## **INSECTS**

# CHECKLIST OF SASKATCHEWAN MOTHS: PART 17-GEOMETRIDAE (3), ALSOPHILINAE, GEOMETRINAE AND STERRHINAE

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This is a continuation of the list of Saskatchewan geometrid moths. The first geometrid article was published in *Blue Jay*, Volume 64, Number 2.

Unless otherwise indicated, all the species are represented in the Royal Saskatchewan Museum collection in Regina. The species are arranged according to the website of Jim Troubridge and Don Lafontaine, The Moths of Canada,9 with updates to 2006 provided to the author by Greq Pohl. This website also has colour photographs of the moths. McGuffin's well-illustrated Guide to Geometridae of Canada covers the subfamilies covered here.<sup>5,6</sup> This reference is the source of some of the information presented here, but the preferred food plants listed are primarily based on Prentice.7 The common names that are used are mostly according to J. R. J. Llewellen Jones and C. V. Covell, Jr.. 1,4 Recent scientific name changes are according to M. J. Scoble.8

In this article the size, and early and late dates of Saskatchewan specimens are given. Some of the recorded food plants are mentioned. Abbreviations: s=south, n=north, w=west, e=east, CNC=Canadian National Collection in Ottawa, RSM=Royal Saskatchewan Museum in Regina.

Subfamily ALSOPHILINAE (OENOCHROMINAE)

Our only species of this group is the Fall Cankerworm. The male flies late in the fall. The wingless females climb up the tree trunks to lay their eggs on the upper trunks or branches. These eggs hatch in the spring and the young feed on the leaves. At maturity, the larvae drop to the ground and spin cocoons in the soil from which the adults emerge in the fall.<sup>3</sup> (Recent research suggests that this subfamily be moved to Subfamily Ennominae as Tribe Alsophilini.<sup>10</sup>)

Fall Cankerworm Alsophila pometaria (Harr.) - S. Sask., n. to Cumberland House and Prince Albert. (24-33 mm - males) (Sept. 21-Nov.8, April 6-June 13 - spring adults are rare) Reported on maple and elm.

Subfamily GEOMETRINAE (Emeralds)

Moths of this group are rather small(18-30 mm). Most of them are a beautiful pale green with two sets of white lines crossing both wings. Most of the males have pectinate antennae in order to pick up more readily the scent of the females. The adults are mostly nocturnal except for the Plain Emerald.

**Looped Emerald** *Nemoria unitaria* (Pack.) - Central Sask., n. to Loon Lake;



Female Fall Cankerworm

RSM collection, Emersen Ziffle

s. to Fort Esperance and Fort Qu'Appelle. Also in Cypress Hills Provincial Park (Centre Block). (25-30 mm) (July 6-19) Reported on currant and gooseberry. See inside back cover, top photo.

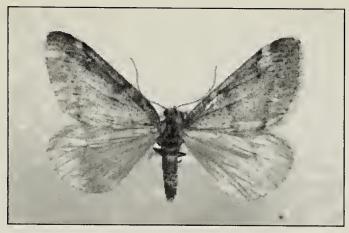
White-faced Emerald Nemoria mimosaria Gn. - Central Sask., n. to Erwood; s. to Roche Percee and Avonlea. (24-26 mm) (June 4-26) Reported on birch, fir and tamarack.

Wavy-lined Emerald Synchlora aerata albolineata Pack.- S. Sask., n. to Somme, Waskesiu area and Loon Lake. (18-30 mm) (June 28-Sept. 12) Reported on aster, blazing star, blackeyed susan, sunflower and raspberry.

**Two-lined Emerald** Synchlora bistriaria (Pack.) - Sw. Sask., e. to Fort Qu'Appelle area; n. to Saskatoon area. (22-28 mm) (July 11-28) Reported on flowers of sunflower, goldenrod and rose.

Blackberry Looper Moth Chlorochlamys chloroleucaria (Gn.) -Roche Percee, Estevan and Fort Esperance. (18-20 mm) (June 29-July 1) Reported on flowers of goldenrod and yarrow.

Plain Emerald Mesothea incertata (Wlk.) - Throughout Sask.(18-20 mm) (May 14-June 29) Reported on bog



Male Fall Cankerworm

RSM collection, Emersen Ziffle

myrtle, willow, hawthorn and buffaloberry.

#### **EXPECTED SPECIES**

Red-fronted Emerald Nemoria rubifrontaria (Pack.) - E. Canada, w. to Alberta. Reported on bog myrtle.

Badland Emerald Dichorda rectaria (Grote) - N. to Milk River, Alberta. Collected by M. Conrad, June 25, 1979. The specimen is at the RSM in Regina. This is the first report of this species for Canada. Previously it was reported only as far north as Slope County, North Dakota.<sup>2</sup>

### Subfamily STERRHINAE (Waves)

These moths are quite small (14-26 mm) and dull coloured. Both wings are crossed by dark wavy lines, giving them the common name "the waves." The beautiful Chickweed Moth is an exception, being yellow with the wings crossed by reddish lines (see inside back cover, middle photograph). The Pearl-grey Wave of birch woods has a small round circle on each wing. The hind tibiae of the males usually have a hair brush or spur.

Frosted Tan Wave Scopula cacuminaria (Morrison) -Trossachs and Buffalo Pound Provincial Park. (16-22 mm) (June 20-July 8) Reported on dandelion and lettuce.



Large Lace-border
RSM collection, Emersen Ziffle

Large Lace-border Scopula limboundata (Haworth) - S. Sask., n. to Gordon Lake (n. of Pinehouse). (22-26 mm) (June 20-Aug. 7) Reported on elm, knotweed and cherry.

