edw.) (Lesser Umber) – 10-VII-2002 1.
6820. Metanema determinata Wlk. (Dark-Banded Thorn) – 10-VII-2002 1.
6838. Probole amicaria (H.-S.) (Friendly Probole) – 10-VII-2002 1.
7164. Scopula junctaria (Wlk.) (Simple Wave) – 10-VII-2002 1.
7207. Eulithis xylina (Hulst) (The Phoenix) – 10-VII-2002 1.
7394. Epirrhoe alternata (Müller) (White-banded Toothed Carpet) – 10-VII-2002 1.
7406. Zenophleps lignicolorata (Pack.) – 13B-VIII-2003 3.
7440. Eubaphe mendica (Wlk.) (The Beggar) – 10-VII-2002 2.
Eupithecia sp. (Pugs) – 10-VII-2002 1. This specimen is currently being examined by Dr. George Balogh.

URANIIDAE

7650. Callizia amorata Pack. (Gray Scoopwing) – 10-VII-2002 1.

SATURNIDAE – Giant Silk Moths

7757. Antheraea polyphemus (Cram.) (Polyphemus Moth) – 10-VII-2002 1.

SPHINGIDAE – Sphinx Moths

7822. Smerinthus cerisyi Kby. (One-eyed Sphinx) – 10-VII-2002 1.
7893. Hyles gallii (Rottemburg) (Bedstraw Hawk-moth or Galium Sphinx) – 10-VII-2002 1.

NOTODONTIDAE – Prominent Moths

7895. Clostera albosigma Fitch (Sigmoid Prominent) – 10-VII-2002 1.
8007. Schizura unicornis (J. E. Smith) (Variegated Prominent or Unicorn Caterpillar Moth) – 10-VII-2002 1.

NOCTUIDAE – Owlet or Noctuid Moths

8322. Idia americalis (Gn.) (American Snout) – 10-VII-2002 3.
8362. Phalaenostola metonalis (Wlk.) (Tufted Snout or Pale Phalaenostola) – 10-VII-2002 1.
8738. Caenurgina crassiuscula (Haw.) (Clover Looper Moth) – 10-VII-2002 1.
8821. Catocala semirelicta Grt. (Semirelict Underwing) – 13B-VIII-2003 1.
8914. Autographa californica (Speyer) (Alfalfa Looper) – 13B-VIII-2003 1.
8990. Nola cilicoides (Grt.) (Blurry-patched Nola) – 10-VII-2002 1.
9048. Lithacodia albidula (Gn.) (Common Midget) – 10-VII-2002 1.
9193. Raphia frater Grt. (The Brother) – 10-VII-2002 1.
9241. Acronicta fragilis (Gn.) (Fragile Dagger-Moth) – 10-VII-2002 1.
9257. Acronicta impleta Wlk. (Yellow-haired Dagger-Moth) – 1.
9359. Apamea commoda (Wlk.) (Southern Quaker) – 10-VII-2002 2.
9362. Apamea remissa (Hbn.) (Broken-banded Quaker) – 13B-VIII-2003 1.
9364. Apamea finitima Gn. (Bordered Apamea) – 10-VII-2002 1.
9382. Apamea devastator (Brace) (Glassy Cutworm Moth) – 13A-VIII-2003 2.
9391. Luperina passer (Gn.) (Dock Rustic) – 10-VII-2002 1.
9419. Oligia mactata (Gn.) (Prairie Quaker) – 10-VII-2002 1.
9437. Chortodes inquinata (Gn.) (Sordid Wainscot) – 13B-VIII-2003 1.
9439. Chortodes basistriga (McD.) (Base-streaked Wainscot) – 13B-VIII-2003 1.
9656. Platyperigea montana (Bremer) (Civil Rustic) – 13A-VIII-2003 1, 13B-VIII-2003 1.
9963. Anathix aggressa (Sm.) (Pale Sallow) – 13B-VIII-2003 1.
9993. Brachylomia populi (Stkr.) (Cloaked Peasant) – 13A-VIII-2003 1.
10276. Polia imbrifera (Gn.) (Cloudy Arches) – 10-VII-2002 1.
10405. Lacinipolia lorea (Gn.) (Bridled Arches) – 10-VII-2002 1.
10431. Faronta diffusa (Wlk.) (Wheat Head Armyworm Moth) – 10-VII-2002 1.

