

A Snapshot of Butterflies in Southeast Manitoba

**A citizen science project to record butterfly and skipper
species and numbers (2015-2019)**

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Cover photo: Red-disked Alpine, a boreal specialty, at Jessica Lake, Whiteshell Provincial Park, 29 May 2014; Photo by Larry de March

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1. Introduction

Five full field seasons have now passed in a five-year project to record butterfly species and numbers in southeast Manitoba. It started with records reported to the Yahoo discussion group Manitobanaturetalk, but later included sightings from group field trips and from individuals who contributed sightings directly to the authors.



*Butterfly enthusiasts concentrate on a basking Northern Blue on a trail near Chatfield, 29 June 2016.
Photo by Garry Budyk.*

Manitobanaturetalk was one of over ten million discussion boards once hosted by Yahoo! Inc. It was set up in 2006 for sharing information on all Manitoba natural history subjects after the success of Manitobabirds, which had been set up six years earlier (membership of more than 700). Although Manitobanaturetalk garnered less interest than did Manitobabirds (64 members and, as is typical of online forums, about 10-15% very active) those who participated actively were enthusiastic, knowledgeable naturalists eager to share sightings both in their posts and in the field. Yahoo closed down most features of their groups at the end of 2019, but a number of groups including Manitobanaturetalk have migrated to groups.io (<https://groups.io/g/manitobanaturetalk/topics>).

Manitobanaturetalk proved to be an excellent forum for collecting data and photographs of the diverse flora and fauna of Manitoba. During the existence of Manitobanaturetalk, there have been numerous postings of arthropods, rather fewer of mammals, reptiles and amphibians, and even fewer of fungi and plants. Butterfly and dragonfly records and their photographs were particularly numerous, likely because of their relatively large size and visibility, and they generated considerable discussion.

In 2014, we kept a casual list of “first-date-of-the-year” records for any butterfly species that were reported. By the end of the year, we had records for 83 species. The enthusiasm of Manitoban naturalists encouraged us to record all butterfly sightings the following year and then to continue recording for a further four years.



Common milkweed is well known as a larval food plant for Monarchs, but is also a nectar source for many other butterflies, like this group west of Milner Ridge on 16 July 2019. Clockwise from upper right: Atlantis Fritillary; two male Northern Crescents (wings closed and open); unidentified crescent (probably an aberrant female Northern); Acadian Hairstreak. Photo by Peter Taylor.

The data included species, numbers of individuals, observation dates, locations, and observer names. Photographic documentation was obtained for all species, and for multiple observations in most cases. Excluding numbers of Cabbage White (*Pieris rapae*), whose numbers were sometimes described as “in the thousands”, 5575 individuals and 84 species of butterflies were reported in 2015; 6509 individuals of 93 species in 2016; 15,992 individuals of 88 species in 2017; 8790 individuals of 84 species in 2018; and 9844 individuals of 86 species in 2019, for a combined total of 107 species, comprised of 46,710 individual insects.

To some extent the numbers of species depended on observers’ travel history and habitat coverage. Consequently, we decided that we would restrict our area of interest to the region of greatest coverage, which was southeast Manitoba, and the results reported below reflect that decision. A few of the accompanying photographs were taken outside this area.

The study area was limited by the Ontario and U.S. boundaries to the east and south, respectively, and in the north by the latitude of Bloodvein. The western boundary is an irregular line that runs from Bloodvein to Watchorn in the Interlake, then along the eastern and southern shores of Lake Manitoba to Delta, and finally south to the international border.

This series of short articles first appeared as a monthly series in the online publication *Nature Manitoba News* in 2020 (<https://www.naturemanitoba.ca/newsletter>). Each article (Sections 2 to 10) covers a different taxonomic unit or part thereof, depending on the number of species in that unit. They cover swallowtails (Papilionidae) and whites & sulphurs (Pieridae), gossamer wings (Lycaenidae), brushfoots (Nymphalidae) in five parts, and skippers (Hesperiidae) in two parts. The articles do not follow a strict taxonomic order. While emphasizing common species, we have tried to mention every butterfly and skipper known to have occurred at any time within our study area.

As well as furnishing a lot of data and photographs, our field trips have left us with many indelible memories, especially from the period of peak butterfly diversity around the beginning of July. A combination of sunshine after recent rain with abundant roadside flowers can yield some fine spectacles of assorted puddling and nectaring butterflies along little-used rights-of-way. Provincial roads west of Chatfield (PR 419) and south of East Braintree (PR 308), and gravel roads in and near Agassiz Provincial Forest, were especially rewarding.



These White Admirals and Canadian Tiger Swallowtails are “puddling”, i.e., drinking, in this case from wet sand in the Sandilands area, 15 June 2012. Puddling also occurs on dung and carrion. Butterflies obtain minerals and amino acids from this activity. Photo by Larry de March.

2. Papilionidae (Swallowtails) and Pieridae (Whites and Sulphurs)

(Richard Staniforth)

Old World Swallowtail (*Papilio machaon*, 3 reported)
Black Swallowtail (*Papilio polyxenes*, 284 reported)
Canadian Tiger Swallowtail (*Papilio canadensis*, 2015 reported)
Clouded Sulphur (*Colias philodice*, thousands reported)
Orange Sulphur (*Colias eurytheme*, 482 reported)
Pink-edged Sulphur (*Colias interior*, 395 reported)
Large Marble (*Euchloe ausonides*, 134 reported)
Mustard White (*Pieris oleracea*, 154 reported)
Cabbage White (*Pieris rapae*, thousands reported)
Checkered White (*Pontia protodice*, 5 reported)
Western White (*Pontia occidentalis*, 22 reported)

Giant Swallowtail (*Papilio cresphontes*, 0 reported)
Pipevine Swallowtail (*Battus philenor*, 0 reported)
Giant Sulphur (*Colias gigantea*, 0 reported)
Christina Sulphur (*Colias christina*, 0 reported)
Mexican Sulphur (*Eurema mexicana*, 0 reported)
Dainty Sulphur (*Nathalis iole*, 0 reported)

Our three kinds of swallowtails are part of a mostly tropical family of very showy butterflies (Papilionidae) and include the largest butterfly in the world, the Queen Alexandra's Birdwing butterfly of Papua New Guinea. The Old World Swallowtail just reaches southward into the northern edge of our area, where we have only three records. It is generally uncommon anywhere in our province.



Black Swallowtail male on Dandelion - Ste Geneviève, 16 May 2012. Photo by Richard Staniforth.

The Black Swallowtail is more familiar to us in the south. It has two peaks of abundance, in early June and in late July, indicating two broods. Its yellow-and-black banded caterpillars feed on plants of the carrot family (Apiaceae), such as carrot, celery, celeriac, dill, fennel, parsnip, and parsley. The presence of these magnificent insects is well worth the loss of a few vegetable leaves in our yards! The Kahli Swallowtail, formerly treated as a separate species (*Papilio kahli*), is now believed to be a hybrid between Old World and Black Swallowtails.

The Canadian Tiger Swallowtail is one of the largest North American butterflies, though smaller than its close relative the Eastern Tiger Swallowtail. It has black-striped yellow wings and is our commonest swallowtail, often gathering in large numbers at rain puddles on gravel roads in forest regions. Elsewhere, such as in gardens and parks, its large size, yellow coloration, and distinctive flight pattern of flap, flap, glide make it easy to identify. The Pipevine Swallowtail and Giant Swallowtail are two southern species that have previously occurred as rare vagrants in southeast Manitoba.



