# Tachinid collecting in southwestern Saskatchewan, with a list of species of the Canadian Prairies



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Last summer I had the opportunity to travel to southern Saskatchewan, in the heart of the Canadian Prairies, to collect tachinid flies (Diptera: Tachinidae) for the Canadian National Collection of Insects (CNC) in Ottawa. The tachinids of Saskatchewan are poorly known and I suspected even a brief trip targeting them would yield some interesting results. This is a report of that trip and includes some background about the area, the localities where I collected, and what I caught. A list of Tachinidae known from the Canadian Prairies (i.e., the provinces of Alberta, Saskatchewan and Manitoba) is given at the end of this report and documents for the first time the species recorded from Saskatchewan.

Saskatchewan (Fig. 27) is a province in western Canada that is bordered by Alberta to the west, Manitoba to the east, the Northwest Territories to the north, and the American states of Montana and North Dakota to the south. It is approximately 651,900 km<sup>2</sup> and in relative terms is larger than France and smaller than Texas. The province has a population of about 1.25 million people with about half living in the cities of Saskatoon and Regina and the rest mostly spread throughout the southern half of the province in smaller cities and towns, and on ranches and farms.

## Prairie Grasslands of Saskatchewan

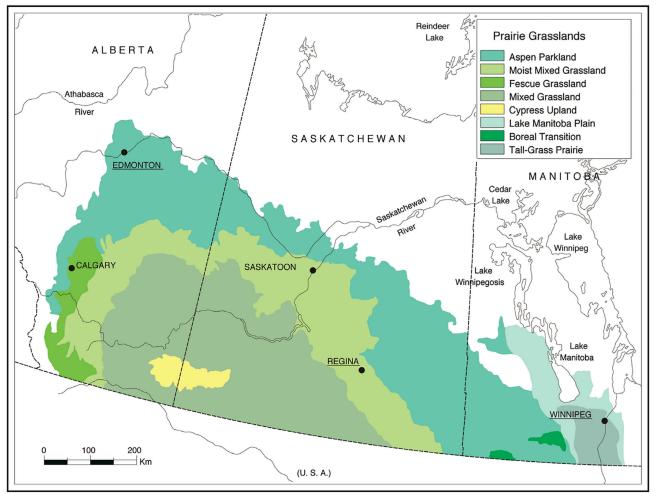
The prairie grasslands of Canada are recognized as a distinct ecozone that stretches from central Alberta to southwestern Manitoba (Fig. 2). This ecozone is defined on the basis of a suite of characteristics ranging from soils, climate and topography to plants, animals and agricultural activities, that together function as an ecosystem<sup>1</sup>. There are several other ecozones north of the prairie grasslands that are characterized by forest type (aspen parkland,

<sup>&</sup>lt;sup>1</sup> http://www.ecozones.ca/english/introduction.html

deciduous and coniferous boreal forests, taiga shield), soils, and increasingly harsher climates<sup>2</sup>.

The Prairie Grasslands ecozone is also known as the "Prairie Pothole Region", so named for the many "pothole" wetlands that dot the region and date back to the retreat of the Laurentian Ice Sheet at the end of the Pleistocene (ca. 17,000–10,000 years ago) (Christiansen 1979). It extends southward into Montana in the United States, and southeastward to western Minnesota, eastern Nebraska and Iowa (Millett et al. 2009, Fig. 2 therein).

The prairie grasslands are subdivided into eight ecozones, four of which occur in Saskatchewan and are shown in Fig. 2: Aspen Parkland, Moist Mixed Grassland, Mixed Grassland, and Cypress Upland. A fifth ecozone, Fescue Grassland, is not extensive in Saskatchewan but does occur in patches in the Cypress Upland. A few pictures from the Mixed Grassland ecozone are shown in Figs. 3–7.



**Figure 2.** Ecoregions of the Prairie Grasslands ecozone in the Canadian provinces of Alberta, Saskatchewan and Manitoba. The capital city of each province is underlined. Reproduced from Shorthouse (2010: 55, used with permission).

<sup>2</sup> Ecoregions of Saskatchewan:

https://biolwww.usask.ca/rareplants\_sk/root/htm/en/researcher/4\_ecoreg.php (University of Saskatchewan) https://biodiversity.sk.ca/eco.htm (Saskatchewan Conservation Data Centre)



Figures 3–7. Arable land in the Mixed Grassland ecozone of southwestern Saskatchewan is mostly in use for growing crops like cereals (barley, oats, wheat), oilseeds (canola, flax) and forage (alfalfa, grass), and for cattle ranching. The non-arable land includes rugged hills and valleys, badlands and sand dunes. 3. A decaying barn in a grass field near Val Marie.
4. Flowering canola turns a field into an undulating sea of yellow. 5. Free-ranging cattle are a common sight on dirt roads passing through pasture lands. This picture was taken in the prairies north of the Cypress Hills (visible in the distance).
6. Barren hills rise out of the prairie near Grasslands National Park. 7. Pronghorn antelope are common and roam freely throughout croplands, rangeland, and semi-arid badlands.

## Cypress Upland and Cypress Hills

The Trans-Canada Highway runs through the southern portion of the prairie provinces on its route across the country. The portion passing through Saskatchewan is about 650 kms long. I had considered driving along the Trans-Canada and using it as a jumping-off point to potential collecting sites across the province, but chose instead to pick one area as my main location from which I could work outward. This would allow me to return to a spot if the weather was uncooperative on the first visit, or if the site was so good that I would want to collect there again.

I chose the Cypress Upland ecozone as my focus for collecting tachinids. This area has the most topographic relief of anywhere in Canada between the Rocky Mountains and eastern Canada (up to 1465 m [4810 ft] in elevation in the Cypress Hills), and rises above the surrounding grassland by about 600 m. Associated with the elevational gain are changes in vegetation and most notably the presence of forests of aspen (*Populus* spp.), white spruce (*Picea glauca*) and particularly Lodgepole pine (*Pinus contorta*)<sup>3</sup>. Completely absent, and never present in the past, is any "cypress" (*Cupressus*, family Cupressaceae), the namesake of the Cypress Hills. The name is thought to have come about as an error in translation. The early Métis, who spoke a language that included words from Canadian French, called the Cypress Hills "les montagnes des Cyprès". To them this meant "mountains of pine", but this was "lost in translation" and the English name became, and continues to be, the Cypress Hills.

A small portion of the upper Cypress Hills escaped the direct effects of the last ice age as a nunatak (an area protruding above the surrounding ice), while the Laurentide Ice Sheet advanced into Montana. The ice sheet began retreating northward through southern Saskatchewan about 15,000 years ago (Christiansen 1979)<sup>4</sup>. The Cypress Hills were covered with snow and ice during the glacial maximum but were spared the ravages of a moving ice sheet. They would have been repopulated with a fauna and flora much sooner than the surrounding lowlands. Some species of the current Cypress Hills biota are recognized as relict disjunct populations of cordilleran/montane species, including 32 bird species and a few small mammal species (Cypress Hills Provincial Park Management Plan 2011).

The unique and fragile nature of the Cypress Upland area led to the creation of Cypress Hills Provincial Park in Saskatchewan in 1931, and its expansion into Alberta in 1951. Later, these two portions of the park became comanaged by the two provinces and renamed the Cypress Hills Interprovincial Park. The Saskatchewan side is split into two discrete parts, the West Block (continuous with the Alberta side of the park) and the Centre Block (ca. 20 kms to the east).

## Collecting in Southwestern Saskatchewan

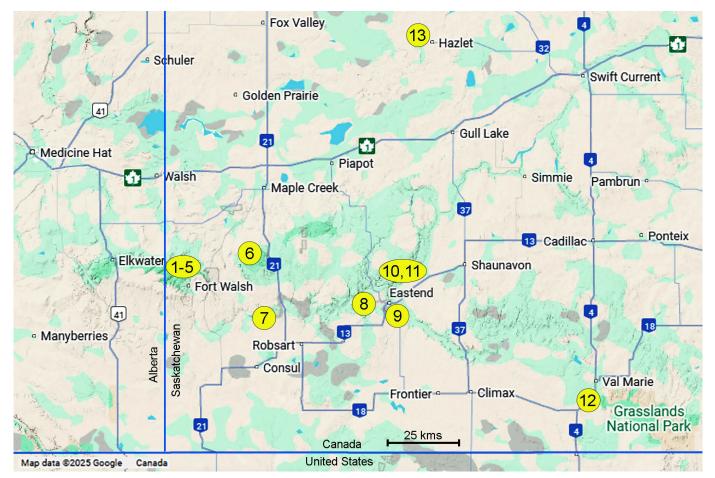
I drove from Ottawa to Saskatchewan and reached the West Block of Cypress Hills Interprovincial Park on 9 July 2024. I had been approved for a Research Permit from the Government of Saskatchewan that allowed me to collect tachinid flies for the CNC in Ottawa (Permit Number 24AR014 NEW-2024). My first stop was the Ranger Station in the West Block where I met Melody Nagel-Hisey, park naturalist and West Block Park Supervisor. We had corresponded a few times prior to my departure from Ottawa. Melody advised me about habitats and locations that I might want to visit within the park, and allowed me to stay for free in either of the two rustic campgrounds nearby. Park policy did not allow me to camp on my own in more remote parts of the park. I was pleased to learn, however, that there are no bears and few ticks in the Cypress Hills, either of which can interfere with tachinid collecting. There are no bison either, with free-roaming cattle having taken their place as grazers to help preserve the fragile mixed grassland and other habitats<sup>5</sup>.

<sup>&</sup>lt;sup>3</sup> A list of plants of Cypress Hills Interprovincial Park is available here: https://www.npss.sk.ca/docs/2\_pdf/Plants\_of\_Cypress\_Hills\_Provincial\_Park.pdf

<sup>&</sup>lt;sup>4</sup> Geology and physical geography of Cypress Hills: https://www.albertaparks.ca/media/2850121/cypress\_hills\_-\_geology\_fact\_sheet.pdf https://uregina.ca/~sauchyn/geog497&897/hills.html

<sup>&</sup>lt;sup>5</sup> Domestic Livestock Grazing on Public Lands (Alberta Wilderness Association): https://albertawilderness.ca/wp-content/uploads/2021/02/AWA-PS-Grazing-Domestic-Livestock-on-Public-Lands-1994-2021.pdf

A total of 11 days, 9–19 July, were spent collecting in various places in southwestern Saskatchewan during the day, and nights were spent either camping or in a hotel. The collecting localities and dates are given below and all are accompanied by pictures except for one (no. 12). Locations are indicated on the map in Fig. 8. Localities are numbered roughly from west to east rather than by date in order to consecutively number the sites in the Cypress Hills, which were visited on multiple dates.



**Figure 8.** Map of southwestern Saskatchewan with collecting localities indicated. Localities: **1–5**, Cypress Hills Interprovincial Park, West Block; **6**, Cypress Hills Interprovincial Park, Centre Block; **7**, Cypress Lake Recreation Area; **8**, Jones Peak (Frenchman River Overlook); **9**, Frenchman River at Eastend; **10** & **11**, Pine Cree Regional Park; **12**, Hwy. 4 south of Val Marie; and **13**, near Hazlet Regional Park. See Collecting Localities section for further details about these localities, including their coordinates.

## Collecting localities and tachinid numbers

1-5. Cypress Hills Interprovincial Park, West Block.

- Campground next to Battle Creek, 49.604°N 109.926°W, 1150 m, 9–10.vii.2024. Tachinids: 17 (CNC2077290–2077298, CNC207731–2077319). Lush vegetation along creek with patchy stands of conifers. Only a few tachinids seen or swept.
- A nearby Battle Creek area, 49.599°N 109.923°W, 1135 m, 14–15.vii.2024 (Fig. 9). Tachinids: 21 (CNC2077368–2077381, CNC2077405–2077411). Most tachinids caught while sweeping lush vegetation along a dirt path beside the creek.
- Base of Baldy Mountain, 49.600°N 109.932°W, 1145 m, 18.vii.2024 (Figs. 10, 11). Tachinid: 1 (CNC2077526). Caught beside car while preparing to leave area after hilltopping on Baldy Mountain.
- Summit of Baldy Mountain, 49.5983°N 109.9434°W, 1240 m, 16, 18.vii.2024 (Fig. 12). Tachinids: 48 (CNC2077429–2077460, CNC2077487–2077502). Great hilltopping site. Male Tachinini (*Deopalpus*,



**Figures 9–14.** Cypress Hills Interprovincial Park, West Block. **9.** Battle Creek, locality 2. **10.** Curious onlookers at base of Baldy Mountain (locality 3), as I prepare to ascend Baldy Mountain for hilltopping. **11.** View of Baldy Mountain from locality 3. **12.** View from summit of Baldy Mountain, locality 4, looking northeastward. Red arrow points to locality 3. **13.** Plaque at Conglomerate Hills overlook, locality 5, commemorating "A Special Place". **14.** Forested slope at edge of Conglomerate Hills.



