

SYNOPSIS OF THE ANTHOMYIID GENERA MYDÆA, OPHYRA,  
PHYLLOGASTER, TETRAMERINX, AND EULIMONOPHORA  
(DIPTERA).

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The genus *Mydæa* as here limited is essentially northern in its distribution, most of the species being found in the extreme northeast and northwest, with a few occurring as far south as Texas, though rarely. Stein lists about 300 species in this genus, but very few indeed of the species so listed really belong to the genus as I have discovered by examining a great number of the species involved. Most of the species he lists as belonging to this genus from North America belong to *Helina*. The other genera dealt with in this paper have but few representatives in this country, and two of them, *Tetramerinx* and *Phyllogaster*, are unknown from the old world.

**Mydæa** Robineau-Desvoidy

This genus is distinguished from its allies by having the third wing-vein setulose at base, fourth not curved forward at apex, hind tibia without calcar, penultimate abdominal sternite in female with a number of short bristles, eyes of male subcontiguous, prealar bristle present, prosternum bare, face not buccate.

KEY TO SPECIES.

MALES.

1. Legs largely or entirely black; knobs of halteres black or brown except in *calvicrura*.....2.
- Legs with the exception of the tarsi, and sometimes part of the fore femora, yellowish testaceous; knobs of halteres pale.....4.
2. Eyes with dense hairs; halteres pale yellow.....*calvicrura* Coquillett.
- Eyes bare; halteres black or brown.....3.
3. Arista with the longest hairs as long as width of third antennal segment; wings slightly infuscated throughout.....*obscura* Stein.
- Arista with the longest hairs not longer than its basal diameter; wings slightly brownish, the bases of veins orange yellow.....*rugia* Walker.
4. Scutellum largely or entirely yellow, contrasting sharply with the colour of disc of thorax.....5.
- Scutellum coloured as disc of thorax.....7.
5. Palpi yellow, antennæ almost entirely so.....*flavicornis* Coquillett.
- Palpi black, antennæ almost entirely so.....6.
6. Hind femur without bristles on posteroventral surface except at extreme apex.....*occidentalis* Malloch.
- Hind femur with a series of long, fine, rather closely placed bristles on apical half of posteroventral surface.....*pagana* Fabricius.
7. Antennæ entirely black; longest hairs on arista at least as long as width of third antennal segment; fore femora infuscated except in *discimana*.....8.
- Second antennal segment brownish yellow; longest hairs on arista not as long as width of third antennal segment; claws of fore tarsus not as long as apical tarsal segment; fore femora yellow....*persimilis* Malloch.

8. All femora largely fuscous; hind tibia with one strong and sometimes one weak anteroventral bristle; prealar bristle minute; wings not yellow at bases.....*obscura* Stein.  
At most the fore and mid femora infuscated; wings yellow at bases, or dorsum of thorax indistinctly vittate.....9.
9. Small species, 5.5 to 6.5 mm. in length; thorax and abdomen with distinct but not very dense pruinescence, the former distinctly vittate only in front; prealar bristle very small.....*winnemanna* Malloch.  
Larger species, 7 to 9 mm. in length; thorax and abdomen with dense yellowish pruinescence, the former with very distinct vittæ.....10.
10. Fore femora yellow; second antennal segment brown; prealar bristle one-third as long as the one behind it.....*discimana* Malloch.  
Fore femora infuscated; second antennal segment black; prealar bristle over half as long as the one behind it.....*urbana* Meigen.