*Canadian Tiger Swallowtail nectaring on early dandelions, Reed Lake, Grass River Provincial Park, 3 June 2013.
Photo by Richard Staniforth.*

Manitoba's yellow (sulphur) and white butterflies belong to one family, the Pieridae; we had three sulphur and five white species reported within our area in southeast Manitoba. Members of this butterfly family usually perch with their wings closed over their thoraces and abdomens. The three common sulphurs are difficult to distinguish from each other and usually require a very close observation or photograph.

The Clouded Sulphur and Orange Sulphur are most often seen over fields of legumes, such as clover (*Trifolium*) or alfalfa (*Medicago sativa*), on which the caterpillars feed. Orange Sulphurs are seen later in the summer because they depend to some extent on immigrants arriving from the south.



Pink-edged Sulphur male on Red Clover - St. Labre, 5 July 2014. Photo by Richard Staniforth.

The Pink-edged Sulphur is found in boreal regions and over the Canadian Shield, where its caterpillars feed on various species of blueberries (*Vaccinium*, section *Cyanococcus*), and not legumes as do the previous two species. It is poorly named because other species also may have pink edges to their wings, especially when freshly emerged from their chrysalids. This species flies mostly in the month of July. Two additional species, the Giant Sulphur and the Christina Sulphur, have been recorded in locations near the boundaries of our area in southeast Manitoba, but none was reported during our survey. Two southern species, the Mexican Sulphur and the Dainty Sulphur, have also been recorded in the past as rare vagrants. When seeking the latter species, beware of undersized individuals of the Clouded Sulphur!

Our five species of white butterflies test our identification skills. The commonest is the Cabbage White, which may appear in thousands over fields of crucifers (*Brassicaceae*), such as cabbages and canola on which the caterpillars feed. They cause significant damage to garden crops such as cabbages, kale, Brussels sprouts and kohlrabi by leaving an unsightly mess of frass (droppings) and damaged foliage. This species and the European Skipper are the only non-native butterflies in Manitoba; in Britain they are known as the “Small White” and “Essex Skipper”. Though much less common as a rule, the Western and Checkered Whites can also damage crops at times. The Mustard White feeds on legumes but is a woodland butterfly; its cruciferous larval food plants are Bitter and Rock Cresses (*Cardamine* and *Arabis* species). The last of our “whites” is the beautiful Large Marble, so named because of its “marbling” of green markings on the undersides of the wings. Like the Mustard White, this spring-flying species feeds on wild cruciferous plants but is not a pest of crops.



Western White female at Interlake Forest Centre, Hodgson, 31 August 2011. Photo by Richard Staniforth.



Large Marble nectaring on Hawksbeard near Mafeking, 24 June 2014. Photo by Richard Staniforth.

3. Lycaenidae (Gossamer-winged Butterflies)

(Deanna Dodgson)

Harvester (*Feniseca tarquinius*, 91 reported)
Gray Copper (*Lycaena dione*, 1 reported)
Bronze Copper (*Lycaena hyllus*, 30 reported)
Bog Copper (*Lycaena epixanthe*, 1 reported)
Dorcas Copper (*Lycaena dorcas*, 120 reported)
Purplish Copper (*Lycaena helloides*, 83 reported)
Acadian Hairstreak (*Satyrrium acadica*, 12 reported)
Coral Hairstreak (*Satyrrium titus*, 46 reported)
Edwards' Hairstreak (*Satyrrium edwardsii*, 12 reported)
Banded Hairstreak (*Satyrrium calanus*, 31 reported)
Striped Hairstreak (*Satyrrium liparops*, 56 reported)
Brown Elfin (*Callophrys augustinus*, 102 reported)
Hoary Elfin (*Callophrys polios*, 786 reported)
Henry's Elfin (*Callophrys henrici*, 17 reported)
Eastern Pine Elfin (*Callophrys niphon*, 362 reported)
Gray Hairstreak (*Strymon melinus*, 2 reported)
Eastern Tailed Blue (*Cupido comyntas*, 28 reported)
Western Tailed Blue (*Cupido amyntula*, 171 reported)
Northern [Spring] / Summer Azure (*Celastrina lucia / neglecta*, 1280 reported)
Silvery Blue (*Glaucopsyche lygdamus*, 1759 reported)
Northern Blue (*Plebejus idas*, 92 reported)
Melissa Blue (*Lycaeides melissa*, 22 reported)
Greenish Blue (*Icaricia saepiolus*, 20 reported)

American Copper (*Lycaena phlaeas*, 0 reported)
Western Pine Elfin (*Callophrys eryphon*, 0 reported)
Arctic Blue (*Agriades glandon*, 0 reported)
Reakirt's Blue (*Echinargus isola*, 0 reported)

Over 7000 mostly small species of Lycaenidae are found worldwide, with four subfamilies found in Manitoba: harvester (with only one species), coppers, hairstreaks (including elfins), and blues, for a combined total of at least 27 species. The Lycaenidae are brown, orange, or metallic blue or purple dorsally and often have elegantly patterned ventral wing surfaces. Several species have tails on the lower hindwing margins and all species have banded forelegs. Some species are fond of sipping moisture and minerals from damp soil, while others may feed on carrion, dung or rotting fruit. Many are commonly seen nectaring or basking in sunny areas. Basking occurs with wings fully to partially open, or with the butterfly laterally positioned to the sun with wings folded over the back. Hairstreaks (including elfins) and blues rub their hindwings together when at rest, a strategy thought to divert predatory attention away from more vulnerable body parts. Both adult and larval diets vary widely. Several species have multiple generations per year and most are locally distributed.



The Hoary Elfin gets its common name from the whitish scales along the margins of the ventral fore and hindwings. Mars Sand Hills, 5 May 2011. Photo by Deanna Dodgson.



The Eastern Pine Elfin and its Western counterpart are the most distinctively marked elfins. This Eastern individual was imbibing moisture in Agassiz Provincial Forest, 27 May 2019. Photo by Deanna Dodgson.

The mainly brown and inconspicuous elfins, found in or near dry forest openings, open coniferous forests and/or bogs, are most active in May. During the survey period, Hoary Elfins were found in more locations than the superficially similar Brown Elfin, and in much greater numbers. This may be partly the result of the affinity of the Brown Elfin for wetter, often inaccessible habitats. Both of these species are dependent as larvae on heath plants and thus are often seen together as adults. The rarely encountered Henry's Elfin has stubby tails on the hindwing margins but can be mistaken for the former two species, particularly when worn; larvae reportedly feed on blueberry. The Eastern and Western Pine Elfins bear complex ventral wing patterns, unlike their more plainly marked relatives. The Eastern Pine Elfin can be fairly common in the study region, where the larvae feed on young pine needles. Its western counterpart was not detected (existing Manitoba records are from northern regions). The abundance of these species was found to vary markedly from season to season, but this may be due in part to sampling efforts.

The uniquely patterned Harvester is found near forested streams or rivers, often near alders. Its larvae feed on insects (especially Woolly Alder Aphids, *Prociphilus tessellatus*), making this our only carnivorous butterfly caterpillar. In Manitoba, the spring flight is more robust than the summer one, and adults are most often seen in late May to mid-June.