**Figures 15–20. 15.** Cypress Hills Interprovincial Park, Centre Block, Lookout Point, locality 6. **16.** Jones Peak, Frenchman River Overlook, locality 8. **17.** Frenchman River Valley as seen from Jones Peak. **18.** A riparian habitat along the Frenchman River at Eastend, locality 9. **19.** View of Pine Cree Regional Park from hilltop, localities 10 & 11. **20.** Near entrance to Hazlet Regional Park, locality 13.

*Peleteria*) landed mostly on the bare ground of the summit. High numbers of male *Aplomya theclarum* landed on the leaves and twigs of low bushes on one side of the hilltop.

- Conglomerate Hills, 49.646°N 109.847°W, 1325 m, 10.vii.2024 (Figs. 13, 14). Tachinids: 2 (CNC2077323–2077324). The area is noted for its rare fescue prairie vegetation. Despite sunny weather and abundant flowers, tachinids were inexplicably difficult to find and even "sugaring" leaves did not attract them.
- Cypress Hills Interprovincial Park, Centre Block, Lookout Point, 49.681°N 109.548°W, 1275 m, 11.vii.2024 (Fig. 15). Tachinids: 9 (CNC2077338–2077346). No tachinids landed around or on shelter despite its expected potential as a hilltopping site. Tachinids were caught while sweeping the nearby grassy vegetation. Plaque in shelter reads in part:

"Imagine staring straight into the face of a gigantic, cold, mass of ice! That is what you would see standing at this point 18,000 years ago. The Wisconsinian Laurentide Ice Sheet was one of the greatest and last glaciers to shape this land. While living things were quieted during this cooling-off period, the plains below were stripped and sculpted. The high plateau of the Cypress Hills was left as an island, or nunatak, covered only by a thin layer of ice in some areas, untouched in others."

- Cypress Lake Recreation Area, 49.457°N 109.508°W, 980 m, 17.vii.2024. Tachinids: 3 (CNC2077518–2077520). Heavily managed area for fishing and camping. Tachinids were caught while sweeping grassy areas along tree rows.
- 8. Frenchman River overlook, Jones Peak, 49.502°N 108.954°W, 1125 m, 10.vii.2024, 13.vii.2024 (Figs. 16, 17). Tachinids: 4 (CNC2077327–2077330). Appeared to have hilltopping potential, but little activity.
- Eastend along Frenchman River, 49.5055°N 108.8075°W, 910 m, 19.vii.2024 (Fig. 18). Tachinids: 3 (CNC2077527–2077529). Tachinids caught while sweeping lush vegetation along river edge.
- Pine Cree Regional Park, hilltop, 49.616°N 108.759°W, 1050 m, 12.vii.2024 (Fig. 19). Tachinids: 2 (CNC2077350–2077351). Another hilltop that failed to live up to its perceived potential.
- Pine Cree Regional Park, campground, 49.615°N 108.762°W, 1005 m, 12.vii.2024. Tachinids: 3 (CNC2077356–2077358). Beautiful spot, diverse vegetation, but few tachinids seen and "sugaring" ineffective. See park webpage for links to lists of forest and grassland flowers of Pine Cree Regional Park: https://www.townofeastend.com/p/pine-cree-park-
- Hwy. 4 south of Val Marie, 49.160°N 107.784°W, 825 m, 13.vii.2024. Tachinids: 3 (CNC2077365–2077367). Swept from roadside vegetation.
- Near entrance to Hazlet Regional Park, 50.408°N 108.647°W, 715 m, 17.vii.2024 (Fig. 20). Tachinid: 1 (CNC2077515). Swept from vegetation at lake edge.

## Results

A total of 117 specimens belonging to 44 species of Tachinidae were collected over a period of 11 days, 9–19 July, 2024. Most notable among the named species are the following new records:

*Zizyphomyia crescentis* (Reinhard), new record for Canada. *Panzeria incisa* (Tothill), new record for Canadian Prairies. 17 species are new records for Saskatchewan.

Each species is discussed below in a numbered list. The taxonomy of North American Tachinidae is a "work in progress" and few genera of any size are well resolved. This is reflected in the list below by recognizing several levels of certainty in species identifications depending upon the state of the taxonomy of the genus and its level of curation in the Canadian National Collection of Insects (CNC) in Ottawa. My predecessor at the CNC, Monty Wood, curated many genera into named, questionably named (e.g., unresolved species complexes), and undescribed species while he was preparing his key to the tachinid genera for the *Manual of Nearctic Diptera* (Wood 1987). Generic synonymies in that work brought the number of genera in America north of Mexico down to about 330 from over 400 (reviewed in O'Hara & Wood 1998) and that number was further reduced to 303 genera in O'Hara & Wood (2004). This last work recognized 1345 named species of Tachinidae in America north of Mexico.

The classification of Tachinidae in the following list, and the geographical divisions of North America and the world, follow O'Hara et al. (2020). Each species name is followed by the CNC database numbers of the specimens assigned to it, and sex of each specimen. Superscript numbers at the end of each database number refer to the locality where the specimen was collected, as listed above under *Collecting localities*. Specimens that were COI

DNA barcoded have their numbers shown in red. BIN (Barcode Index Numbers) assignments are given and sometimes discussed. The DNA barcoding was based on a leg taken from each selected specimen that was sent to the Biodiversity Institute of Ontario (BIO) at the University of Guelph for analysis. The resultant sequences were compared to my "DNA barcode library" of over 4400 CNC Tachinidae in the Barcode of Life Data Systems (BOLD) repository to help with my identifications. A "match" was generally interpreted as sequences belonging to the same "BIN" (Barcode Index Numbers) in the BOLD system. Specimens that could not be identified beyond genus have been assigned a species number preceded by "SK" (= Saskatchewan; e.g., *Blepharipa* sp. SK1, Figs. 21, 22).

Distributions for named species are given in the following order and are based on the subdivisions of the Nearctic Region shown in Fig. 27:

Distribution order: Canada: Yukon, N.W.T. [Northwest Territories & Nunavut], B.C. [British Columbia], Prairies, Ontario, Québec, Maritimes, Labrador, Newfoundland. USA: Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida.

Named species known from Saskatchwan prior to this report as listed as "(Prairies [incl. Saskatchewan]" and new records from Saskatchwan are listed as "Prairies [incl. new for Saskatchewan]". New records for Canada and/or Prairies are also indicated in red.

## **DEXIINAE**, Dexiini

**1.** *Dinera grisescens* (Fallén), CNC2077365<sup>12</sup> , CNC2077366<sup>12</sup> , CNC2077367<sup>12</sup> , CNC2077518<sup>7</sup> [BIN AAG2123].

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Southwest, Great Plains, Northeast). Palaearctic: widespread.

This is *D. grisescens*, as the name is understood in North America. It is a common species and the DNA barcode matches those of 10 specimens from Oregon, Utah, New Mexico, Alberta, Wyoming, Nebraska, Ontario and Québec. The DNA barcode of a specimen of *D. grisescens* from "Central Bohemia" [Czech Republic] is in a different BIN (CNC DIPTERA 104707, BIN AAZ3904), raising some uncertainty about the name of the North American species.

*Hosts*. Scarab beetles in North America (*Phyllophaga* spp., Arnaud 1978: 179) and a carabid beetle reported in Europe (*Harpalus* sp., Tschorsnig 2017: 296).

## Voriini

## **2.** *Cyrtophloeba* **sp. SK1**, CNC2077444<sup>4</sup>♀ [BIN AAP3780].

*Cyrtophloeba* species SK1 and SK2 can be distinguished by both morphology and DNA barcodes. They are probably *C. coquilletti* Aldrich and *C. nitida* Curran but I cannot distinguish between them because identifications are mixed in the CNC.

Hosts. Members of this genus have been recorded from Noctuidae (Lepidoptera) (Arnaud 1978: 174).

## **3.** *Cyrtophloeba* **sp. SK2**, **CNC2077340**<sup>6</sup>♀</sup> [BIN AAG2130].

See note under Cyrtophloeba sp. SK1.

## **4.** *Spathidexia dunningii* (Coquillett) complex, CNC2077410<sup>2</sup> [BIN AAZ3939].

Distribution [as *S. dunningii*]. Nearctic: Canada (Yukon, Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Greater Antilles (Jamaica, Puerto Rico).

The single specimen is a small slender male, mostly black and about 5 mm long. It keys to *Spathidexia dunningii* in the review of the genus by Arnaud (1960) and resembles specimens identified as this species in the CNC. However, DNA barcoding of 16 CNC specimens of "*S. dunningii*" separates these into three BINS, suggesting that *S. dunningii* is an unresolved species complex:

BIN AAP2716: 12 specimens from eastern North America (Massachusetts, New Brunswick, Ohio, Ontario). BIN AAZ3939: 3 specimens from Saskatchewan (present survey), New Mexico, Utah. BIN AAZ4033: 1 specimen from Alberta.

Host. Lepidoptera, Hesperiidae, Ochlodes yuma (Edwards) (Arnaud 1960: 25).

## 5. *Voria ruralis* (Fallén) complex, CNC2077370<sup>2</sup> [DNA barcode failed].

Distribution [as *V. ruralis*]. Nearctic: Canada (all [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Widespread throughout the world.

Voria ruralis is a species complex of cosmopolitan distribution (O'Hara et al. 2020).

Hosts. Various Noctuidae (Lepidoptera) in North America (Arnaud 1978: 503).

## **EXORISTINAE**, Acemyini

6. Acemya oestriforme (B. & B.), CNC2077314<sup>1</sup> [DNA barcode failed].

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies [incl. new for Saskatchewan]), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

This is one of two species of *Acemya* R.-D. in North America with wing vein  $M_1$  fading out at bend (i.e., does not reach wing margin). The other species is *A. plankii* (Walton), shown in Fig. 25 in Greene (1934: 38, as *Hemithrixion oestriforme*).

Hosts. Various grasshoppers (Orthoptera, Acrididae) (Rees 1973: 73).

## 7. Acemya tibialis Coquillett complex, CNC2077515<sup>13</sup> [BIN ABZ6360].

Distribution [as *A. tibialis*]. Nearctic: Canada (Yukon, B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast).

Acemya tibialis is not difficult to distinguish from other Acemya species and is without exceptional variation morphologically. Nevertheless, my BOLD barcode library separates the barcodes of seven A. tibialis specimens into four BINs. The DNA barcode of the Saskatchewan specimen is in the same BIN as barcodes of three specimens from New Mexico. The other three BINs each have a barcode of a single specimen, one from Arizona and two from Ontario. These preliminary results suggest that Acemya tibialis is an unresolved species complex.

Hosts. Various grasshoppers (Orthoptera, Acrididae) (Rees 1973: 68).

## **8.** *Ceracia dentata* (Coquillett), CNC2077528<sup>9</sup>♀ [BIN ABX6290].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Middle America (Mexico), South America (Chile).

The DNA barcode of this common species matches those of six specimens from Arizona, New Mexico, Alberta, Ontario and Virginia.

Hosts. Various grasshoppers (Orthoptera, Acrididae) (Rees 1973: 70).

## Blondeliini

9. *Medina* sp. SK1, CNC2077358<sup>11</sup> [DNA barcode failed].

My comments on Medina in O'Hara (2024: 60) apply equally well here:

"Four species of *Medina* R.-D. are currently recognized from America north of Mexico (O'Hara et al. 2020). There are morphological differences that help to separate these species, but more study is needed to fully resolve species limits. Curiously, the 29 *Medina* in my BOLD barcode library from throughout North America appear to belong to several species based on morphology but are all assigned to the same BIN in BOLD. This is one of the rare instances in which DNA barcodes do not seem to differentiate putative species."

*Hosts. Medina* species are parasitoids of beetles in the families Chrysomelidae, Coccinellidae and Curculionidae in the Nearctic and Palaearctic regions (Arnaud 1978: 20, Tschorsnig 2017: 53). An undescribed *Medina* species was reared from the bean leaf beetle, *Cerotoma trifurcata* (Forster) (Chrysomelidae), a soybean pest, in Minnesota (Loughran & Ragsdale 1986).