Pointed-winged Wave Scopula ancellata Hulst - St. Victor and Rockglen. (22 mm) (June 30-Aug 14)

Ochreous Wave Scopula fuscata (Hulst) - Cypress Hills. (24 mm) (June 14)

United Wave Scopula junctaria (Walker) - S. Sask., n. to Sturgeon Landing and Buffalo Narrows (22-26 mm) (May 27-Aug.3) Reported on elm, stitchwort and clover.

**Four-lined Wave** Scopula quadrilineata (Packard) - Greenbush and Waskesiu Lake (21 mm) (June 24) Reported on clover.

Arctic Wave Scopula frigidaria (Möschler) - N. Sask., s. to Preeceville and Harlan (20-23 mm) (June 18-July 7)

**Soft-lined Wave** Scopula inductata (Gn.) - Throughout Sask. (23-25 mm) (May 27-Sept. 12) Reported on sweet clover, aster and cherry.

Magnet Moth Scopula sentenaria (Geyer) - S. Sask., n. to Swan Plain, Candle Lake and Harlan area (22-25 mm) (May 27-July 3) Dark-ribboned Wave Leptostales ferruminaria (Zeller) - S. Sask., n. to Tantallon, Fort Qu'Appelle and Douglas Park (14-17 mm) (May 8-Aug.1)

Pearl-grey Wave Cyclophora pendulinaria (Gn.) - N. Sask., s. to Swan Plain area, Prince Albert area and Harlan area; also at St. Victor (20-24 mm) (June 8-Aug. 13) Reported on birch, alder and willow.

Rough-winged Wave Idaea rotundopennata (Packard) - Throughout Sask. (19-23 mm) (June 12-July 16) Reported on knotweed.

Chickweed Moth Haematopis grataria (Fab.) - S. Sask., n. to Indian Head, Saskatoon area and Macklin area (21-26 mm) (June 27-Aug. 13) Reported on knotweed. (See inside back cover, middle photograph.)

#### **Acknowledgements**

I thank Klaus Bolte of Ottawa for checking the identification of most of our geometrid species. I also thank Greg Pohl of Edmonton for checking this manuscript and giving helpful suggestions.

- 1. COVELL, C. V., Jr. 1984. A Field Guide to the Moths of Eastern North America. Houghton Mufflin, Boston. (well illustrated)
- 2. FERGUSON, D. C. 1985. The Moths of America North of Mexico. Fascicle 18.1 Geometroidea. Geometridae (Part). (Subfamily Geometrinae) The Wedge Entomological Research Foundation, Washington. (well illustrated)
- 3. IVES, W. G. H. and H. R. WONG. 1988. Tree and Shrub Insects of the Prairie Provinces. Information Report NOR-X-292. Canadian Forestry Service, Edmonton.
- 4. LLEWELLEN JONES J. R. J. 1951. An Annotated Checklist of the Macrolepidoptera of British Columbia. Occasional Paper No. 1. The Entomological Society of British Columbia.

- 5. MCGUFFIN, W.C. 1967. Guide to the Geometridae of Canada. I. Subfamily Sterrhinae. Memoirs of the Entomological Society of Canada. No. 50.
- 6. MCGUFFIN, W.C. 1988. Guide to the Geometridae of Canada. III Archiearinae, IV Oenochrominae and V Geometrinae. Memoirs of the Entomological Society of Canada, No. 145.
- 7. PRENTICE, R. M. 1963. Forest Lepidoptera of Canada: Recorded by the Forest Insect Survey. Vol. 3. Canada Department of Forestry, Ottawa, Ontario.

- 8. SCOBLE, M. J. (Ed.) 1999. A Taxonomic Catalogue of the Geometridae of the World. 2 vols., CSIRO publications, Melbourne.
- 9. TROUBRIDGE, J. and D. LAFONTAINE, website http://www.cbif.gc.ca/spp\_pages/mise \_moths/phps/mothindex\_ e.php
- 10. YOUNG, C.J. 2006. Molecular relationships of the Australian Ennominae (Lepidoptera: Geometridae) and implications for the phylogeny of the Geometridae from molecular data. *Zootaxa* 1264. 1-147.



# **NOTES AND LETTERS**

### FRANKLIN'S GULLS KILL WOUNDED INDIVIDUAL

On a beautiful September day about 15 years ago, I was watching flocks of Franklin's Gulls feeding on grasshoppers and mice while I was summerfallowing, about 5 miles southwest of Kyle, SK. One gull struck an overhead power line and fell to the ground. It walked around with its broken wing hanging out painfully. Within

seconds, other gulls spotted this situation and immediately attacked and killed the wounded bird. Then they left it in the field and went about their regular routine of soaring and feeding. Could this have been a case of mercy killing?

- Cameron Brose, 627 Advent Bay, Calgary, AB T1X 1N8

### PAINTED TURTLES IN WASCANA LAKE

The Painted Turtle shown in the inside back cover was photographed on the south shore of Spruce Island in Regina's Wascana Lake on August 25, 2006. On one hot afternoon in 2006, I saw eight turtles sunning themselves in this area. It surprised me to see so many turtles because three years ago the lake was totally dug out and no turtles could have survived that event.

- *Diether Peschken*, 2900 Rae Street, Regina, SK are S4S 1R5.

Editor's note:

Painted Turtles are native to southern Saskatchewan and commonly found in farmyard dugouts, sloughs and areas of quiet river water. Although turtles would have been impacted by the dredging of Wascana Lake, these reptiles do move to colonize new areas. They are also frequently relocated by people releasing pets or helping females across roads in the spring when the animals are looking for nest sites.