*Harvesters are most often seen while puddling. Brightstone Provincial Forest, 18 May 2016.
Photo by Deanna Dodgson.*

Various blues, so named for the metallic blue scales on the dorsal surface of the males' wings (females are generally brown above), fly from very early in the spring until the autumn. Blues are distinctively marked on the undersides, with dark spots on a whitish background, and sometimes also with orange spots or bands along the wing margins; two species sport hindwing tails. Caterpillars of most species are legume feeders. May is the peak flight period of the Spring

[Northern] Azure, one of the most numerous and widespread butterflies in our region. Of all blues, the Spring Azure has the most varied larval diet, including dogwood (*Cornus*), blueberry, and wild cherry (*Prunus*) – especially the flower buds. This butterfly is part of a species complex (including the Summer Azure, which is much less numerous in Manitoba and has a later flight period) whose taxonomic status is uncertain. We chose to combine total sightings of these two species, because the situation is complicated by a small summer flight of Spring Azures. The main Silvery Blue flight is in the first half of June, when it is readily found in various habitats. Eastern and Western Tailed Blues, difficult at times to identify to species, have two or more generations per season. Western Tailed Blues appeared to be more numerous in the southeast, appearing in early May and peaking by mid-June (peak season for the Eastern species is in July). Melissa and Northern Blues, which also present identification challenges, make their main appearances in June and July respectively, the former in dry prairie habitats and the latter in boreal areas where heaths abound. Once numerous in southern Manitoba, Greenish Blues were observed in small numbers (records in early June); this species appears to be much more common in northern localities such as Thompson. No Arctic Blues were found during our study, though there are historic records for the Winnipeg area. Reakirt's Blue is an extremely rare stray to Manitoba from the south.

Mid to late July is the optimum time to see coppers, most males of which have iridescent purple dorsal wing surfaces. The Dorcas and Bog Coppers favour peatland areas where their food plants are found: Shrubby Cinquefoil (*Dasiphora fruticosa*) and *Vaccinium* cranberries, respectively). A small group of observers were delighted when Peter Taylor found a lone Bog Copper in the Milner Ridge area.

The larger Gray and Bronze Coppers bear a strong resemblance to each other and are both found near sloughs, ditches and in marshy areas; docks (*Rumex*) are larval hosts for both species, with the latter also reported on knotweed (*Polygonum*). Only one Gray Copper was reported during the survey period, in a Winnipeg yard, but the species is likely more common than this lone record suggests. Of the five copper species found in southeast Manitoba, the Purplish Copper is the only one with two generations per year, with numbers peaking in late July and again more modestly in late August. This species wanders widely in search of nectar sources and may be found in open areas well into the autumn. Caterpillars feed on various dock and knotweed species. The American Copper has apparently been recorded once at Winnipeg, and should be sought in weedy “waste ground”, while its Arctic subspecies *feildeni* approaches the northern boundary of Manitoba.

Best observed while nectaring, hairstreaks are most common in mid to late July. The name refers to the filamentous tails found on the hindwing margins of numerous species within this subfamily. Fond of wet areas where shrubby willows (*Salix*) grow, Acadian Hairstreaks were rarely reported during our survey. Small populations may have escaped detection, however, as adults often remain in vegetation. The Banded and Edwards' Hairstreaks live in dry areas with stands of Bur Oak (*Quercus macrocarpa*). Edwards' Hairstreaks were reported less often than the former species, perhaps because of their sedentary nature and a penchant for perching out of sight on host trees. The Striped and Coral Hairstreaks were found more often than their cousins. Larvae of the Striped Hairstreak feed on plants in multiple families; not surprisingly, Striped Hairstreak was the most commonly encountered species, even found in large urban centres such

as Winnipeg. The tailless Coral Hairstreak can sometimes be seen in small groups, particularly at favoured nectar sources, in moist or dry, sandy habitats where the food plants (wild plums and cherries) are present. The Gray Hairstreak, a vagrant to Manitoba, was found on two occasions, one by Peter Taylor near Pinawa and the other by Jason Gibbs in Winnipeg.



The best occasions in which to observe the delicate Western Tailed Blue are while it is puddling like this one at Sandridge Wildlife Management Area, 8 June 2020. Photo by Deanna Dodgson.



Two Northern Blues north of Lee Lake Provincial Wildlife Management Area, 27 June 2018. Photo by Deanna Dodgson.



*The dorsal wing pattern is the best way to differentiate the Dorcas and Purplish Coppers, which otherwise look nearly identical; the habitat where the butterfly was seen and host plant presence will also provide clues as to the butterfly's identity. This Dorcas Copper was seen in Whiteshell Provincial Forest, 2 August 2009.
Photo by Deanna Dodgson.*



Acadian Hairstreak resting in vegetation near Lauder Sand Hills, 17 July 2013. Photo by Deanna Dodgson.

4. Nymphalidae, Part 1: Fritillaries

(Peter Taylor)

Atlantis Fritillary (*Speyeria atlantis*, 1347 reported)
Northwestern Fritillary (*Speyeria hesperis*, 2 reported)
Great Spangled Fritillary (*Speyeria cybele*, 634 reported)
Aphrodite Fritillary (*Speyeria aphrodite*, 500 reported)
Meadow Fritillary (*Boloria bellona*, 443 reported)
Silver-bordered Fritillary (*Boloria selene*, 242 reported)
Arctic [Purplish] Fritillary (*Boloria chariclea*, 245 reported)
Frigga Fritillary (*Boloria frigga*, 2 reported)
Freija Fritillary (*Boloria freija*, 13 reported)
Bog Fritillary (*Boloria eunomia*, 1 reported)
Variegated Fritillary (*Euptoieta claudia*, 28 reported)

Regal Fritillary (*Speyeria idalia*, 0 reported)
Callippe Fritillary (*Speyeria callippe*, 0 reported)
Edwards' Fritillary (*Speyeria edwardsii*, 0 reported)
Mexican Fritillary (*Euptoieta hegesia*, 0 reported)

The eleven fritillary species found regularly in our area form a distinctive group within the family Nymphalidae, the brush-footed butterflies. This is the most diverse butterfly family, with over 6000 species worldwide. One of the main family characteristics is the reduced size of the



The “brush-footed” forelegs are prominent in front of the eyes of this Arctic Fritillary near Milner Ridge, 25 July 2015. Photo by Peter Taylor.

front pair of legs, which often have brush-like hairs and are curled up in front of the eyes; they have a sensory rather than walking function. Thus, these butterflies are in effect quadrupeds, though anatomically hexapods like all insects. Manitoba fritillaries are grouped mainly as greater (genus *Speyeria*) and lesser (*Boloria*), while one member of the Neotropical genus *Euptoieta*, the Variegated Fritillary, is an uncommon migrant that may turn up any time from late spring to early fall. The sole record of the closely related Mexican Fritillary was an extraordinary find at Sandy Hook in 1980.



Two Variegated Fritillaries jostle for nectar from White Sweet-Clover flowers on a windy day at Brightstone, 10 September 2016. Photo by Peter Taylor.

Greater and lesser fritillaries have wingspans mostly in the ranges 50-70 mm and 32-44 mm, respectively, making the groups fairly easy to distinguish in the field. All have intricate dorsal (upper surface) patterns of dark, checkered and linear markings and rounded spots on an orange background. The ventral (under surface) patterns are quite distinctive for the lesser fritillaries, though not always easy to see in the field, and more challenging to tell apart for the greater fritillaries.