## **10.** *Myiopharus macellus* (Reinhard), CNC2077520<sup>7</sup> [BIN ABV8803].

Distribution. Nearctic: Canada (Prairies [incl. new for Saskatchewan], Ontario), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

Comments from O'Hara (2007: 33):

"A few species of *Myiopharus* have an ovipositor that has been modified into a curved and pointed piercer, and these species are thought to form a monophyletic lineage, termed here the *M. doryphorae* (Riley) species group. This species group comprises *M. americanus* (Bigot), *M. doryphorae*, and *M. macellus* (Reinhard) in America north of Mexico and includes at least several Neotropical species."

*Hosts*. Best known as a parasitoid of the sunflower beetle, *Zygogramma exclamationis* (Fab.) (Chrysomelidae) (e.g., Charlet 2003). It was listed as *Doryphorophaga macella* in Arnaud (1978: 185). See Wood (1985) and O'Hara (2007) for taxonomic information on *Myiopharus*.

## Eryciini

**11.** *Aplomya theclarum* (Scudder) complex, CNC2077339<sup>6</sup>*C*, CNC2077441<sup>4</sup>*C*, CNC2077446<sup>4</sup>*C*, CNC2077447<sup>4</sup>*C*, CNC2077448<sup>4</sup>*C*, CNC2077449<sup>4</sup>*C*, CNC2077450<sup>4</sup>*C*, CNC2077451<sup>4</sup>*C*, CNC2077452<sup>4</sup>*C*, CNC2077454<sup>4</sup>*C*, CNC2077454<sup>4</sup>*C*, CNC2077455<sup>4</sup>*C*, CNC2077456<sup>4</sup>*C*, CNC2077457<sup>4</sup>*C*, CNC2077458<sup>4</sup>*C*, CNC2077459<sup>4</sup>*C*, CNC2077460<sup>4</sup>*C*, CNC2077497<sup>4</sup>*C*, CNC2077498<sup>4</sup>*C*, CNC2077499<sup>4</sup>*C*, CNC2077500<sup>4</sup>*C*, CNC2077501<sup>4</sup>*C*, CNC2077502<sup>4</sup>*C*, EBIN ABY9410].

Distribution [as *A. theclarum*]. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

All specimens are males caught at hilltops, one at Lookout Point (Fig. 15) and the rest on Baldy Mountain (Figs. 11, 12). They were present in high numbers at the latter locality where they were landing on the leaves of several low bushes on one side of the hilltop, or landing on the ground nearby. The rest of the hilltop was mostly bare with scattered flowering plants low to the ground. Many more males could have been collected. I have caught *A. theclarum* on a hilltop in New Mexico (O'Hara 2012).

O'Hara (2023: 58, New Brunswick survey) wrote that: "DNA barcodes suggest there are two species under the name *A. theclarum* from Missouri westward". O'Hara (2024: 60) commented further:

"The DNA barcodes of these Henry Mtns specimens match those of about 20 specimens from Arizona, Kentucky, Missouri, New Mexico, Ohio, Tennessee, Utah, New Brunswick, Ontario and Quebec. A second BIN (ABY9410) comprises unidentified *Aplomya* from Arizona, Missouri, New Mexico and Utah. O'Hara (2012: 39, Gila N.F.) listed *A. theclarum* as a species complex".

The DNA barcodes of the Saskatchewan specimens match those of the "second BIN" of O'Hara (2024: 60); i.e., a species of western distribution. They do not match the barcodes of the more wide-ranging species that was caught by the author in New Brunswick (O'Hara 2023) and in Utah's Henry Mtns (O'Hara 2024).

Hosts. Lepidoptera, Lycaenidae (Arnaud 1978: 71), including Reakirt's blue (Echinargus isola (Reakirt)) (Weeks 2003), Melissa blue (Plebejus melissa (Edwards)) (Scholl et al. 2014), and gray hairstreak (Strymon melinus Hübner) (Capinera 2020).

# **12.** *Blepharipa* **sp. SK1, sp. n.?** (Figs. 21, 22), CNC2077292<sup>1</sup>∂, CNC2077526<sup>3</sup>∂, CNC2077293<sup>1</sup>♀</sup> [BIN AEM2847].

#### Distribution. Nearctic: Canada (Saskatchewan).

This is a *Blepharipa* species but not *B. fimbriata* (Wulp) or *B. pratensis* (Meigen), the two described Nearctic species. It does not key to *Blepharipa* in Wood (1987) because the prosternum is bare (haired in key) and there are four (three in key) katepisternal setae. The katepisternal setae are arranged as described by Wood for *Blepharipa* with "posteroventral one absent", but there are four in an irregular row rather than three. This is not a significant difference and contrary to the key, there are some *B. fimbriata* in the CNC with four setae arranged as in the Saskatchewan specimens. The latter also agree with *Blepharipa* in having "anterodorsal bristles on hind tibia forming an even closely spaced row" (couplet 67) and male tergite 4 with a sexual patch (couplet 69). The barcode results match these morphological similarities, pairing the BIN of the Saskatchewan specimens with that of the single barcoded specimen of *B. fimbriata* from Missouri, CNC1394268, BIN AAA1966).

*Hosts. Blepharipa* species have been reared from various Lepidoptera in the families Lasiocampidae, Lymantriidae, Noctuidae (Arnaud 1978: 31). *Blepharipa pratensis* (Meigen) was successfully introduced into eastern North America for control of the spongy moth (formerly "gypsy moth", *Lymantria dispar* (L.)) (e.g., Fuester et al. 2014).



Figures 21–22. Blepharipa sp. SK1 (Exoristinae, Eryciini), CNC2077526<sup>3</sup>. 21. Lateral view. 22. Close-up of head showing setation and colouration. Body length: 10 mm.

# **13.** *Carcelia* (*Carcelia*) sp. nr. *reclinata* (Aldrich & Webber), CNC2077371<sup>2</sup> , CNC2077372<sup>2</sup> [BIN AAG2429].

O'Hara (2024: 60–61) reported on the DNA barcodes of two closely-related *Carcelia* (*Carcelia*) species and argued for one of them being *C. reclinata*. The other species is the one here called "*C.* sp. nr. *reclinata*" from BIN AAG2429:

"A second BIN (AAG2429) in my BOLD barcode library contains barcodes of four specimens identified as *C. reclinata* (from Maine, New Mexico, Alberta and Yukon) and these specimens are presumed to belong to a misidentified species close to *C. reclinata*. The type locality of *C. reclinata* is in the Manzano Mtns of central New Mexico, the same mountain range where a barcoded specimen of the presumed "true" *C. reclinata* was collected (CNC DIPTERA 104456)." (O'Hara 2024: 60–61).

*Hosts. Carcelia reclinata* has been reared from various Noctuidae (as Arctiidae) (Arnaud 1978: 122), including a woolly bear caterpillar, *Grammia incorrupta* (Hy. Edwards). See Singer et al. (2009) for a study involving self-medication of plant toxins by *G. incorrupta* in response to parasitism by *Carcelia reclinata*.

## **14.** *Madremyia saundersii* (Williston), CNC2077338<sup>6</sup>∂, CNC2077324<sup>5</sup>♀</sup> [BIN AAX3393].

Distribution. Nearctic: Canada (all [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

This is a common and widespread species in North America. In the same BIN are three specimens from Ontario and Arizona.

*Hosts*. Lepidoptera, several families (Arnaud 1978: 367). It is an important parasitoid of *Choristoneura* species (Tortricidae) in forests, including spruce budworm (*C. fumiferana* (Clemens)) and obliquebanded leafroller (*C. rosaceana* (Harris)) (O'Hara 2005). It has been reared in low numbers from monarch larvae (*Danaus plexippus* L., Nymphalidae) (Oberhauser et al. 2017).

## **15.** *Nilea erecta* (Coquillett) complex, CNC2077373<sup>2</sup> [BIN AER3186].

Distribution [as *N. erecta*]. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska).

There are two BINS in my BOLD barcode library for CNC "*Nilea erecta*": BIN AAA1961 for multiple specimens from Ontario and Québec, and BIN AER3186 for three specimens from British Columbia and my single specimen from Saskatchewan. A few of the eastern specimens were identified by Monty Wood as *N. unipilum* (Aldrich & Webber), a species recorded only from Oregon in O'Hara & Wood (2004). The three barcoded specimens from B.C. belong to a series of ca. 25 specimens that I collected at Shuswap Lake in 1987; these were initially identified as *N. erecta* but are now under *N. unipilum* – moved there by Monty or myself.

I offer the following as a possible interpretation of the preceding comments as the basis for further investigation:

- a) the BINS are correct and two morphological similar species are involved, likely N. erecta and N. unipilum,
- b) identifications of *N. unipilum* from eastern Canada are incorrect (male surstylus seems to have been used as a distinguishing feature),
- c) specimens in BIN AAA1961 are N. erecta, and
- d) specimens in BIN AER3186 are a different species and are possibly N. unipilum (type in USNM, Washington).

*Hosts*. Like *Madremyia saundersii* above, *Nilea erecta* has been reared from various Lepidoptera (Arnaud 1978: 448, as *Pseudoperichaeta erecta*), pest budworms (O'Hara 2005, Pfannenstiel et al. 2012) and monarch larvae (Oberhauser et al. 2017).

## **16.** *Zizyphomyia crescentis* (Reinhard) (Figs. 23, 24), CNC2077409<sup>2</sup> [BIN AEA1817].

Distribution. Nearctic: new for Canada (incl. Prairies and Saskatchewan), USA (Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

There are three species of *Zizyphomyia* Townsend in the Nearctic Region, none of which has been recorded from Canada until now. The abdominal colour pattern of male *Z. crescentis* is unique to this species (Figs. 23, 24). The DNA barcodes of two unidentified *Zizyphomyia* females from southern Arizona and New Mexico belong to a sister BIN (AAZ1273).

Hosts. Unknown.

## Exoristini

## 17. *Chetogena* sp. SK1, CNC2077327<sup>8</sup> [BIN ACB4456].

This shares a BIN with three other unidentified specimens of Chetogena, one from Arizona and two from Nebraska.

## **18.** *Chetogena* (*Stomatomyia*) *parvipalpis* (Wulp), CNC2077527<sup>9</sup> [BIN AAG2337].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico), South America (Argentina, Chile).

This common species is smaller than most *Chetogena* species (Sask. specimen is 5 mm) and its maxillary palpus is cylindrical along its length, not clubbed at tip as in species of subgenera *Chetogena* Rondani and *Diplostichus* B. & B.

*Hosts*. Recorded as a parasitoid of the beet webworm, *Loxostege sticticalis* (L.) (Lepidoptera: Crambidae) in Arnaud (1978: 475) and Capinera (2020: 396), as *Stomatomyia parvipalpis* in both.

# **19.** *Exorista (Adenia) dydas (Walker)*, CNC2077433<sup>4</sup> , CNC2077529<sup>9</sup> [BIN ABZ7039 for male, DNA barcode failed for female].

Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (all mainland except Alaska).

O'Hara (2024: 61) recorded this species from "sugared" oak leaves in the Henry Mountains of Utah and commented:

"This widespread species is represented by about 20 barcoded specimens in my BOLD barcode library, from British Columbia to New Brunswick as well as Colorado, Maryland and Utah. It was not listed from Gila N.F. by O'Hara (2012)."

Hosts. Sawflies in the families Diprionidae and Tenthredinidae (Hymenoptera) (Arnaud 1978: 272, as Guerinia dydas).



Figures 23–24. Zizyphomyia crescentis (Reinhard) (Exoristinae, Eryciini), CNC2077409 3. 23. Lateral view. 24. Close-up of abdomen showing colouration and banding. Body length: 6 mm.

## Goniini

## **20.** *Gonia distincta* Smith, CNC2077438<sup>4</sup>, CNC2077439<sup>4</sup> [BIN ACC0772].

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Southwest, Northeast, Southeast).

Two species of *Gonia* Meigen were caught hilltopping on Baldy Mountain. They are superficially similar in colouration with abdominal tergites 3 and 4 black medially and reddish-orange laterally. The parafacial of *Gonia* species is typically quite wide but is uncharacteristically narrow (for a *Gonia* species) in *G. distincta* (Morrison 1940).

Hosts. Unknown.

## 21. Gonia porca Williston, CNC2077437<sup>4</sup> [BIN ACV7169].

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

This species resembles *G. distincta* in abdominal colouration (see above) but can be recognized by its scattered golden (rather than black) hairs on the thoracic pleura and especially behind the row of an episternal setae (Morrison 1940).

Hosts. Several cutworms in the family Noctuidae (Lepidoptera) (Arnaud 1978: 268).