## FEMALES.

1. All femora largely or entirely black.....2.  
Femora reddish yellow, sometimes the fore pair brownish or fuscous in part.....6.
2. Eyes distinctly hairy.....*calvicrura* Coquillett.  
Eyes bare.....3.
3. Arista with its longest hairs not longer than its basal diameter.....*rugia* Walker.  
Arista with its longest hairs as long as or longer than width of third antennal segment.....4.
4. Third antennal segment distinctly less than 4 times as long as its greatest width; mid and hind femora entirely or almost entirely black or fuscous.....5.  
Third antennal segment at least 4 times as long as its greatest width; mid and hind femora, and especially the latter very indistinctly infuscated.....*winnemanna* Malloch.
5. Calyptre white; tibiæ yellowish testaceous.....*obscura* Stein.  
Calyptre orange yellow; legs entirely black.....*obscura* Malloch.
6. Scutellum largely or entirely yellow, contrasting sharply with the disc of mesonotum.....7.  
Scutellum black, concolorous with disc of mesonotum.....9.
7. Palpi and antennæ yellow.....*flavicornis* Coquillett.  
Palpi entirely, antennæ largely black.....8.
8. Humeral angles of thorax broadly yellow.....*occidentalis* Malloch.  
Humeral angles of thorax coloured as disc.....*pagana* Fabricius.
9. Apical segment of fore tarsus disclike, as broad as long; fore tibia with a median posterior bristle.....*discimana* Malloch.  
Apical segment of fore tarsus normal, about twice as long as wide.....10.
10. Arista densely short-haired, the longest hairs barely as long as its basal diameter; fore tibia with 1 posterior and 1 postero-ventral bristle.....*armatipes* n. n. (*armipes* Malloch nec. Stein).  
Arista with long hairs, the longest of which are at least as long as width of third antennal segment, or the fore tibia with or without one bristle.....11.

11. Arista with its longest hairs barely longer than its basal diameter.....*persimilis* Malloch.  
 Arista with its longest hairs, longer than width of third antennal segment.....*urbana* Meigen.

### **Ophyra** Robineau-Desvoidy

There are but two species of this genus known to me as occurring in America one of which, *leucostoma*, occurs in Europe and in Canada and all over the United States, though less common in the south. The other species is confined to the southern United States in North America, but extends through Central and South America. The larvæ feed in latrines and in manure.

#### KEY TO SPECIES.

1. Males.....2.  
 Females.....3.  
 2. Hind tibiæ much curved, ventral surfaces with long, soft hairs which are longest just basad of middle; calyptræ fuscous; palpi black.....*leucostoma* Wiedemann.  
 Hind tibiæ but little curved, ventral surfaces with decumbent setulose hairs; calyptræ yellow; palpi ferruginous.....*aenescens* Wiedemann.  
 3. Calyptræ subfuscous, the margins darker; palpi black; hind tibia with 3 to 6 anteroventral bristles.....*leucostoma* Wiedemann.  
 Calyptræ yellow; the margins concolorous; palpi ferruginous; hind tibia with 1 or 2 anteroventral bristles.....*aenescens* Wiedemann.

### **Tetramerinx** Berg.

#### KEY TO SPECIES.

1. Legs black, bases of tibiæ and extreme apices of femora reddish; abdomen with a dark dorsocentral vitta; face, parafacials, and cheeks white, almost silvery; wings milky, veins brown; hind tibia with three or four anterodorsal bristles.....*unica* Stein.  
 Legs black, all of tibiæ and extreme apices of femora reddish yellow; abdomen with black dorsocentral vitta and lateral spots; face, parafacials, and cheeks brownish or bronzy; wings slightly grayish, veins dark brown; hind tibia with two anterodorsal bristles.....*californiensis* Malloch.

### **Phyllogaster** Stein

#### KEY TO SPECIES.

1. Males.....2.  
 Females.....4.  
 2. Mid femur with some long, strong bristles on basal half of antero- and posteroventral surfaces; hind femur with rather widely placed bristles on entire length of anteroventral surface; abdomen with dorsocentral vitta and lateral spots; mid tibia with an anterodorsal bristle.....*robusta* Johnson.  
 Mid femur without anteroventral bristles on basal half; hind femur with a few strong bristles on apical half of anteroventral surface; mid tibia without an anterodorsal bristle.....3.

3. Abdomen with dorsocentral vitta and more or less distinct lateral black spots; hind tibia with 1 anteroventral bristle; the pair of long bristles on basal portion of hypopygium widely separated, much closer to latero-posterior margin than to central cleft; processes of fifth sternite as broad as long.....*cordyluroides* Stein.  
 Abdomen with only a more or less distinct dorsocentral vitta, the lateral spots absent; hind tibia with two anteroventral bristles; the pair of long bristles on basal portion of hypopygium rather closely placed, much closer to central cleft than to lateroposterior margin; processes of fifth sternite longer than broad.....*littoralis* Malloch.
4. Hind femur with rather widely spaced bristles on entire length of anteroventral surface; apical genital segment with two strong thorns; scutellum with numerous setulose hairs on entire upper surface.....*robusta* Johnson.  
 Hind femur with strong bristles only on apical half of anteroventral surface.....5.
5. Apical genital segment with two strong thorns; hind tibia with one anteroventral bristle; scutellum with a number of setulose hairs on disc.....*cordyluroides* Stein.  
 Apical genital segment with four strong thorns; hind tibia with two anteroventral bristles; scutellum very rarely with more than two discal setulae.....*littoralis* Malloch.