The underwings of greater fritillaries and several of the lesser species have numerous, attractive silvery-white spots. Digital photography is a great aid to field identification, revealing for example the bluish-grey eyes of Atlantis Fritillaries (orange or brownish in most other species). All of Manitoba's greater fritillary caterpillars feed on various species of violets (*Viola*), as do Meadow and Silver-bordered Fritillary larvae, while other species have more diverse tastes.



Mating pair of Atlantis Fritillaries south of Bloodvein, 6 July 2016 (male on left). If disturbed, a male butterfly carries the female in a short flight for cover. Photo by Peter Taylor.



Sometimes the butterflies themselves get confused! Here, a male Atlantis Fritillary (right) appears to be courting a Great Spangled Fritillary, whose raised abdomen is an expression of disinterest (near Pinawa, 17 July 2018). Note the different eye colours, and the broader pale band on the Great Spangled hindwing. Photo by Peter Taylor.



This finely marked male Aphrodite Fritillary near Inwood, 24 July 2018, is easier to identify than boldly marked females, which may closely resemble Atlantis Fritillaries. Photo by Peter Taylor.

The three common greater fritillaries have a single summer flight, peaking in July, with Aphrodite Fritillary averaging slightly later than Great Spangled and Atlantis. Though they are quite common annually, 2018 was a bumper year for all three species. These widespread butterflies are often found in close proximity to each other when visiting thistles (*Asteraceae: Cardueae*), milkweed (*Asclepias*), or other abundant nectar sources, usually in or near forest settings. Aphrodite Fritillaries, however, tend to favour dry (rocky or sandy) upland habitats, while Atlantis Fritillaries prefer lower-lying, boggy areas. The Northwestern Fritillary, only found twice in our five-year survey, reaches its eastern range limit in southeast Manitoba. Three prairie species, the Regal, Callippe, and Edwards' Fritillaries, formerly occurred at least sparingly in our area but have not to our knowledge been recorded here for many years.

The two most widespread lesser fritillaries, Meadow and Silver-bordered, also tend to favour relatively dry and wet settings, respectively. Both of these species have two generations per year, with well-defined peaks in late May to early June and in July for Meadow, but with more drawn-out flight periods for Silver-bordered. All the other lesser fritillaries have one generation per year. Of these, the fairly widespread Arctic Fritillary has a late July peak and can be found in a range of both dry and wet coniferous forest settings. Formerly known as the Purple Lesser Fritillary, this distinctive southern population has only recently been classified as a subspecies of the Arctic Fritillary. The three remaining species are boreal wetland specialists that are rare and inaccessible within our area; Frigga and Freija Fritillaries peak in late May, while the Bog Fritillary should be sought in mid to late June.



Silver-bordered Fritillaries rarely pause for long in the open like this one near Milner Ridge, 12 August 2017. Photo by Peter Taylor.



This Meadow Fritillary, probing a dirt-road surface near Prawda for moisture and salt, 9 July 2016, is identifiable by its indistinct hindwing pattern and slightly angular forewing shape. Photo by Peter Taylor.

5. Nymphalidae, Part 2: Checkerspots and Crescents

(Richard Staniforth)

Baltimore Checkerspot (*Euphydryas phaeton*, 35 reported)

Silvery Checkerspot (*Chlosyne nycteis*, 6 reported)

Gorgone Checkerspot (*Chlosyne gorgone*, 89 reported)

Harris's Checkerspot (*Chlosyne harrisii*, 51 reported)

Pearl Crescent (*Phyciodes tharos*, 20 reported)

Northern Crescent (*Phyciodes cocyta*, 5421 reported)

Tawny Crescent (*Phyciodes batesii*, 37 reported)

Between 2015 and 2019, we found seven species of checkerspots and crescents in southeast Manitoba. With the exception of the striking Baltimore Checkerspot, the species look superficially quite similar to each other with their orange wings criss-crossed with black lines and patches. Their lower wing surfaces, however, are more distinct; the arrangement, numbers and shapes of silvery-white markings are clues to differentiating the species. As their name suggests, most checkerspots have a checkerboard pattern of markings on the lower surfaces of the hindwings, whereas the crescents have a single moon-shaped silver crescent near the wing edge. Checkerspots and crescents are attracted to nectar-rich flowers, but also have an affinity to animal dung and the carcasses of mammals.



Baltimore Checkerspot on a buttercup near East Braintree, 11 July 2015. Photo by Richard Staniforth.



*Harris's Checkerspot on Black-eyed Susan, showing checkered pattern underneath; near Julius, 15 July 2017.
Photo by Richard Staniforth.*



*Northern Crescent near East Braintree, 11 July 2015, showing the silver crescent on the underside of the hindwing.
Photo by Richard Staniforth.*

Caterpillars of both checkerspots and crescents have rows of branched spines along their bodies and may live in colonial webs for protection when they are young. Caterpillars of crescents feed on the foliage of various species of asters (*Aster*) whereas those of checkerspots also feed on sunflowers (*Helianthus*) and Black-eyed Susan (*Rudbeckia hirta*). The scarcity of the Baltimore Checkerspot in Manitoba may in part be related to the scarcity of the food plant of its caterpillar, the White Turtlehead (*Chelone glabra*), which itself is restricted to damp woodland edges.



Harris's Checkerspot basking in the sun near Julius, 15 July 2015. Photo by Richard Staniforth.

The Baltimore Checkerspot has a striking pattern of orange and creamy-white spots on its black wings; its unwary nature with slow, floppy flight and frequent landing allows photographs to be taken with ease. The other three checkerspots—Gorgone, Silvery, and Harris's—also have slow flights, but on warm sunny days, a combination of speed and a stealthy final approach may be required to observe and photograph them. The Gorgone Checkerspot has a spectacular series of white zig-zag markings on the lower surfaces of its hindwings. Our records of Silvery Checkerspot are too sparse to draw many conclusions, whereas the Gorgone, Harris's and Baltimore Checkerspots had distinctly different peak flight times. The Gorgone was the earliest, appearing in late May and on the wing until late June; Harris's was found between mid-June and mid-July, whereas the Baltimore had a flight period limited to July.

Sunny forest trails and flower-festooned roadsides are the habitats of the widespread Northern Crescent. This is one of the most familiar and abundant butterflies in southeast Manitoba; we may count tens, or even hundreds, of them fluttering and gliding among the asters and wild sunflowers along a country roadside. This species has two close but scarcer relatives in southeast Manitoba—the Tawny Crescent (which is more common further north) and the Pearl Crescent.



Male Northern Crescent nectar-feeding on a sunflower at Winnipeg, 26 June 2011. Photo by Richard Staniforth.



Male Tawny Crescent drinking from wet sand near St. Labre, 4 July 2014. Photo by Richard Staniforth.



Male Pearl Crescent warming in the sun at Winnipeg, 27 June 2012. Photo by Richard Staniforth.