#### **22.** *Platymya confusionis* (Sellers), CNC2077411<sup>2</sup> [DNA barcode failed].

Distribution. Nearctic: Canada (all [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

Hosts. Sod webworms of the genus Crambus Fab. (Lepidoptera, Crambidae) (Arnaud 1978: 68, as Aplomya confusionis).

## Winthemiini

23. *Hemisturmia parva* (Bigot), CNC2077407<sup>2</sup> [DNA barcode failed].

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

*Hosts*. Lepidoptera, several families (Arnaud 1978: 278, as *H. tortricis*). It has been reared from multiple pest species of the genus *Choristoneura* Lederer (Tortricidae) (O'Hara 2005).

## **24.** *Smidtia fumiferanae* (Tothill), CNC2077295<sup>1</sup>, CNC2077296<sup>1</sup>, [BIN AAB5914].

Distribution. Nearctic: Canada (all [incl. new for Saskatchewan]), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

*Hosts*. Lepidoptera, several families (Arnaud 1978: 403, as *Omotoma fumiferanae*). It has been reared from multiple pest species of the genus *Choristoneura* Lederer (Tortricidae) (O'Hara 2005).

## PHASIINAE, Cylindromyiini

**25.** *Besseria anthophila* (Loew), CNC2077342<sup>6</sup> , CNC2077343<sup>6</sup> , CNC2077346<sup>6</sup> , CNC2077344<sup>6</sup> , CNC2077345<sup>6</sup> [DNA barcode failed].

Distribution. Nearctic: Canada (N.W.T., Prairies [incl. new for Saskatchewan], Ontario), USA (Alaska). Palaearctic: widespread.

This is the only *Besseria* species of the three in North America in which wing vein  $M_1$  fades out at bend (i.e., does not reach wing margin). Vein  $M_1$  reaches wing margin in *B. ater* (Coquillett) and meets vein  $R_{4+5}$  before wing margin in *B. brevipennis* (Loew).

Hosts. Unknown but assumed to be true bugs belonging to the order Hemiptera.

## Gymnosomatini

## **26.** *Gymnosoma par* Walker, CNC2077313<sup>1</sup> [BIN AAG2156].

Distribution. Nearctic: Canada (Yukon, Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northern Rockies, Great Plains, Northeast, Southeast).

Hosts. Stink bugs (Hemiptera: Heteroptera: Pentatomidae), including Euschistus servus (Say) (Tillman 2010).

## **27**. *Gymnosoma* **sp. SW1**, CNC2077351<sup>10</sup>♀ [BIN AAV0936].

This is the same *Gymnosoma* species caught in Utah's Henry Mtns on "sugared" oak leaves (O'Hara 2024). It is here called "SW1" to match the term used for the Utah species. O'Hara (2024: 65) noted: "The DNA barcode matches that of a specimen from Utah (Juab Co., Fish Springs WR) tentatively identified as *G. fuliginosum* R.-D."

## Leucostomatini

## **28.** *Leucostoma simplex* (Fallén), CNC20775197 [DNA barcode failed].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: South America (Argentina, Chile). Widespread in Old World except for Oriental Region.

*Hosts*. Hemipteran bugs in the families Lygaeidae, Nabidae, Rhopalidae (Arnaud 1978: 340, Tschorsnig 2017: 333) and grasshoppers (Orthoptera, Acrididae) (Arnaud 1978: 341).

## Tachininae, Ernestiini

**29.** *Linnaemya* sp. SK1, CNC2077323<sup>5</sup>♂, CNC2077368<sup>2</sup>♀, CNC2077429<sup>4</sup>♀ [BIN AAI1339].

The two DNA barcodes are virtually the same and belong to the same BIN as the barcodes of about 30 other *Linnaemya* specimens from across Canada that had been tentatively identified as four described species. Collectively these specimens could belong to a single variable species but I suspect they instead represent a complex of closely related species.

Hosts. Linnaemya species are often parasitoids of Noctuidae (Lepidoptera) (Arnaud 1978: 109, as Bonnetia).

## **30.** *Panzeria incisa* (Tothill), CNC2077291<sup>1</sup> [BIN ACA7380].

Distribution. Nearctic: Canada (B.C., new for Prairies [Saskatchewan], Ontario, Québec), USA (Northeast, Northern Rockies).

O'Hara & Wood (2004: 247) recorded this species from British Columbia, Montana, Wyoming, Michigan, Ohio, Pennsylvania, Ontario and Québec. This known distribution would suggest the likely presence of *P. incisa* in the Canadian Prairies but it had not been recorded from there until now. The DNA barcode matches that of two specimens from Ontario.

Hosts. Unknown. Panzeria species, as Mericia R.-D., parasitize various Lepidoptera (Arnaud 1978: 375).

## Graphogastrini

**31.** *Phytomyptera* **sp. SK1** (Figs. 25, 26), CNC2077297<sup>1</sup>Å, CNC2077298<sup>1</sup>Å, CNC2077315<sup>1</sup>Å, CNC2077316<sup>1</sup>Å, CNC2077317<sup>1</sup>Å, CNC2077318<sup>1</sup>Å, CNC2077319<sup>1</sup>Å, CNC2077380<sup>2</sup>Å, **CNC2077381<sup>2</sup>Å**, CNC2077445<sup>4</sup>Å [DNA barcodes failed].

*Phytomyptera* Rondani is a large genus of tiny tachinids (ca. 4 mm) with over 20 described and many undescribed species in North America. The genus is one of the most morphologically diverse within the Tachinidae with all sorts of varied features including size and shape of the antennal postpedicel, wing colouration and venation, and abdominal colouration and setation.

*Phytomyptera* sp. SK1 is an undescribed, but not unknown, species. I found a 4"x4" tray of this species in the CNC that was labelled as "*Plectops* sp. 14" by Frank McAlpine, probably in the early 1960s (Frank was the CNC dipterist in charge of Tachinidae before Monty Wood was hired and took over the family; see Cumming et al. 2011). *Plectops* was later synonymized with *Elfia* R.-D. by Sabrosky & Arnaud (1965: 1065) and the two names were synonymized with *Phytomyptera* by Wood (1987: 1220).

*Hosts*. This species (as *Plectops* sp. 14) is represented in the CNC by specimens from California, Arizona, Alberta, Saskatchewan, Ontario, Québec, New York and North Carolina. A few of the Saskatchewan specimens were reared from the banded jack-pine needleminer, *Coleotechnites canusella* (Freeman) (Lepidoptera: Gelechidae) (as "*Eucordylea canusella*"), collected in Nisbet Provincial Forest and nearby Fort à la Corne Provincial Forest. This *Phytomyptera* species is presumably the same one reared from "*Eucordylea canusella*" in Québec by McLeod (1969, as "*Elphia* sp." [error for *Elfia*]). I have collected this species in my backyard in Ottawa.



Figures 25–26. *Phytomyptera* sp. SK1 (Tachininae, Graphogastrini), CNC2077297 **3**. 25. Lateral view. 26. Close-up of abdomen showing silvery bands of microtomentosity. Body length: 3 mm.

# **32.** *Phytomyptera* sp. SK2, CNC2077376<sup>2</sup>Å, CNC2077378<sup>2</sup>Å, CNC2077379<sup>2</sup>Å, CNC2077377<sup>2</sup>♀, CNC2077408<sup>2</sup>♀ [DNA barcode failed].

I did not find a match for this species among the identified or miscellaneous CNC *Phytomyptera*. It is dark with a shiny black abdomen and only a hint of microtomentosity [formerly "pruinosity"] at the base of the abdominal tergites. The species is unusual among *Phytomyptera* in having a tiny downcurved proepimeral seta; a well-developed downcurved seta is generally characteristic of the genus.

## Nemoraeini

## **33.** *Xanthophyto* **sp. SK1**, CNC2077357<sup>11</sup>♀ [DNA barcode failed].

This *Xanthophyto* species has abdominal tergite 5 completely black, without a trace of yellowish orange; differing in this respect from *Xanthophyto* sp. SW1 in O'Hara (2024: 68, Figs. 21, 22). This species is almost certainly undescribed. John Stireman of Wright State University is revising the genus.

Hosts. Lepidoptera, several families (Arnaud 1978: 531). Recorded from coneworms (*Dioryctria* spp., Pyralidae) in Belmont & Habeck (1983) and from hemlock looper (*Lambdina fiscellaria* (Guenée), Geometridae) in Sabbahi et al. (2018).

## Siphonini

## **34.** *Ceromya americana* (Townsend) species group, CNC2077341<sup>6</sup> [DNA barcode failed].

The single female belongs to the *C. americana* species group and is probably one of the six described species (see O'Hara 1994). Males of this group are difficult to identify morphologically and females are seldom identifiable. DNA barcoding works well to recognize species but the barcode of the single Saskatchewan female failed.

*Hosts*. The known hosts of members of the *Ceromya americana* species group are listed in O'Hara (1994) and include species of Noctuidae (*Achytonix praeacuta* (Smith), *Feralia jocosa* (Guenée) and *Lithophane* sp.) and Notodontidae (*Heterocampa guttivitta* (Walker) and *Schizura concinna* (Smith)).

**35.** *Siphona* (*Siphona*) *medialis* O'Hara, CNC2077374<sup>2</sup>♂, CNC2077375<sup>2</sup>♀ [DNA barcode failed]. Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

*Siphona* species have a long and geniculate proboscis and are usually small (under 6 mm long) and palecoloured. The North American species were revised by O'Hara (1983). *Hosts*, Unknown.

## Tachinini

Many species of Tachinini "hilltop" for mating purposes, with males spending more time than females on a hilltop. All of the nine species below were caught on hilltops or a prominent overlook, mostly on Baldy Mountain (locality 4). A few specimens (mostly females) of three species were also caught elsewhere.

# **36.** *Deopalpus* sp. SK1, CNC2077431<sup>4</sup> , CNC2077432<sup>4</sup> , CNC2077436<sup>4</sup> , CNC2077442<sup>4</sup> , CNC2077443<sup>4</sup> [BIN AAM7880].

*Deopalpus* Townsend is a New World genus with its greatest diversity in the Neotropics. Most of the 11 Nearctic species are confined to the southern portion of the region. Only one species, *Deopalpus contiguous* (Reinhard), is recorded from Canada. The Saskatchewan specimens resemble *D. contiguous* (possibly a species complex) but the single barcode places the species in a BIN of its own among five BINs of identified and unidentified *Deopalpus* species.

**37.** *Peleteria anaxias* (Walker), CNC2077435<sup>4</sup>, CNC2077494<sup>4</sup>, CNC2077496<sup>4</sup>. [BIN ACI6315]. Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Southwest, Northeast, Southeast).

The unpublished Ph.D. thesis on the *Peleteria* of America north of Mexico by Lynda L.E. Richards (1973) was helpful for the identification of the species listed here, as were specimens in the CNC identified by her.

*Peleteria anaxias* and *P. haemorrhoa* below are characterized by a dark abdomen with tergite 5 partially or entirely red. They can be identified by significant differences in abdominal sternite 5 and male terminalia. Most

noticeable in undissected males is the broader posterior edge of each lobe of sternite 5 in P. haemorrhoa.

*Hosts*. Arnaud (1978) did not list any known hosts for the species of *Peleteria* listed here. The Ph.D. thesis on *Peleteria* by Richards (1973) noted that the collections she examined "include adults reared from the following genera of cutworms and armyworms (Noctuidae): *Agrotis, Chorizagrotis, Euxoa, Graphiphora, Heliophila*, and *Peridroma*" (p. 5).

## **38.** *Peleteria biangulata* Curran, CNC2077434<sup>4</sup>Å, CNC2077356<sup>11</sup>Å [BIN AEB0151].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

This is one of the *Peleteria* species with a darkish orange abdomen and black median vitta. The median vitta is discernable but less conspicuous than in *P. iterans* because of the generally darker colouration of the abdomen. *Peleteria biangulata* is one of the few North American species of the genus with an orange (not black) tegula at the base of the wing, and is the only *Peleteria* species listed here with this character state. I called this species "*Peleteria* sp. SW1" in my report last year on the Tachinidae of the Henry Mountains in Utah (O'Hara 2024: 69).

Hosts. See note under Peleteria anaxias.

# **39.** *Peleteria conjuncta* Curran, CNC2077487<sup>4</sup> , CNC2077488<sup>4</sup> , CNC2077489<sup>4</sup> , CNC2077490<sup>4</sup> , CNC2077491<sup>4</sup> [BIN ACA6975].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Northern Rockies, Southwest).