10436. Aletia oxygala (Grt.) (Lesser Wainscot) – 10-VII-2002 1, 13A-VIII-2003 2, 13B-VIII-2003 1.
10524. Nephelodes minians Gn. (Shaded Umber or Bronzed Cutworm Moth) – 13A-VIII-2003 1, 13B-VIII-2003 1.
10670. Feltia jaculifera (Gn.) (Dingy Cutworm Moth) – 13A-VIII-2003 2.
10702. Euxoa divergens (Wlk.) (Divergent Dart) – 13A-VIII-2003 2, 13B-VIII-2003 1.
10801. Euxoa ochrogaster (Gn.) (Red-Backed Cutworm Moth) – 13A-VIII-2003 1.
10915. Peridroma saucia (Hbn.) (Variegated Cutworm Moth) – 13B-VIII-2003 1.
10942. Xestia c-nigrum (L.) (Lesser Black-letter Dart) – 10-VII-2002 2.
10944. Xestia smithii (Snellen) (Spotted Clay Dart) – 13A-VIII-2003 1.
10954. Agnorisma bugrai (Koçak) (Collared Dart) – 13B-VIII-2003 1.
10992. Paradiarsia littoralis (Pack.) (Labrador Dart) – 10-VII-2002 2.
11004. Protolampra rufipectus (Morr.) (Red-breasted Dart) – 10-II-2002 1.
11012. Cryptocala acadiensis (Bethune) (Catocaline Dart) – 13B-VIII-2003 1.
11041. Abagrotis placida (Grt.) (Placid Dart) – 13B-VIII-2003 1.

SUMMARY

The report based on 2002 research (Bird 2003) listed 66 species. The present list brings the total up to 92 (plus some yet to be determined) species. While this may seem an impressive number, it is felt that, with further study, this total can be easily quadrupled. To put things into perspective, it is thought that there are about 1000 macromoths plus 1000 micromoths in the province.

Peak numbers of moths occur during June, July and August. As most species fly for only a few days at a particular time of the year, the present list, which involves collections made on two nights, must be regarded as only a start at a proper inventory.

ACKNOWLEDGEMENTS

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Landry, B & J.-F. Landry. In press. The genus Alucita in North America, with the description of two new species (Lepidoptera: Alucitidae). The Canadian Entomologist 135.

Pohl, G., C. D. Bird, J-F. Landry & G. Anweiler. Submitted. New records of Microlepidoptera for Alberta. J. Lep. Soc.

USEFUL ONLINE INFORMATION SOURCES ON MOTHS

Information on many of our Alberta moths can be found at the Entomology Collection Search site of the E.H. Strickland Entomological Museum of the Department of Biological Sciences at the University of Alberta: http://virtual-museum.sunsite.ualberta.ca/dig.search/ent/ent/.

Illustrations of Alberta macromoths can be found at a site put together by D. Lafontaine and J. Troubridge called "The Moths of Canada": http://www.cbif.gc.ca/spp_pages/misc_moths/phps/mothindex_e.php.

USEFUL BOOKS ON MOTHS

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Handfield, Louis. 1999. Le Guide des Papillons du Quebec. Vol. 1. Broquet, Boucherville, QC.

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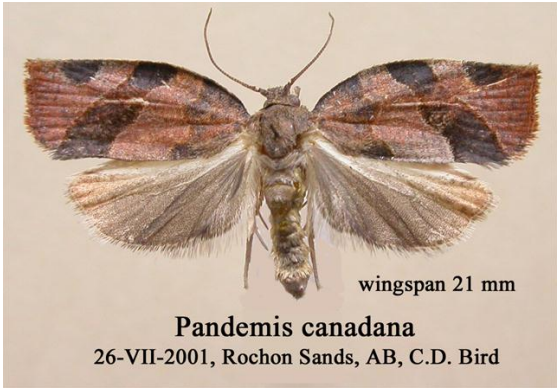
Plate 1. Some Moths known from the Gaetz Lakes Sanctuary.



Dioryctria abietivorella, wingspan 22 mm: ALBERTA, Erskine, 21-VII-2000, C.D. Bird, BIRD212, C.D. Bird image