Whereas males of all three species have wings that are primarily orange and marked by black lines and patches, they can be distinguished from each other by the degree of black markings. These markings are most extensive in the Tawny Crescent. The Northern Crescent has an open area of unmarked orange in the centre of each hindwing, which is lacking from the hindwings of the more southern and provincially uncommon Pearl Crescent. The females of these species are so similar to each other that their identification is best left to occasions when they are associated with the more identifiable males! Except for the Tawny Crescent, our species have two overlapping generations per year peaking in June and August, with some individuals flying as late as mid-September.

6. Nymphalidae, Part 3: Browns

(Richard Staniforth)

Northern Pearly-eye (*Enodia anhedon*, 878 reported)
Eyed Brown (*Satyrodes eurydice*, 359 reported)
Common Ringlet (*Coenonympha tullia*, 363 reported)
Little Wood Satyr (*Megisto cymela*, 381 reported)
Common Wood Nymph (*Cercyonis pegala*, 654 reported)
Taiga Alpine (*Erebia mancinus*, 4 reported)
Red-disked Alpine (*Erebia discoidalis*, 27 reported)
Alberta Arctic (*Oeneis alberta*, 55 reported)
Macoun's Arctic (*Oeneis macounii*, 49 reported)
Jutta Arctic (*Oeneis jutta*, 1 reported)

The “browns” or satyrs are a distinct subset of the brushfoot family and, as their common name suggests, they are mostly brown. Elsewhere in the world, there are species that are mostly white, *e.g.*, the Marbled Whites of Europe, or even iridescent blue like the huge *Morpho* butterflies of forests in Central and South America.

Most species have eyespots on their wings; in some satyrs these spots are huge, as in the spectacular owl butterflies (*Caligo*), also of Central and South America. Most browns have floppy, bouncing flights, as they fly among trees and bushes, or between tall grasses in a meadow. Only a few species visit flowers on a regular basis. When at rest, their wings are usually held in a closed posture revealing camouflage coloration on the lower ventral wing surfaces, especially those “browns” known as the arctics and alpiners. The “eye” markings on many species may lure predators away from the vulnerable head region of the insect, or perhaps frighten them completely. These eyespots are quite convincing – more than one naïve, young butterfly observer has blamed the eyespots on difficulty in approaching these insects!

The eggs of Manitoba browns are laid on the leaves of grasses and sedges. The resulting caterpillars are green or brown, tapered at each end and possess a bifid tail. The caterpillars become the hibernating stage. There is a single generation per year but a few species, notably among the arctics, take two years to complete their life cycles.

The Northern Pearly-eye is our largest satyr. It is encountered along moist forest trails where it avoids bright sunshine unless enticed by carrion, feces, or puddles of rainwater lying in the open. Otherwise, these attractive butterflies may be hard to photograph due to their fondness of perching on and even hiding behind tree trunks.

The somewhat similar but paler Eyed Brown is fond of moist grassy meadows where it may occur alongside Common Wood Nymphs. Despite its name, the Common Wood Nymph is a butterfly of fields, meadows and grassy road edges, where it is sometimes abundant during its



Northern Pearly-eyes feeding on animal scat near St. Labre, 4 July 2014. Photo by Richard Staniforth.



Common Wood Nymph, Moose Lake Provincial Park, 25th July 2014. Photo by Richard Staniforth.

flight period between late June and late August. It is certainly deserving of a name change to something like “Meadow Nymph” because it is only occasionally found in woodlands! The prominent eyespots on the upper forewings are emphasized by borders of yellowish-brown; this colour and also the foundation wing colour of dull brown are quite variable. Some butterflies have insignificant eyespots or eyespot borders, others have a general coloration anywhere between pale brown to a very dark chocolate-brown.

The Common Ringlet and the Little Wood Satyr are both on the wing during June and July but are found in different habitats. The ringlet (known as the Large Heath in England) occurs in pastures and other grassy places where it flutters for short distances before dropping back into the grass. On the other hand, the wood satyr is usually seen jauntily flying through the branches and tangles of shrubbery in woodland edges that defy anyone from following.



Common Ringlet nectaring on Oxeye Daisy at Winnipeg, 19 June 2007. Photo by Richard Staniforth.

We recorded two species of alpine (*Erebia*) and three species of arctic (*Oeneis*) butterflies during the five years of our butterfly survey. Normally butterflies of these two genera are inhabitants of arctic tundra and mountains, but a few species range south into conifer swamps or onto dry prairies hills. It is always a special day when such butterflies are spotted, since they are very locally distributed and some appear early in the season and only for a short period (*e.g.*, mostly late May to early June for the Red-disked Alpine, and mid- to late May for the Alberta Arctic).

The Red-disked Alpines were found mostly in the vicinity of Black Spruce (*Picea mariana*) – Tamarack (*Larix laricina*) – *Sphagnum* bogs in several boreal locations in southeast Manitoba, including the Gull Lake wetland. These are dark brown butterflies with a patch of dark red in the centres of their upper forewings, but they tend to look black from a distance. Four individuals of

the Taiga Alpine were observed by Peter Taylor near Milner Ridge on 19 June 2019. These butterflies are difficult to photograph because of their very dark coloration and avoidance tactics. I once tried to photograph one that repeatedly returned and perched on a whitish limestone boulder, which was terrible as a photographic backdrop for a blackish insect.



Little Wood Satyr. Living Prairie Museum, Winnipeg. 18th June 2016. Photo by Richard Staniforth.

Of the three species of arctics observed, we were able to verify that Macoun's Arctic only flew in even-numbered years in eastern Manitoba due to its synchronised, two-year life-history. It flies in odd-numbered years farther west. At first sight, this large, predominantly orange butterfly may resemble a Monarch or a Viceroy. Its habit of flying among Jack Pines and perching on tree trunks is usually sufficient to distinguish it from these unrelated species. Its flight period was restricted to May and June.

The Alberta Arctic was more frequent during odd-numbered years in southeast Manitoba. This pale brown butterfly flies up from its grassy habitat when disturbed and quickly drops down again. Once on the ground it disappears! The marbled pattern on its lower wing surfaces camouflages the butterfly very efficiently. It also has the habit of leaning toward the direction of sunshine so that only a tiny shadow is cast. Sightings of Alberta Arctics were only made in Bird's Hill Provincial Park and this may be one of the most eastern populations of this species in Canada; specimens from nearby Pine Ridge have been recognized as a distinct subspecies, *Oeneis alberta ojibwe*. Our single record of a Jutta Arctic is based on a photograph by Julie Yatsko taken on July 18, 2015 near Zhoda, and suggests the presence of a small colony of these insects in that neighborhood. This species prefers coniferous bog habitat, which is often inaccessible and was under-represented in our surveys. Therefore, for this and other bog specialists, low numbers may exaggerate apparent scarcity.



Alberta Arctic at Birds Hill Provincial Park, 12 May 2015. Photo by Richard Staniforth.



Macoun's Arctic at Mars Sand Hills, 10th June, 2016. Photo by Richard Staniforth.