The single DNA barcode of *P. conjuncta* is in a BIN with the barcodes of two specimens of *Peleteria pseudoershovi* Zimin, a Palaearctic species in Northeast Asia. The two barcoded specimens were collected by Monty Wood in 1990 on the summit of Rodinka Mtn. in the Chersky Range of the Sakha Republic, Russia. The posterior lobes of male sternum 5 of both species are distinctive in having a small medially-projecting appendage distally. The abdomens differ in colouration, that of *P. pseudoershovi* being black medially and orange laterally, and that *P. conjuncta* being entirely black. The two forms are closely related but I doubt they are conspecific, despite their DNA barcodes belonging to the same BIN.

Hosts. See note under Peleteria anaxias.

# **40.** *Peleteria cornuta* Curran, CNC2077312<sup>1</sup><sup>3</sup>, CNC2077430<sup>4</sup><sup>3</sup>, CNC2077369<sup>2</sup><sup>2</sup>, CNC2077405<sup>2</sup><sup>2</sup> [BIN AAI2974].

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, Northern Rockies, Southwest). Neotropical: Middle America (Mexico).

The DNA barcodes of four *P. cornuta* and three *P. cornigera* Curran in my BOLD barcode library form two slightly separate groups, but both within BIN AAI2974. The male terminalic characters given in Curran (1925) for the two species appear to be reliable and are here the basis for treating the Saskatchewan specimens as *Peleteria cornuta*.

Hosts. See note under Peleteria anaxias.

## **41.** *Peleteria haemorrhoa* (Wulp), CNC2077495<sup>4</sup> [BIN ACG7558].

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (California, Southwest, Great Plains, Northeast, Southeast).

This species is characterized by a partially or entirely red abdominal segment 5 and male cerci divided by a deep groove.

Hosts. See note under Peleteria anaxias.

## **42.** *Peleteria iterans* (Walker), CNC2077350<sup>10</sup> , CNC2077440<sup>4</sup> [BIN AAG2186].

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast). Neotropical: Middle America (Mexico).

This is a common and distinctive species. The abdomen is yellow with a narrow black median vitta (sometimes interrupted or absent) and lobes of male sternite 5 shiny black and directed outwards.

Hosts. See note under Peleteria anaxias.

# **43.** *Peleteria malleola* (Bigot), CNC2077294<sup>1</sup><sup>3</sup>, CNC2077406<sup>2</sup><sup>3</sup>, CNC2077492<sup>4</sup><sup>3</sup>, CNC2077493<sup>4</sup><sup>3</sup> [BIN AAG2129].

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

The abdomen is varied among specimens of this common species, with a mix of light red to black in ground colour and varying degrees of overlying microtomentosity.

Hosts. See note under Peleteria anaxias.

## **44.** *Tachina* (*Rhachogaster*) *latianulum* (Tothill), CNC2077328<sup>8</sup> A, CNC2077329<sup>8</sup> A, CNC2077330<sup>8</sup> A, CNC2077330<sup>8</sup> A, CNC2077329<sup>8</sup> A, CNC207730<sup>8</sup> A, CNC2077730<sup>8</sup> A, CNC207730<sup>8</sup>

## CNC2077290<sup>1</sup>♀ [BIN AAH6662].

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

This is one of several large and shiny black *Tachina* species and it can be identified by the male terminalia characters given in the key and shown in the figures in Rowe (1931). The three males were caught at a high point (Jones Peak) along the top of a ridge overlooking the Frenchman River Valley (Figs. 16, 17). I visited this spot twice expecting better hilltopping results (only two species, the other being *Chetogena* sp. SK1 [a single male, and maybe there by chance and not "hilltopping" for a mate?]). Perhaps the windy conditions on both visits contributed to the poor collecting.

Hosts. Unknown.

## Acknowledgements

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The species of Tachinidae known from the Canadian provinces of Alberta, Saskatchewan and Manitoba (i.e., "Canadian Prairies") are listed below. This list began as an output for "Prairies" from a FileMaker Pro database of tachinid names, types and distributions that will be used to create a world catalogue of Tachinidae in the near future (see O'Hara & Henderson 2022). This initial output provided a list of species known from the Canadian Prairies but without information on species known from Saskatchewan. For that, I turned to the catalogue of O'Hara & Wood (2004), and to an unpublished physical list of distributions by province and state for CNC specimens that was prepared in advance of that catalogue by my former technician Bruce Cooper.

## Distributional information

Distributions are given in a similar style to those in the world checklist of Tachinidae (O'Hara et al. 2020), with the following subdivisions recognized within Canada and United States and arranged roughly from west to east within each country (Fig. 27):

Distribution. Canada: Yukon, N.W.T., B.C., Prairies, Ontario, Québec, Maritimes, Labrador, Newfoundland. USA: Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida.

Abbreviations and subdivisions listed above represent:

Canada

B.C.: British Columbia. Maritimes: New Brunswick, Nova Scotia and Prince Edward Island. N.W.T.: Northwest Territories & Nunavut.

Prairies: Alberta, Saskatchewan and Manitoba.

United States

Alaska.

California.

Florida.

Great Plains: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota.

Northeast: Connecticut, Delaware, District of Columbia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin.

Northern Rockies: Idaho, Montana, Wyoming.

Pacific Northwest: Oregon, Washington.

Southeast: Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee. Southwest: Arizona, Colorado, Nevada, New Mexico, Utah. Texas.

A distribution for a species known previously from Saskatchewan is listed as:

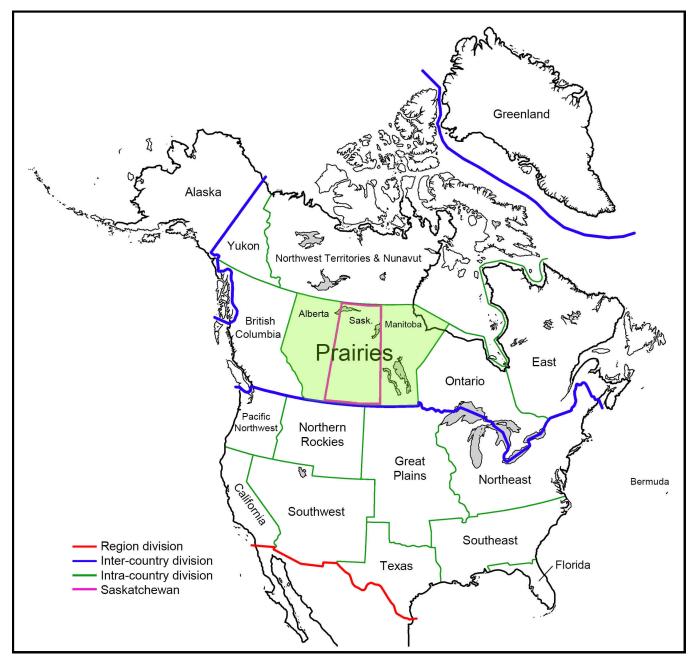
Distribution. Canada: Yukon, N.W.T., B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Labrador, Newfoundland. USA: Alaska ...

A distribution for a species newly recorded from Saskatchewan is listed as:

Distribution. Canada: Yukon, N.W.T., B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes, Labrador, Newfoundland. USA: Alaska ...

Summary of species numbers:

Species recorded from the Canadian Prairies:	405
Species known previously from Saskatchewan:	112
Species currently known from Saskatchewan:	129
– including new only for Saskatchewan	15
- including new only for Canadian Prairies & Sask.	1
<ul> <li>including new for Canada</li> </ul>	1
Species with their type locality in Saskatchewan	11



**Figure 27.** Map of the Nearctic Region with the subdivisions of O'Hara et al. (2020). The Canadian prairie provinces of Alberta, Saskatchewan and Manitoba are highlighted in green and Saskatchewan is outlined in pink. [Map adapted from O'Hara et al. 2020: 18.]

## List of Tachinidae of the Canadian Prairies

## DEXIINAE

#### Dexiini

Ateloglossa algens (Curran) Distribution. Nearctic: Canada (Yukon, Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Southwest).

Ateloglossa gillettei (Townsend) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Texas).

#### Ateloglossa johnsoni (West)

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Southwest, Northeast).

Ateloglossa marginalis (Curran) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, Northern Rockies, Southwest).

Ateloglossa wickhami (Townsend) Distribution. Nearctic: Canada (Yukon, Prairies), USA (Alaska).

*Billaea nipigonensis* Curran Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec).

#### Dinera grisescens (Fallén)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Southwest, Great Plains, Northeast). Palaearctic: widespread.

#### Estheria cinerea (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

*Eumegaparia flaveola* (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Northern Rockies, Southwest).

*Mochlosoma validum* Brauer & Bergenstamm Distribution. Nearctic: Canada (B.C., Prairies, East), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast). Neotropical: Middle America (Mexico).

#### Ptilodexia agilis Reinhard

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Texas).

#### Ptilodexia canescens (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northern Rockies, Southwest, Great Plains, Northeast).

*Ptilodexia carolinensis* Brauer & Bergenstamm Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Ptilodexia conjuncta (Wulp)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico).

#### Ptilodexia harpasa (Walker)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Great Plains, Northeast, Southeast).

#### Ptilodexia incerta West

Distribution. Nearctic: Canada (Prairies), USA (Great Plains, Texas, Northeast, Southeast).

*Ptilodexia mathesoni* (Curran) Distribution. Nearctic: Canada (Prairies Ontario, Québec, Maritimes), USA (Northeast).

Ptilodexia obscura West

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast).

#### Ptilodexia rufipennis (Macquart)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

#### Eutrixini

Eutrixa exilis (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Freraeini

*Freraea montana* (Coquillett) Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Oestrophasiini

Oestrophasia calva Coquillett

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Maritimes), USA (California, Northern Rockies, Southwest, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

*Oestrophasia clausa* Brauer & Bergenstamm Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (California, Northern Rockies, Southwest).

## Uramyini

*Uramya limacodis* (Townsend) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northeast, Southeast).

## Voriini

*Athrycia cinerea* (Coquillett) Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

#### Blepharomyia tibialis (Curran)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Alaska, Northeast, Southeast).

#### Campylocheta orbitalis (Webber)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Northeast).

#### Chaetovoria seriata (Aldrich)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies), USA (Pacific Northwest, Southwest, Texas).

#### Cyrtophloeba coquilletti Aldrich

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast, Southeast).

#### Cyrtophloeba nitida Curran

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, Southwest, Northeast, Southeast).

*Eriothrix penitalis* (Coquillett) Distribution. Nearctic: Canada (Prairies, Ontario), USA (Great Plains, Northeast, Southeast).

*Euptilopareia erucicola* (Coquillett) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec), USA (Northern Rockies, Great Plains, Northeast).

Euptilopareia vicinalis Reinhard

Distribution. Nearctic: Canada (Prairies), USA (California, Northern Rockies, Southwest).

#### Hypovoria cauta (Townsend)

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

#### Hypovoria discalis (Brooks)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Maritimes), USA (California, Northern Rockies, Southwest, Northeast).

Kirbya (Hesperophasiopsis) aldrichi (Curran)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Great Plains). Type locality of *Hesperophasia aldrichi* Curran: Canada, Sask., Biggar.

#### Meledonus californicus (Coquillett)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Metaplagia brevicornis Brooks

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Maritimes, Newfoundland), USA (Northeast).

#### Muscopteryx chaetosula Townsend

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico).

Muscopteryx evexa (Reinhard) Distribution. Nearctic: Canada (Prairies, Ontario, Québec,

Newfoundland), USA (Northern Rockies, Great Plains, Northeast).

*Periscepsia (Ramonda) cinerosa* (Coquillett) Distribution. Nearctic: Canada (Yukon, B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

*Periscepsia (Ramonda) clesides* (Walker) complex Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Quebec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, Southwest, Great Plains, Northeast).

Periscepsia (Ramonda) helymus (Walker) Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

*Periscepsia (Ramonda) labradorensis* (Brooks) Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Québec, Maritimes, Labrador, Newfoundland), USA (Alaska). *Periscepsia (Ramonda) rohweri* (Townsend) Distribution. Nearctic: Canada (Yukon, Prairies), USA (Pacific Northwest, Northern Rockies, Southwest).

*Phyllomya fuscicosta* Curran Distribution. Nearctic: Canada (B.C., Prairies), USA (Northern Rockies, Southwest).

Phyllomya limata (Coquillett)

Distribution. Nearctic: Canada (Prairies), USA (California, Northern Rockies, Southwest).

Phyllomya washingtoniana (Bigot)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

*Plagiomima spinosula* (Bigot) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario), USA (California, Southwest, Great Plains, Texas, Northeast).

Spathidexia dunningii (Coquillett) complex

Distribution. Nearctic: Canada (Yukon, Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Greater Antilles (Jamaica, Puerto Rico).