### **Eulimnophora** Malloch

This genus is represented by many species in Africa.

#### KEY TO SPECIES.

1. Thorax conspicuously vittate; palpi and tibiae largely yellowish.....*dorsovittata* Malloch.  
 Thorax inconspicuously vittate; palpi black; tibiae black, sometimes yellowish at bases.....2.
2. Large species, normally over 4 mm. in length; hind femora in both sexes with from 3 to 6 bristles on apical half of anteroventral surface, the space basad of these with weak decumbent hairs.....*arcuata* Stein.  
 Smaller species, less than 4 mm. in length; hind femora in both sexes with a series of short erect bristles, which are rather closely placed, from base to apex on anteroventral surface, the apical two or three much longer than the others.....*cilifera* Malloch.

### **Xenocoenosia** Malloch

#### KEY TO SPECIES.

1. Males.....2.  
 Females.....4.
2. Large species, 4.5 mm. in length; abdomen without glossy bare areas on sides of third and fourth tergites; hind femur without dense, soft hairs on ventral surfaces, the antero- and posteroventral surfaces with long, black bristles which are unequal in lengths, the longest one on anteroventral surface about one-third of the femoral length from apex.....*major* Malloch.

- Smaller species, 3.5 mm. in length; abdomen with a large, glossy, bare area on each side of third and fourth tergites; hind femur with dense, soft hairs on ventral surfaces, and with or without a fine bristle near apex on anteroventral surface, no other bristles on this surface.....3.
3. Antennæ entirely pale yellowish testaceous; apical scutellar bristle almost or quite as long as the lateral pair; one bristle near apex of anteroventral surface of hind femur very distinctly stronger than the rather short ventral pale hairs.....*calopyga* Loew.
- Antennæ with the exception of apex of second segment and base of third black; apical scutellar bristles much weaker than the lateral pair and shorter; apical bristly hair on anteroventral surface of hind femur hardly distinguishable from the very long, pale ventral hairs.....*floridensis* Malloch.
4. Hind femur without a bristle near apex on anteroventral surface, the one nearest apex about one-third from it.....*major* Malloch.
- Hind femur with a bristle very near apex on anteroventral surface.....5.
5. Second antennal segment and basal half of third yellowish; apical pair of scutellar bristles little shorter than laterals.....*calopyga* Loew
- Antennæ except extreme base of third segment black; apical pair of scutellar bristles very much shorter than lateral pair.....*floridensis* Malloch.

#### ANNOTATED CHECK LIST OF THE MACROLEPIDOPTERA OF ALBERTA—ADDITIONS, 1919.

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The following additions to my "Check List of the Macrolepidoptera of Alberta," published by the Alberta Natural History Society (Edmonton, 1919) were made during the season of 1919.

The abbreviations are the same as those employed in the Check List. The numbers before the names are those of Messrs. Barnes and McDunnough's "Check List of the Lepidoptera of Boreal America, 1917." The numbers after the names indicate the months in which the insects have been taken. The capital letters are abbreviations of the localities of capture, as follows: E, Edmonton; R, Red Deer; G, Gleichen; P, Pocahontas; N, Nordegg; B, Banff; Bm, Blairmore.

33	<i>Pieris occidentalis calyce</i> Edw.....	4 E.P.
57	<i>Eurymus hecla glacialis</i> McLach.....	6 N.+
59	" <i>eriphyle autumnalis</i> Ckll.....	5-6 E.B.N.R.
64	" <i>christina pallida</i> Ckll.....	7 N.R.
	" <i>christina gigantea</i> Stkr.....	7 E.N.R.
157	<i>Argynnis leto</i> Behr.....	7 Bm.
185	" <i>bischoffi</i> Edw.....	7-8 P.N.
211	<i>Euphydryas nubigena beani</i> Skin.....	7 P.
283	<i>Vanessa virginiensis</i> Dru.....	7 E.
407	<i>Heodes helloides florus</i> Edw.....	7-8 E.N.R.
794	<i>Pseudohazis eglanderina</i> Bdv.....	6 Bm.
1076	<i>Melaporphyria immortua</i> Grt.....	5 E.