7. Nymphalidae, Part 4: Anglewings, Tortoiseshells & Mourning Cloak

(Larry de March)

Question Mark (*Polygonia interrogationis*, 2 reported)
Eastern Comma (*Polygonia comma*, 203 reported)
Satyr Comma (*Polygonia satyrus*, 49 reported)
Gray Comma (*Polygonia progne*, 491 reported)
Green Comma (*Polygonia faunus*, 371 reported)
Hoary Comma (*Polygonia gracilis*, 1 reported)
Milbert's Tortoiseshell (*Aglais milberti*, 329 reported)
Compton Tortoiseshell (*Nymphalis vaualbum*, 1461 reported)
Mourning Cloak (*Nymphalis antiopa*, 961 reported)

On a warm day in early April, a welcome flash of orange could be one of our overwintering comma species. The commas, genus *Polygonia*, comprise a group of similarly marked, medium-sized orange butterflies with black spots and dark, scalloped wing margins. Eastern Comma and Question Mark have summer forms with almost completely black hindwings. Gray Comma has a summer form with a larger brown area on the hindwings. Ventrally the wings are generally mottled brown, resembling dry leaves. The common name derives from the small, white comma (or question mark) on the underside of the hindwing; its shape can be helpful in identification. *Polygonia* caterpillars are covered in sharp, branched spines.

The uncommon Question Mark migrates to Manitoba in spring and doesn't overwinter here. Its caterpillars feed primarily on nettles (Urticaceae) and hops (*Humulus lupulus*) and they can turn up almost anywhere including in Winnipeg. Of the other commas, Eastern and Satyr commas are also primarily nettle feeders with the former found in forests and near stream edges where nettles grow; the latter species can be found almost anywhere in and near wooded areas and both overwinter as adults. Gray and Green Commas are fairly common in forested areas. Gray Comma caterpillars feed on the leaves of birch (*Betula*), elm (*Ulmus*), and currants (*Ribes*), whereas Green Comma caterpillars favour the foliage of willow, birch, and alder (*Alnus*) among other plants. Both overwinter as adults. Hoary Comma, which is annoyingly similar to Gray Comma, has a more northerly distribution so is rare in our study area. Its caterpillars likely feed on currant and skunkberry (*Ribes glandulosum*) leaves and adults overwinter.

Formerly, there were three species in Manitoba placed in the genus *Nymphalis*, all medium sized and widely differing in appearance. Recently, Milbert's Tortoiseshell was put in the mostly Eurasian genus *Aglais*. It is likely that the first butterfly one sees in spring, even when there is snow on the ground in March, will be one of these three beauties. It is amazing that these coldblooded creatures can fly at air temperatures down to 4°C, when in summer many other species stay grounded at much warmer temperatures. Early in spring, before plants are flowering, they can be found feeding on sap oozing from injured trees or puddling on wet sand or dung. Their caterpillars also have threatening spines.



The shape and general pattern of this Green Comma are typical of the group – Whiteshell Provincial Park, 15 July 2007. Photo by Larry de March.

The common Compton Tortoiseshell is a widely distributed northern species whose range covers not only a large part of Canada and the northeast United States but an area from Eastern Europe to the Asian Pacific coast. It is another mainly orange butterfly, resembling an oversized comma, complete with a small white punctuation mark on the ventral side of the hindwing. It overwinters as an adult and flies primarily in forests, including riparian forests, where the caterpillars feed on alder, willow, poplar (*Populus*) and birch. The less common Milbert's Tortoiseshell is easily identifiable with a large brown triangular basal area on its wings bordered by a broad band that shades from yellow to bright orange. This band gave rise to the seldom-used but more expressive name, Fire-rim Tortoiseshell. Another nettle feeder, this species overwinters as a pupa or adult.



The shape of the wings identifies this butterfly as a comma; the dorsal pattern and colours identify it as a Green Comma. Whiteshell Provincial Park, 18 May 2016. Photo by Larry de March.



Milbert's Tortoiseshell is arguably one of the most beautiful butterflies found in Manitoba. Sandilands, 11 October 2011. Photo by Larry de March.



Butterflies that overwinter as adults can become extremely worn like this Compton Tortoiseshell feeding on tree sap at Winnipeg, 16 April 2010. Photo by Larry de March.

The Mourning Cloak is another species we share with Eurasia. Its British name, Camberwell Beauty is far more uplifting than the Mourning Cloak name used by North Americans and speakers of other Germanic languages. A common species, its adults can be seen early in the spring when they come out of hibernation, through July when a new generation emerges, to late in the fall before they find a place to spend the winter. They are easily identified by their maroon/brown wings bordered with blue spots and a yellow band, which can fade to white with age. It is a ubiquitous species that feeds on willow, Eastern Cottonwood (*Populus deltoides*), elm and birch leaves.



Upper left: This Mourning Cloak caterpillar is typical of the caterpillars of commas and related species. Whiteshell Provincial Park, 29 June 2007. Upper right: The chrysalis of Mourning Cloak is similar to those of other species in this group. Whiteshell Provincial Park, 5 July 2007. Lower: The Mourning Cloak is one of our easiest to identify butterflies. Winnipeg, 9 July 2007. Photos by Larry de March.

8. Nymphalidae, Part 5: Monarch, Ladies, Admirals, etc.

(Larry de March)

Painted Lady (*Vanessa cardui*, 4842 reported)
American Lady (*Vanessa virginiensis*, 34 reported)
Red Admiral (*Vanessa atalanta*, 660 reported)
White Admiral [Red-spotted Purple] (*Limenitis arthemis*, 3791 reported)
Viceroy (*Limenitis archippus*, 324 reported)
Monarch (*Danaus plexippus*, 709 reported)
Common Buckeye (*Junonia coenia*, 9 reported)

The final group of “leftover” Nymphalidae includes some of the most easily identifiable butterflies in Manitoba and two easily confused pairs. They are of medium to large size.

The Painted Lady has a global distribution. Its high-altitude fall migration from northern Europe to Africa is the longest migration of any butterfly species. Painted Ladies cannot overwinter in Manitoba. Migrants arrive from May on and there are two generations per year. Concentrations during the autumn migration can be large and the remarkable numbers in many parts of North America including southern Manitoba in September, 2017 were enjoyed by anyone who saw them. Large numbers were also seen in 2019, though not as many as in 2017. Painted Lady caterpillars feed on a wide variety of plants including sunflowers and thistles. Adults can be found almost anywhere in open areas and they nectar on many species of wild and domestic flowers.



This Painted Lady was one of many delightful visitors to the English Gardens at Assiniboine Park, Winnipeg on 13 September 2017. Photo by Larry de March.

The uncommon American Lady differs from the similarly patterned Painted Lady by having two large eye spots on the underside of the hindwings and a tiny but obvious white spot in the middle of an orange cell on the dorsal forewing. Like the Painted Lady, it likely cannot overwinter in Manitoba and migrants can be seen from early May on with two generations produced in summer. Caterpillars feed on a number of plants in the Asteraceae including pussytoes (*Antennaria*), pearly everlasting (*Anaphalis margaritacea*), and burdock (*Arctium*). The adults, which can be found in many open habitats, are fast flyers that often cooperate with the viewer by nectaring with their wings spread for easy identification.



*This American Lady was a nice bonus on a birding trip near St. Ambrose, 22 September 2007.
Photo by Larry de March.*

In the same genus as the two ladies, the Red Admiral is an easily identifiable species whose dark brown wings sport reddish-orange stripes that fade to orange with age. It also cannot overwinter in Manitoba. Migrants, which can arrive as early as mid-April when no other food is available, can sometimes be found sharing bleeding trees with Mourning Cloaks or other overwintering species. The two generations of caterpillars feed primarily on thistles. Adults can be found almost anywhere, feeding on tree sap, bird droppings, rotting fruit and sometimes on flowers of Asteraceae and in spring, often on lilac (*Syringa*).