#### Spathidexia reinhardi Arnaud

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: southern Lesser Antilles (Trinidad & Tobago).

#### Thelaira americana Brooks

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

#### Thelaira bryanti Curran

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest).

#### Uclesia retracta Aldrich

Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, Southwest).

#### Voria aurifrons (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Great Plains, Northeast).

#### Voria ruralis (Fallén)

Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Widespread throughout the world but likely a species complex, including in Nearctic Region.

#### Wagneria pacata Reinhard

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Maritimes), USA (California, Southwest, Great Plains, Northeast).

#### Wagneria vernata West

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

## EXORISTINAE

Acemyini Acemya favilla Reinhard Distribution. Nearctic: Canada

Distribution. Nearctic: Canada (Prairies), USA (Northern Rockies, Great Plains, Northeast).

#### Acemya oestriforme (Brauer & Bergenstamm)

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies [incl. new for Saskatchewan]), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Acemya tibialis Coquillett

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast).

#### Ceracia dentata (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Middle America (Mexico), South America (Chile).

#### Blondeliini

*Admontia degeerioides* (Coquillett) Distribution. Nearctic: Canada (all), USA (California, Southwest, Great Plains, Northeast, Southeast).

#### Admontia pollinosa Curran

Distribution. Nearctic: Canada (N.W.T., Prairies [incl. Saskatchewan], Ontario), USA (California, Northern Rockies, Southwest, Great Plains, Northeast). Type locality of *Admontia dubia* Curran, a synonym of *Admontia pollinosa*: Canada, Sask., Holdfast.

#### Admontia washingtonae (Coquillett)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (Alaska, Northeast).

#### Belida chaetoneura (Coquillett)

Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Northeast, Southeast).

Belida dexina (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Northeast).

#### Blondelia eufitchiae (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Blondelia hyphantriae (Tothill)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, Southwest, Great Plains, Northeast, Southeast, Florida). Palaearctic: China. Oriental: China, Taiwan.

#### Blondelia polita (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest). Neotropical: Middle America (Mexico).

#### Compsilura concinnata (Meigen)

Distribution. Nearctic (introduced): Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Great Plains, Northeast). Widespread in Old World.

*Cryptomeigenia demylus* (Walker) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Northeast, Southeast).

*Cryptomeigenia hinei* (Coquillett) complex Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northeast).

*Cryptomeigenia muscoides* Curran Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Great Plains, Texas, Northeast).

#### Cryptomeigenia nigripes Curran

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec), USA (Pacific Northwest, Texas, Northeast).

*Cryptomeigenia ochreigaster* Curran Distribution. Nearctic: Canada (Prairies).

*Cryptomeigenia theutis* (Walker) complex Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Texas, Northeast, Southeast).

*Cryptomeigenia triangularis* Curran Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northeast).

#### Dolichotarsus kingi Brooks

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, Southwest). Type locality of *Dolichotarsus kingi* Brooks: Canada, Sask., Saskatoon.

*Eribella exilis* (Coquillett) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Northeast, Southeast).

*Eribella polita* (Coquillett) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Southwest, Great Plains, Northeast).

#### Eucelatoria dimmocki (Aldrich)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

#### Euthelyconychia nana (Curran)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (California, Northern Rockies, Southwest, Great Plains).

*Euthelyconychia vexans* (Curran) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northeast).

*Euthelyconychia xylota* (Curran) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Texas, Northeast, Southeast).

*Lixophaga alberta* (Curran) Distribution. Nearctic: Canada (Prairies, Ontario, Québec).

*Lixophaga discalis* (Coquillett) Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes), USA (Southwest, Great Plains, Northeast, Southeast).

*Lixophaga impatiens* (Curran) Distribution. Nearctic: Canada (Prairies).

Lixophaga opaca Reinhard

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Québec, Maritimes), USA (Pacific Northwest, Northern Rockies, Northeast).

Lixophaga plumbea Aldrich

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

## Lixophaga unicolor (Smith)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, Northern Rockies, Southwest Northeast).

#### Lixophaga variabilis (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Great Plains, Texas, Northeast, Southeast, Florida).

#### Medina barbata (Coquillett)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Alaska, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

*Meigenia submissa* (Aldrich & Webber) Distribution. Nearctic: Canada (Yukon, Prairies), USA (Northern Rockies, Southwest, Great Plains, Northeast).

*Myiopharus americanus* (Bigot) Distribution. Nearctic: Canada (Prairies), USA (Southwest, Texas, Southeast, Florida). Neotropical: Middle America (Mexico).

*Myiopharus doryphorae* (Riley)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

Myiopharus macellus (Reinhard)

Distribution. Nearctic: Canada (Prairies [incl. new for Saskatchewan], Ontario), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

#### Myiopharus neilli O'Hara

Distribution. Nearctic: Canada (Prairies), USA (Southwest, Great Plains).

*Oswaldia albifacies* (Townsend) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Northeast).

Oswaldia assimilis (Townsend)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast).

## Oswaldia aurifrons (Townsend)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Southwest, Texas, Northeast).

#### Oxynops anthracinus (Bigot)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: eastern Lesser Antilles (Saint Vincent), Middle America (Mexico, Costa Rica).

#### Picconia derisa (Reinhard)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast).

Zaira eleodivora (Walton) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (California, Southwest, Great Plains).

#### Eryciini

Aplomya theclarum (Scudder) Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

*Buquetia obscura* (Coquillett) Distribution. Nearctic: Canada (B.C., Prairies), USA (Great Plains, Texas, Northeast).

*Carcelia (Carcelia) languida* (Walker) Distribution. Nearctic: Canada (Prairies, Ontario), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico, Nicaragua). *Carcelia (Carcelia) protuberans* (Aldrich & Webber) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Southwest, Texas, Northeast, Southeast).

*Carcelia (Carcelia) reclinata* (Aldrich & Webber) Distribution. Nearctic: Canada (all), USA (all mainland except Alaska). Neotropical: Middle America (Mexico), South America (Colombia).

Carcelia (Carcelia) yalensis Sellers

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario), USA (California, Northern Rockies, Texas, Northeast).

Drino (Drino) bakeri (Coquillett)

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Alaska, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

Drino (Drino) rhoeo (Walker)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Greater Antilles (Jamaica), eastern Lesser Antilles (Dominica), Middle America (Mexico, Costa Rica), South America (Argentina).

#### Eunemorilla comosa (Reinhard)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast).

*Gymnophryxe claripennis* (Reinhard) Distribution. Nearctic: Canada (Yukon, Prairies), USA (Pacific Northwest, Northern Rockies, Southwest).

Hubneria estigmenensis (Sellers) Distribution. Nearctic: Canada (all), USA (Alaska, California,

Northern Rockies, Southwest, Great Plains, Northeast). Lespesia anisotae (Webber)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Northeast).

#### Lespesia archippivora (Riley)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (all mainland except Alaska). Neotropical: Greater Antilles (Cuba, Puerto Rico), eastern Lesser Antilles (Guadeloupe), southern Lesser Antilles (Trinidad & Tobago), Middle America (Guatemala, Honduras, Mexico, Nicaragua, Panama), South America (Argentina, Brazil, Colombia, Peru, Uruguay, Venezuela). Australasian & Oceanian: Hawaii (introduced).

#### Lespesia cuculliae (Webber)

Distribution. Nearctic: Canada (Prairies), USA (Great Plains, Texas, Northeast, Southeast, Florida).

*Lespesia datanarum* (Townsend) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (all mainland except Alaska).

Lespesia flavifrons Beneway

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, East), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Southeast, Northeast).

Lespesia frenchii (Williston)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (all mainland except Alaska).

## *Lespesia melalophae* (Allen)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies,

*Lespesia parviteres* (Aldrich & Webber) Distribution. Nearctic: Canada (Prairies), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Greater Antilles (Puerto Rico), Middle America (Costa Rica, Honduras, Nicaragua).

#### Lespesia sabroskyi Beneway

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Lespesia samiae (Webber)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Lespesia schizurae (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

#### Lydella radicis (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Lydella thompsoni Herting

Distribution. Nearctic (introduced): Canada (Prairies, Ontario, Québec, Maritimes). USA (Great Plains, Northeast, Southeast). Palaearctic: widespread. Oceanian: Guam.

#### Madremyia saundersii (Williston)

Distribution. Nearctic: Canada (all [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

#### Nilea carpocapsae (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Southeast).

#### Nilea dimmocki (Webber)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Northeast).

Nilea erecta (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (all mainland except Alaska).

#### Nilea mathesoni (Reinhard)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Florida, Northeast).

#### Nilea sternalis (Coquillett)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

#### Phebellia cerurae (Sellers)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Southwest, Northeast).

*Phebellia crassiseta* (Aldrich & Webber) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast).

#### Phebellia curriei (Coquillett),

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Texas, Northeast).

#### Phebellia epicydes (Walker)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Great Plains, Northeast).

Phebellia helvina (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, Southwest, Great Plains, Northeast).

#### Phebellia imitator (Sellers)

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Pacific Northwest, Northern Rockies, Southwest, Northeast, Southeast).

#### Phebellia nigripalpis (Robineau-Desvoidy)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Northeast). Palaearctic: widespread.

Phebellia pheosiae (Sellers) Distribution. Nearctic: Canada (Prairies, Ontario), USA (Northeast).

*Phebellia trichiosomae* (Sellers) Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, Northeast).

#### Phryxe pecosensis (Townsend)

Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Phryxe vulgaris (Fallén)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast). Palaearctic: widespread. Oriental: China, India.

#### Siphosturmia confusa Reinhard

Distribution. Nearctic: Canada (Prairies), USA (California, Southwest, Texas).

#### Siphosturmia phyciodis (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

#### Sisyropa alypiae Sellers

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (Northern Rockies, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Zizyphomyia crescentis (Reinhard)

Distribution. Nearctic: new for Canada (incl. Prairies and Saskatchewan), USA (Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Euthelairini

Neomintho celeris (Townsend) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast, Florida).

#### Exoristini

Bessa harveyi (Townsend)

Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Chetogena claripennis (Macquart)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (all mainland). Neotropical: Greater Antilles (Puerto Rico), Middle America (Mexico), South America (Venezuela).

#### Chetogena lophyri (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec,

Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast, Florida).

*Chetogena omissa* (Reinhard) Distribution. Nearctic: Canada (B.C., Prairies), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

Chetogena parvipalpis (Wulp)

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico), South America (Argentina, Chile).

*Chetogena vibrissata* (Brauer & Bergenstamm) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Southwest, Northeast).

*Exorista (Adenia) dydas* (Walker) Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (all mainland except Alaska).

*Exorista (Adenia) trudis* (Reinhard) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

*Exorista (Exorista) mella* (Walker) Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes), USA (all mainland except Alaska).

*Gueriniopsis setipes* (Coquillett) Distribution. Nearctic: Canada (Prairies, Ontario), USA (Great Plains, Northeast).

*Phorocera (Pseudotachinomyia) compascua* (Reinhard) Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, Northern Rockies, Southwest, Texas).

*Phorocera (Pseudotachinomyia) exigua* Wood Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Northeast).

Phorocera (Pseudotachinomyia) slossonae (Townsend) Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Northeast).

#### Tachinomyia apicata Curran

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Great Plains, Northeast).

#### Tachinomyia cana Webber

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Great Plains, Texas, Northeast).

*Tachinomyia dakotensis* Webber Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario), USA (California, Great Plains, Northeast, Pacific Northwest).

#### Tachinomyia montana (Smith)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

*Tachinomyia nigricans* Webber Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast).

*Tachinomyia panaetius* (Walker) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Great Plains, Northeast).

*Tachinomyia similis* (Williston) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

*Tachinomyia variata* Curran Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan],

Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Florida). Neotropical: Middle America (Mexico).

#### Goniini

*Allophorocera aldrichi* (Curran) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

Allophorocera delecta (Curran) Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario), USA (Northeast).

Allophorocera sajanica Mesnil

Distribution. Nearctic: Canada (Prairies), USA (Alaska). Palaearctic: Russia, Mongolia, China.

Belvosia canadensis Curran

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario), USA (Great Plains, Northeast, Pacific Northwest, Northern Rockies, Southeast, Southwest, Texas). Type locality of *Belvosia canadensis* Curran: Canada, Sask., Piapot Reserve.

#### Belvosia splendens Curran

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario), USA (Northern Rockies, Great Plains, Northeast, Southeast). Type locality of *Belvosia splendens* Curran: Canada, Sask.

#### Ceromasia auricaudata Townsend

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

Ceromasia hybreas (Walker)

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Ontario), USA (Alaska). Palaearctic: Russia (Eastern Siberia).