Red Admiral at Whiteshell Provincial Park, 5 July 2007. Photo by Larry de March.

With large eyespots on the dorsal wing surfaces, the spectacular and unmistakable Common Buckeye is an occasional vagrant that can show up in almost any open-area location from early June to early October. Sightings have been made in scattered locations across the study area including Buffalo Point, Winnipeg, Oak Hammock Marsh, Hecla Island, and near Pinawa. It has bred in Manitoba at least once.

The white stripes on all four wings of the White Admiral make this species easily identifiable, even at a distance. In other parts of North America there are other colour forms including the Red-spotted Purple on which the white stripes are completely lacking. White Admiral numbers are variable and sometimes they can be abundant, with groups found puddling on moist soil patches or on animal droppings along forestry roads. This inhabitant of deciduous forests has one primary generation per year with the first adults usually appearing in early June. There is usually a smaller second generation later in the summer. The caterpillars, which as they get bigger do a terrific impersonation of bird droppings, feed on poplars and birch.



A Common Buckeye found in Sandilands Provincial Forest, 15 June 2012. Photo by Larry de March.



These White Admirals were sharing a Gray Wolf scat meal with an Eyed Brown (left) and a Northern Pearly-eye (right) in Sandilands Provincial Forest, 2 July 2014. Photo by Larry de March.



*This White Admiral caterpillar is easily mistaken for a bird dropping. Whiteshell Provincial Park, 3 August 2013.
Photo by Larry de March.*

The Viceroy is well known in biological circles as a Batesian mimic of the Monarch butterfly. A Batesian mimic has a similar colour and pattern as a species that is either toxic or unpalatable to predators. The smaller Viceroy can be told from the Monarch most easily by the thin dark line cutting across the hindwings. Just to confuse observers, this line is sometimes missing and other differences in the wing pattern have to be used for identification. Viceroy's are typically found near water or other moist area where two generations of caterpillars, camouflaged as bird droppings, feed on leaves of willows and poplar.

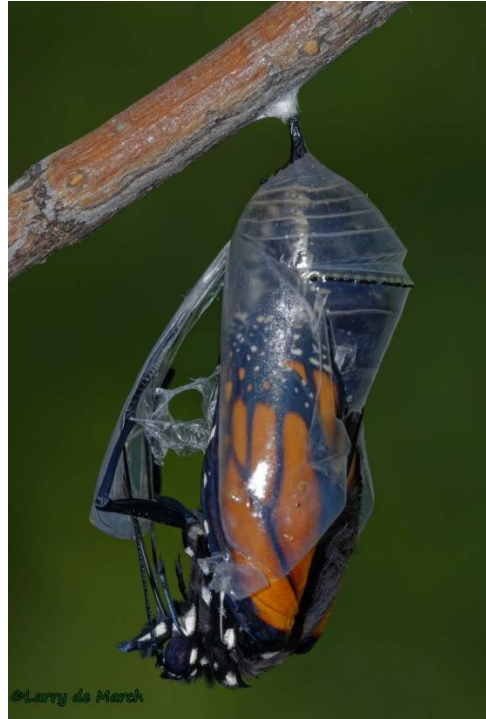
The Monarch is arguably the most iconic butterfly in North America, familiar to most people whether or not they take a specific interest in butterflies. Its long migrations and overwintering in the millions in the mountain forests of Mexico are well known. It occurs not only in North America but also in Central and South America, Hawaii, Australia and a few other places. Monarchs migrate into Manitoba mostly in June and lay their eggs on at least four species of milkweed on which the caterpillars feed. The milkweed sap contains cardenolides (a type of steroid) that are retained by both the caterpillar and adult Monarch, making them bad-tasting and toxic to predators. The second generation, which matures in late summer, is the one that migrates south. Monarchs can be found almost anywhere that milkweeds grow, though their numbers vary considerably from year to year.



Viceroy, Agassiz Provincial Forest, 2 July 2017. Photo by Larry de March.



*This Monarch, photographed in Winnipeg, 10 September 2009, will have migrated to Mexico.
Photo by Larry de March.*



(Upper) Monarch caterpillars are familiar to anyone who grows milkweed in their garden. (Lower) The pupae are much harder to spot: (left) shortly after transformation from caterpillar; (right) commencing transformation to adult. At Winnipeg on 21 June, 8 July, and 26 July 2006, respectively. Photos by Larry de March.

9. Hesperiiidae, Part 1: Spread-winged Skippers (subfamily Pyrginae)

(Deanna Dodgson)

Silver-spotted Skipper (*Epargyreus clarus*, 31 reported)
Northern Cloudywing (*Thorybes pylades*, 369 reported)
Dreamy Duskywing (*Erynnis icelus*, 291 reported)
Sleepy Duskywing (*Erynnis brizo*, 2 reported)
Juvenal's Duskywing (*Erynnis juvenalis*, 128 reported)
Mottled Duskywing (*Erynnis martialis*, 68 reported)
Columbine Duskywing (*Erynnis lucilius*, 34 reported)
Persius Duskywing (*Erynnis persius*, 3 reported)
Northern Grizzled Skipper (*Pyrgus centaureae*, 10 reported)
Common Checkered Skipper (*Pyrgus communis*, 5 reported)

Found nearly world-wide, skippers are more closely related to butterflies than to moths. Skippers are stout-bodied insects with large eyes and clubbed antennae, which are usually equipped with a distinct “hook” at the end, called an apiculus. Four subfamilies occur in Manitoba: the Heteropterinae (skipperlings in the narrow sense), the Hesperiiinae (branded skippers, featured in the next section), the Eudaminae (dicot skippers) and the Pyrginae (spread-winged skippers), the latter two of which are discussed below.

Spread-winged skippers are generally brown, often with a series of clear spots near the forewing tips and/or with bands across the forewings. Most males have a costal fold along the front edge (costal margin) of the forewings; it contains specialized scent scales used to attract females. Most Pyrginae hold their wings flat when at rest or while nectaring. Larvae, which are small, green and slug-like, with large, dark heads, feed on a variety of plants. Nearly all species have one generation per year.

In Manitoba, dicot skippers (so named because the larval food plants are dicotyledon plants) are represented by two species, the Silver-spotted Skipper and the Northern Cloudywing. The caterpillars of both species are legume feeders. When basking or nectaring in a garden or park, the Silver-spotted Skipper is easily noticed, even from a distance, because the free-form silver patch on the underside of the hindwings, which gives this spreadwing its common name, almost glows. The gold forewing bands on the dorsal surface are also a unique feature. The only cloudywing to reach Manitoba is the aptly named Northern Cloudywing, whose clear forewing spots stand out against the otherwise dark wings. This forest dweller is common by early June and is easily found when nectaring, sipping minerals from damp soil, or feeding on animal scat.



A Silver-spotted Skipper nectaring on Red Clover near Lac du Bonnet, 9 July 2018. Photo by Garry Budyk.



A Northern Cloudywing nectaring along a forest road near Pine Falls, 5 June 2017. Photo by Deanna Dodgson.

Duskywings (genus *Erynnis*) are small to medium-sized skippers that are brown above with bands across the forewings. Members of the genus can be separated into two groups, one with white forewing spots, the other without. Nearly all species are active in spring.