#### Chaetogaedia desertorum (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico).

# *Chaetogaedia townsendi* Sabrosky & Arnaud Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan],

Ontario, Québec), USA (Great Plains, Northeast, Southeast).

#### Cyzenis pullula (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, Northern Rockies, Southwest, Northeast).

#### Cyzenis ustulata (Reinhard)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Southwest, Northeast, Southeast).

#### *Erynnia tortricis* (Coquillett)

Distribution. Nearctic: Canada (all), USA (all mainland except Alaska).

*Euceromasia spinosa* Townsend Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Northeast).

#### Euexorista rebaptizata Gosseries

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

#### Eumea caesar (Aldrich)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### *Frontiniella mitis* (Curran) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northeast).

Frontiniella spectabilis (Aldrich)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Southwest, Northeast, Southeast).

*Frontiniella surstylata* O'Hara Distribution. Nearctic: Canada (Prairies, Ontario), USA (Northeast, Florida).

Gaediopsis ocellaris Coquillett

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Great Plains, Northeast).

#### Gonia albagenae Morrison

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Gonia aldrichi Tothill

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northern Rockies, Southwest, Great Plains, Northeast).

#### Gonia aturgida Brooks

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Gonia breviforceps Tothill

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Gonia brevipulvilli Tothill

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Gonia chilonis Walker

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Southwest).

#### Gonia distincta Smith

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Southwest, Northeast, Southeast).

#### Gonia frontosa Say

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast). Type locality of *Knabia hirsuta* Townsend, a synonym of *Gonia frontosa*: Canada, Sask., Oxbow.

#### Gonia fuscicollis Tothill

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Great Plains, Northeast, Southeast).

#### Gonia longiforceps Tothill

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

#### Gonia longipulvilli Tothill

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas). Neotropical: Middle America (Mexico). Australasian & Oceanian: Hawaii (introduced).

#### Gonia nigra (Brooks)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, Northern Rockies). Type locality of *Rhedia nigra* Brooks: Canada, Sask., Swift Current.

#### *Gonia pilosa* Brooks Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

Gonia porca Williston

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Gonia robusta Brooks

Distribution. Nearctic: Canada (Prairies), USA (California).

Gonia senilis Williston

Distribution. Nearctic: Canada (Prairies), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

#### Gonia sequax Williston

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico), South America (Brazil).

#### Gonia setifacies (Brooks)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Northern Rockies). Type locality of *Rhedia setifacies* Brooks: Canada, Sask., Pike Lake.

#### Gonia setigera Tothill

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Gonia smithi Brooks

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Maritimes), USA (Northeast).

Houghia sternalis (Coquillett)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast).

#### Hyphantrophaga blanda (Osten Sacken)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Costa Rica).

#### Hyphantrophaga virilis (Aldrich & Webber)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico, Costa Rica).

#### Leschenaultia americana (Brauer & Bergenstamm)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest). Neotropical: Middle America (Mexico).

#### Leschenaultia exul (Townsend)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northeast, Southeast).

#### Leschenaultia fulvipes (Bigot)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Texas, Northeast, Southeast).

#### Myxexoristops fronto (Coquillett)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (California, Northern Rockies, Southwest, Northeast).

## Myxexoristops neurotomae (Sellers)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Pacific Northwest, Southwest, Northeast, Southeast).

#### *Onychogonia fissiforceps* (Tothill) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific

Northwest, California, Northern Rockies, Southwest).

*Onychogonia flaviceps* (Zetterstedt) Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest). Palaearctic: Europe, Russia, Mongolia, Japan.

*Onychogonia tenuiforceps* (Morrison) Distribution. Nearctic: Canada (Prairies, Labrador), USA (Alaska, Northern Rockies).

Patelloa facialis (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Southwest, Great Plains, Texas).

Patelloa pachypyga (Aldrich & Webber) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Great Plains, Northeast).

#### Patelloa setifrons (Aldrich & Webber)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (California). Type locality of *Phorocera (Patelloa) setifrons* Aldrich & Webber: Canada, Sask., Oxbow.

Patelloa silvatica (Aldrich & Webber) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Great Plains, Northeast).

#### Platymya confusionis (Sellers)

Distribution. Nearctic: Canada (all [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

*Platymya trisetosa* (Coquillett) Distribution. Nearctic: Canada (Yukon, Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

*Pseudochaeta (Pseudochaeta) argentifrons* Coquillett Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (California, Southwest, Texas, Northeast, Southeast, Florida).

#### Spallanzania hebes (Fallén)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (all mainland except Alaska). Neotropical: Middle America (Mexico). Palaearctic: widespread. Oriental: China, India.

#### Spallanzania hesperidarum (Williston)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

#### Winthemiini

Hemisturmia parva (Bigot)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

#### Nemorilla pyste (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (all mainland except Alaska). Neotropical: eastern Lesser Antilles (Virgin Islands), southern Lesser Antilles (Trinidad & Tobago), Middle America (Mexico).

#### Smidtia fumiferanae (Tothill)

Distribution. Nearctic: Canada (all), USA (Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Winthemia aurifrons Guimarães

Distribution. Nearctic: Canada (B.C., Prairies), USA (California, Southwest).

*Winthemia borealis* Reinhard Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, Northeast).

Winthemia cecropia (Riley)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (California, Great Plains, Northeast).

#### Winthemia datanae (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

#### Winthemia occidentis Reinhard

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Northern Rockies, Southwest, Great Plains, Northeast). Neotropical: Middle America (Mexico).

#### Winthemia quadripustulata (Fabricius)

Distribution. Nearctic: Canada (all), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast). Palaearctic: widespread. Oriental: China.

#### Winthemia rufopicta (Bigot)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (all mainland except Alaska). Neotropical: Middle America (Panama).

#### Winthemia sinuata Reinhard

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northern Rockies, Great Plains, Texas, Northeast, Southeast, Florida).

Winthemia vesiculata (Townsend)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northeast).

## PHASIINAE

#### Catharosiini

Catharosia calva (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Texas).

#### Cylindromyiini

*Besseria anthophila* (Loew) Distribution. Nearctic: Canada (N.W.T., Prairies [incl. new for Saskatchewan], Ontario), USA (Alaska). Palaearctic: widespread.

Besseria brevipennis (Loew)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Southeast).

#### Cylindromyia (Calocyptera) intermedia (Meigen)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico). Palaearctic: widespread.

*Cylindromyia (Cylindromyia) alticola* Aldrich Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Northern Rockies, Southwest, Great Plains).

*Cylindromyia (Cylindromyia) binotata* (Bigot) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

## Cylindromyia (Cylindromyia) decora Aldrich Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA

(Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Greater Antilles (Haiti, Jamaica), Middle America (Mexico).

## Cylindromyia (Cylindromyia) euchenor (Walker)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

#### *Cylindromyia (Cylindromyia) fumipennis* (Bigot) Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

*Cylindromyia (Neocyptera) compressa* Aldrich Distribution. Nearctic: Canada (Prairies), USA (Northern Rockies, Southwest, Great Plains, Northeast).

#### Hemyda aurata Robineau-Desvoidy

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Gymnosomatini

#### Euclytia flava (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Labrador), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

#### Gymnoclytia dubia (West)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (?California, Texas, Northeast).

#### Gymnoclytia immaculata (Macquart)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (all mainland except Alaska). Neotropical: Greater Antilles (Jamaica), Middle America (Mexico).

#### Gymnosoma amplifrons (Brooks)

Distribution. Nearctic: Canada (Prairies), USA (Southwest).

#### Gymnosoma filiola Loew

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Gymnosoma fuliginosum Robineau-Desvoidy

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Greater Antilles (Puerto Rico), Middle America (Mexico).

#### Gymnosoma occidentale Curran

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

#### Gymnosoma par Walker

Distribution. Nearctic: Canada (Yukon, Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Northern Rockies, Great Plains, Northeast, Southeast).

#### Leucostomatini

*Clairvillia timberlakei* (Walton) Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas).

#### Leucostoma simplex (Fallén)

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: South America (Argentina, Chile). Widespread in Old World except for Oriental Region.

## Phasiini

#### Phasia aeneoventris (Williston)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Southeast). Neotropical: Middle America (Mexico).

#### Phasia albipennis (Brooks)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest). Type locality of *Paraphasia albipennis* Brooks: Canada, Sask., Saskatoon.

#### Phasia aldrichii (Townsend)

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico). Palaearctic: Europe, Kazakhstan, Mongolia, Russia.

#### Phasia aurulans Meigen

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, Northeast, Southeast). Palaearctic: Europe, Kazakhstan, Russia, Korean Peninsula, Japan.

#### Phasia fenestrata (Bigot)

Distribution. Nearctic: Canada (N.W.T., Prairies, Ontario, Québec), USA (Southwest, Great Plains, Northeast, Southeast).

#### Phasia purpurascens (Townsend)

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Phasia robusta (Brooks)

Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas).

## Strongygastrini

#### Opesia americana (Bigot)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast).

#### Strongygaster didyma (Loew)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec), USA (Alaska, California, Southwest, Great Plains, Northeast).

#### Strongygaster triangulifera (Loew)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: eastern Lesser Antilles (Dominica), Middle America (Mexico), South America (Argentina, Brazil, Chile).

## TACHININAE

## Ernestiini

Cleonice bigelowi (Curran)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario), USA (Alaska, California, Northeast).

#### Cleonice setosa (Reinhard)

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Great Plains, Southeast).

#### *Eloceria nigra* (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Northeast, Southeast).

#### Gymnocheta frontalis Brooks

Distribution. Nearctic: Canada (B.C., Prairies), ?USA (questionable record from New Mexico cited in O'Hara & Wood 2004: 240).

*Hyalurgus clistoides* (Townsend) Distribution. Nearctic: Canada (Prairies, Ontario), USA (Great Plains, Northeast).

Linnaemya (Linnaemya) comta (Fallén) Distribution. Nearctic: Canada (all), USA (all). Neotropical: Middle America (Honduras, Mexico), South America (Chile, Peru). Palaearctic: widespread. Oriental: China.

Linnaemya (Ophina) anthracina Thompson Distribution. Nearctic: Canada (Yukon, N.W.T., Prairies, Ontario, Québec).

*Linnaemya (Ophina) glauca* (Brooks) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, Northern Rockies, Southwest, Great Plains, Northeast).

*Linnaemya (Ophina) nigrescens* Curran Distribution. Nearctic: Canada (all).

*Linnaemya (Ophina) tessellata* (Brooks) Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

#### Linnaemya (Ophina) varia Curran

Distribution. Nearctic: Canada (Yukon, N.W.T., Prairies, Ontario, Québec, Labrador), USA (Alaska). Palaearctic: Russia, Japan.

Melanophrys flavipennis Williston Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Melanophrys insolita (Walker)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Panzeria alberta (Curran)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan]), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Northeast).

#### Panzeria aldrichi (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Southwest, Great Plains, Northeast).

#### Panzeria ampelus (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

#### Panzeria arcuata (Tothill)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario), USA (Alaska, Great Plains, Northeast, Southeast).

## Panzeria bicarina (Tothill)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Maritimes, Labrador), USA (Northern Rockies, Southwest, Great Plains).

#### Panzeria campestris (Curran)

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Northeast, Southeast).

#### Panzeria fasciventris (Curran)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (California, Southwest, Great Plains, Northeast).

#### Panzeria flavicornis Brauer

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

*Panzeria frontalis* (Tothill) Distribution. Nearctic: Canada (all), USA (Alaska, Northern Rockies, Southwest, Northeast).

*Panzeria genalis* (Coquillett) Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan]), USA (California, Northern Rockies, Southwest).

#### Panzeria hirta (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Southwest).

*Panzeria incisa* (Tothill) Distribution. Nearctic: Canada (B.C., new for Prairies [Saskatchewan], Ontario, Québec), USA (Northeast, Northern Rockies).

*Panzeria johnsoni* (Tothill) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (California, Southwest, Northeast).

*Panzeria longicarina* (Tothill) Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Southwest).

Panzeria manitoba (Brooks) Distribution. Nearctic: Canada (Prairies), USA (Northeast).

Panzeria nigrocornea (Tothill)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Labrador), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest).

#### Panzeria nigropalpis (Tothill)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northeast, Southeast).

#### Panzeria platycarina (Tothill)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

Panzeria setifrons (Brooks) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Northern Rockies).

*Panzeria sulcocarina* (Tothill) Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Ontario, Québec), USA (Alaska, Pacific Northwest, California, Southwest, Northeast).

Panzeria triangularis (Curran) Distribution. Nearctic: Canada (Yukon, Prairies, Ontario, Newfoundland), USA (California, Southwest, Northeast, Southeast).

#### Graphogastrini

*Graphogaster alberta* (Curran) Distribution. Nearctic: Canada (Yukon, N.W.T., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

*Graphogaster brunnea* (Brooks) Distribution. Nearctic: Canada (B.C., Prairies), USA (Northern Rockies, Southwest, Northeast).

*Graphogaster fuscisquamis* (Brooks) Distribution. Nearctic: Canada (Prairies).

*Graphogaster grandis* (Brooks) Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, Northern Rockies, Southwest). *Graphogaster macdunnoughi* (Brooks) Distribution. Nearctic: Canada (N.W.T., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Northeast).

*Graphogaster orientalis* (Brooks) Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Northeast).

*Graphogaster pollinosa* (Brooks) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Southwest).

*Graphogaster pseudonuda* (Brooks) Distribution. Nearctic: Canada (B.C., Prairies), USA (Northern Rockies).

*Graphogaster psilocorsiphaga* (Brooks) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Alaska, Northeast).

*Phytomyptera aenea* (Coquillett)

Distribution. Nearctic: Canada (Yukon, Prairies, Ontario, Québec, Maritimes), USA (California, Southwest). Neotropical: Middle America (Mexico).

#### Phytomyptera longicornis (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

Phytomyptera melissopodis (Coquillett)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (California, Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

*Phytomyptera nigra* (Brooks) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Northeast, Southeast).

*Phytomyptera palpigera* (Coquillett) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast, Southeast).

*Phytomyptera ruficornis* (Greene) Distribution. Nearctic: Canada (Prairies), USA (Southwest, Great Plains, Northeast, Florida).

*Phytomyptera vitinervis* (Thompson) Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Maritimes, Labrador), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida).

## Leskiini

*Clausicella opaca* (Coquillett) Distribution. Nearctic: Canada (Yukon, Prairies), USA (California, Southwest, Great Plains, Texas).

*Drepanoglossa lucens* Townsend Distribution. Nearctic: Canada (Yukon, Prairies), USA (California, Northern Rockies, Southwest, Great Plains).

Drepanoglossa tenuirostris (Reinhard) Distribution. Nearctic: Canada (Prairies), USA (Northern Rockies, Northeast).

Solieria piperi (Coquillett) Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Ontario, Québec, Newfoundland), USA (Pacific Northwest, California, Southwest).

## Megaprosopini

Microphthalma disjuncta (Wiedemann) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (all mainland except Alaska). Neotropical: Middle America (Guatemala, Mexico).

*Microphthalma michiganensis* (Townsend) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Southwest, Great Plains, Texas, Northeast).

*Microphthalma ruficeps* Aldrich Distribution. Nearctic: Canada (Prairies), USA (Southwest, Great Plains, Texas, Southeast).

## Minthoini

*Paradidyma melania* (Townsend, 1919) Distribution. Nearctic: Canada (Prairies), USA (California, Southwest, Great Plains, Northeast, Southeast, Florida).

#### Neaerini

Neaera leucoptera (Johnson) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Southwest, Great Plains, Northeast).

#### Nemoraeini

Xanthophyto "antennalis" (Townsend) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (California, Southwest, Northeast, Southeast). Neotropical: Middle America (Mexico).

## Pelatachinini

*Pelatachina limata* Coquillett Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

#### Polideini

Dichocera lyrata Williston

Distribution. Nearctic: Canada (B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

Euscopolia dakotensis Townsend

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Pacific Northwest, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

Homalactia harringtoni (Coquillett)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast).

## Hystricia abrupta (Wiedemann)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

## Lydina americana (Townsend)

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

## Lydina areos (Walker)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Lypha cristiverpa O'Hara

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec), USA (Great Plains, Texas, Northeast).

## Lypha fumipennis Brooks

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Northern Rockies, Great Plains, Northeast, Southeast).

#### Lypha parva Brooks

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Great Plains).

#### Lypha setifacies (West)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (California, Great Plains, Northeast).

*Mauromyia brevis* (Coquillett) Distribution. Nearctic: Canada (Prairies), USA (Great Plains, Northeast, Southeast, Florida).

## Mauromyia finitina Reinhard

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Great Plains).

#### Micronychia maculipennis (Aldrich)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Québec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, Northeast).

#### Siphonini

#### Actia diffidens Curran

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Texas, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Actia interrupta Curran

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Northeast, Southeast).

#### Ceromya balli O'Hara

Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Great Plains, Northeast).

#### Ceromya bicolor (Meigen)

Distribution. Nearctic: Canada (all [incl. Saskatchewan]), USA (Southwest, Great Plains, Northeast). Palaearctic: Europe, Transcaucasia, Russia, Korean Peninsula, China.

#### Ceromya ontario (Curran)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Great Plains, Northeast, Southeast).

#### Siphona (Siphona) cristata (Fabricius)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Southwest). Palaearctic: widespread. Oriental: China, Taiwan.

#### Siphona (Siphona) hokkaidensis Mesnil Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, Northeast). Palaearctic: Europe, Russia, Japan.

Siphona (Siphona) illinoiensis Townsend Distribution. Nearctic: Canada (Prairies), USA (Great Plains, Northeast, Southeast).

#### Siphona (Siphona) intrudens (Curran) Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, California, Great Plains, Texas, Northeast, Southeast).

#### Siphona (Siphona) lutea (Townsend) Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec), USA (Northeast).

#### Siphona (Siphona) maculata Staeger Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, Southwest, Great Plains, Northeast). Palaearctic: Europe, Transcaucasia, Russia.

## Siphona (Siphona) medialis O'Hara

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

#### Siphona (Siphona) multifaria O'Hara

Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Northeast, Southeast, Florida). [Note: *Siphona multifaria* is likely a species complex based on DNA barcoding of CNC specimens.]

## Tachinini

Adejeania vexatrix (Osten Sacken)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest). Neotropical: Middle America (Mexico).

#### Archytas (Archytas) apicifer (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: widespread.

#### Archytas (Archytas) californiae (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes), USA (all mainland except Alaska). Neotropical: Middle America (Mexico).

Archytas (Nemochaeta) aterrimus (Robineau-Desvoidy) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: Middle America (Mexico).

#### Archytas (Nemochaeta) lateralis (Macquart)

Distribution. Nearctic: Canada (B.C., Prairies), USA (California, Northern Rockies, Southwest, Great Plains, Texas, Southeast, Florida). Neotropical: Middle America (Mexico).

#### Copecrypta ruficauda (Wulp)

Distribution. Nearctic: Canada (Prairies, Ontario, Québec), USA (Southwest, Great Plains, Texas, Northeast, Southeast, Florida). Neotropical: southern Lesser Antilles (Trinidad & Tobago), Middle America (Mexico).

#### Epalpus signifer (Walker)

Distribution. Nearctic: Canada (B.C., Prairies, Ontario, Québec, Maritimes, Newfoundland), USA (all mainland except Alaska).

#### Pararchytas decisus (Walker)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Texas, Northeast). Neotropical: Middle America (Mexico).

#### Pararchytas hammondi Brooks

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario), USA (Pacific Northwest, Great Plains, Northeast, Southeast).

#### Peleteria alberta Curran

Distribution. Nearctic: Canada (Prairies), USA (Pacific Northwest, California).

#### Peleteria anaxias (Walker)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Southwest, Northeast, Southeast).

#### Peleteria angulata Curran

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Southwest).

#### Peleteria biangulata Curran

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

Peleteria bryanti Curran

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Ontario), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Southeast).

#### Peleteria clara Curran

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest).

Peleteria conjuncta Curran

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan]), USA (Northern Rockies, Southwest).

#### Peleteria cornigera Curran

Distribution. Nearctic: Canada (B.C., Prairies), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest).

#### Peleteria cornuta Curran

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, Northern Rockies, Southwest). Neotropical: Middle America (Mexico).

#### Peleteria cornuticaudata Curran

Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies), USA (Pacific Northwest, Northern Rockies, Southwest).

#### Peleteria curriei (Townsend)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies), USA (California).

Peleteria haemorrhoa (Wulp)

Distribution. Nearctic: Canada (B.C., Prairies [incl. new for Saskatchewan], Ontario, Québec, Maritimes), USA (California, Southwest, Great Plains, Northeast, Southeast).

#### Peleteria iterans (Walker)

Distribution. Nearctic: Canada (Yukon, B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast). Neotropical: Middle America (Mexico).

#### Peleteria malleola (Bigot)

Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Texas, Northeast). Neotropical: Middle America (Mexico).

#### Peleteria neglecta (Townsend)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Pacific Northwest, California, Northern Rockies, Southwest).

#### Peleteria obsoleta Curran

Distribution. Nearctic: Canada (B.C., Prairies), USA (Northern Rockies, Southwest, Texas). Neotropical: Middle America (Mexico, Costa Rica).

#### Tachina (Nowickia) dakotensis (Townsend)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Labrador), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast). Neotropical: Middle America (Mexico).

#### Tachina (Nowickia) garretti Arnaud

Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario, Québec, Maritimes), USA (Alaska, Pacific Northwest, Northern Rockies, Southwest, Northeast).

#### Tachina (Nowickia) hispida (Tothill)

Distribution. Nearctic: Canada (N.W.T., B.C., Prairies, Ontario, Québec, Nova Scotia, Newfoundland), USA (Alaska, Pacific

Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast), Greenland. [This species was listed as *Tachina* (*Nowickia*) *ampliforceps* (Rowe) in the Tachinidae of the Maritimes (O'Hara 2023) but the name has been corrected here to *T. hispida*, a senior synonym.]

*Tachina (Nowickia) latiforceps* (Tothill) Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Québec), USA (Northern Rockies, Southwest, Northeast).

Tachina (Nowickia) marklini Zetterstedt Distribution. Nearctic: Canada (Yukon, N.W.T., B.C., Prairies, Québec, Labrador), USA (Alaska, Pacific Northwest, Northern Rockies, Southwest, Northeast). Palaearctic: widespread.

Tachina (Nowickia) piceifrons (Townsend) Distribution. Nearctic: Canada (N.W.T., B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast, Southeast).

*Tachina (Rhachogaster) algens* Wiedemann Distribution. Nearctic: Canada (all), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast).

*Tachina (Rhachogaster) latianulum* (Tothill) Distribution. Nearctic: Canada (B.C., Prairies [incl. Saskatchewan], Ontario, Québec, Maritimes, Newfoundland), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

*Tachina (Rhachogaster) latifrons* (Tothill) Distribution. Nearctic: Canada (N.W.T., Prairies), USA (Northern Rockies, Southwest, Great Plains, Northeast).

*Tachina (Rhachogaster) rostrata* (Tothill) Distribution. Nearctic: Canada (Yukon, B.C., Prairies, Ontario), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest, Great Plains).

## Unplaced genus of Tachininae

*Eulasiona cinerea* (Curran) Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Great Plains, Northeast, Southeast).

#### Unplaced tribes of Tachinidae Imitomviini

#### Imitomyia sugens (Loew)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Great Plains, Northeast). Type locality of *Saskatchewania canadensis* Smith, a synonym of *Imitomyia sugens*, is Canada, Sask., Farwell Creek.

#### Macquartiini

*Macquartia albertana* (Reinhard) Distribution. Nearctic: Canada (Prairies).

Macquartia catskillensis (West) Distribution. Nearctic: Canada (Yukon, N.W.T., Prairies [incl. Saskatchewan], Ontario), USA (Northeast).

*Macquartia erythrocera* (Reinhard) Distribution. Nearctic: Canada (Prairies, Ontario, Québec, Maritimes), USA (Southeast).

## **Myiophasiini**

*Gnadochaeta clistoides* (Townsend) Distribution. Nearctic: Canada (Prairies), USA (California, Southwest, Great Plains, Texas, Northeast).

Gnadochaeta fulvicornis (Zetterstedt) Distribution. Nearctic: Canada (Yukon, N.W.T., Prairies, Québec), USA (Alaska). Palaearctic: Europe, Mongolia, Russia.

Gnadochaeta globosa (Townsend)

Distribution. Nearctic: Canada (Prairies, Ontario), USA (Southwest, Texas, Northeast, Southeast, Florida). Neotropical: southern Lesser Antilles (Trinidad & Tobago), Middle America (Mexico).

Gnadochaeta lasia (Reinhard)

Distribution. Nearctic: Canada (B.C., Prairies), USA (Alaska, Pacific Northwest, California, Northern Rockies, Southwest).

Gnadochaeta setigera (Townsend)

Distribution. Nearctic: Canada (Prairies [incl. Saskatchewan]), USA (Pacific Northwest, California, Northern Rockies, Southwest, Texas).