With greyish-blue bands across the forewings and no forewing spots, the Sleepy and Dreamy duskywings are nearly identical in appearance but differ in their choices of host plants - Sleepy Duskywing larvae feed on oak, while willows and poplars are host plants for Dreamy Duskywing. Both of these species are more likely to be seen basking or puddling on a forest road than while nectaring, sometimes in close proximity.



Dreamy Duskywing at Birds Hill Provincial Park, 20 May 2010. Photo by Deanna Dodgson.

Of the “spotted” duskywings, Juvenal’s Duskywing may be separated from the others in the group by its larger size and forewing spots, as well as by its stronger flight. Oak is the larval food plant. Also found in dry uplands is the Mottled Duskywing, whose wings are distinctively patterned in an almost checkerboard fashion. Narrow-leaved New Jersey Tea (*Ceanothus herbaceus*) is the food plant of choice for this skittish species. Finally, the Persius and Columbine Duskywings are most superficially alike and frequent forested areas where legumes and Wild Columbine (*Aquilegia canadensis*) grow. Unlike the others in this group, the Columbine Duskywing is found in summer, with a peak in late July and early August.

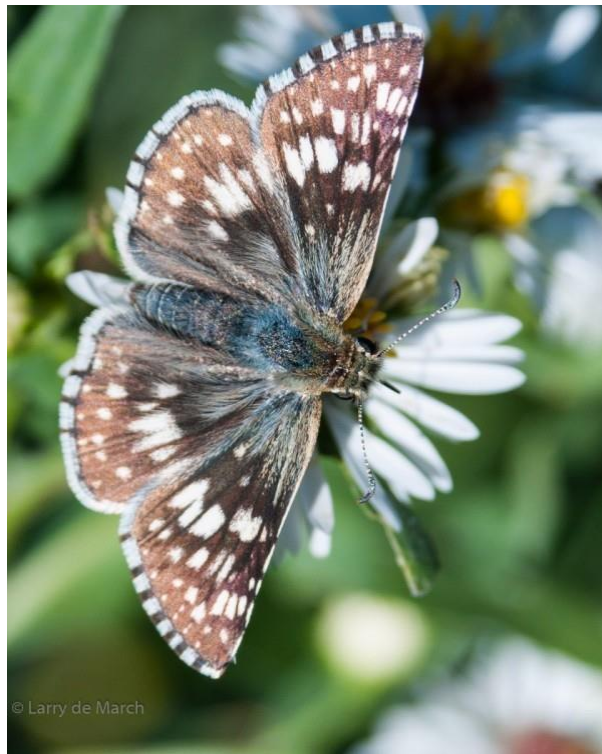


Juvenal's Duskywing male at Sandilands Provincial Forest, 2 June 2016. Females have larger forewing spots than males. Photo by Deanna Dodgson.

The final two species in this section belong to the genus *Pyrgus*. The diminutive Northern Grizzled Skipper is grey with variably-sized white patches on the wing surfaces and heavily checkered fringes. It is a rare treat to see one basking on a granite outcrop or nectaring at early spring flowers. The larvae are reported to feed on cloudberry and perhaps wild strawberry. Our latest-flying spreadwing, the Common Checkered Skipper, prefers open areas and can be seen any time between spring and fall. The male is a striking bluish grey with a myriad of white spots and squares; the female is darker overall. The wing fringes are lightly checkered. Unlike the former species, the Common Checkered Skipper has two or three generations per year; even so, not many individuals were found during our survey. Various mallows (Malvaceae) provide larval nourishment.



*Northern Grizzled Skipper on Long-leaved Bluets (Houstonia longifolia), Nopiming Provincial Park, 4 June 2018.
Photo by Deanna Dodgson.*



*Common Checkered Skipper, Churchill Drive Park, Winnipeg, 22 September 2011.
Photo by Larry de March.*

10: Hesperiiidae, Part 2, Grass Skippers (Subfamilies Heteropterinae and Hesperinae)

(Peter Taylor)

Arctic [Chequered] Skipper (*Carterocephalus palaemon*, 174 reported)
Least Skipper [Skipperling] (*Ancyloxypha numitor*, 83 reported)
European [Essex] Skipper (*Thymelicus lineola*, 2501 reported)
Pepper-and-Salt Skipper (*Amblyscirtes hegon*, 43 reported)
Common Roadside Skipper (*Amblyscirtes vialis*, 57 reported)
Common Branded Skipper (*Hesperia comma*, 6 reported)
Leonard's Skipper (*Hesperia leonardus*, 29 reported)
Indian Skipper (*Hesperia sassacus*, 22 reported)
Peck's Skipper (*Polites peckius*, 59 reported)
Tawny-edged Skipper (*Polites themistocles*, 47 reported)
Long Dash Skipper (*Polites mystic*, 178 reported)
Northern Broken-Dash (*Wallengrenia egeremet*, 18 reported)
Sachem (*Atalopedes campestris*, 1 reported)
Hobomok Skipper (*Poanes [Lon] hobomok*, 278 reported)
Broad-winged Skipper (*Poanes viator*, 8 reported)
Dun Skipper (*Euphyes vestris*, 1314 reported)

Poweshiek Skipperling (*Oarisma poweshiek*, 0 reported)
Garita Skipperling (*Oarisma garita*, 0 reported)
Delaware Skipper (*Anatrytone logan*, 0 reported)
Dakota Skipper (*Hesperia dacotae*, 0 reported)
Dusted Skipper (*Atrytonopsis hianna*, 0 reported)

The Hesperinae (grass skippers) is a large subfamily with over 2000 species worldwide, so called because the larval food plants are various grasses and sedges (also palms for some tropical species). They are also known as branded skippers, because males have a dark "brand" (patch of blackish scales) on the forewing that releases pheromones to attract females. Twenty species have been recorded in southeast Manitoba, of which 15 were reported in our study. This article also includes the Arctic Skipper, which belongs to a separate subfamily (Heteropterinae).

Most grass skippers are small but relatively heavy-bodied; they often perch with forewings and hindwings held at different angles in what has been dubbed the "jet-plane position". Small size and rapid, erratic flight make them difficult to follow when flushed. They can be seen nectaring (often mingling with larger butterflies), visiting mud puddles or moist gravel, or perching on low shrubby and herbaceous vegetation. The larvae typically feed at night within a silk-and-leaf shelter at the base of a sedge or grass clump, where they may also overwinter and pupate. The larvae of one variety, the Assiniboine race of Common Branded Skipper, have been reported to form silken burrows under dried cowpats, perhaps to avoid being trampled or accidentally eaten. Different grass skippers overwinter as partly grown or mature larvae or as pupae. All appear to have a single annual generation in our region.



Broad-winged Skipper, a Manitoba rarity, near Pinawa, 3 August 2008. It is in the “jet-plane” posture, highlighting the left forewing and right hindwing. Photo by Peter Taylor.

As well as small size and flighty behaviour, many skippers have plain coloration, with various combinations of tawny-orange to blackish brown markings, sometimes with a few clear or whitish spots. This makes identification of photographs or specimens, let alone live insects, a challenge.

Few grass skippers emerge before the end of May. In forested regions, where they frequent trail-sides and clearings, the Arctic Skipper and Hobomok Skipper are among the first to appear. The Arctic Skipper is more slender-bodied than the branded skippers, and relatively easy to identify by its rather fritillary-like markings. It does not adopt the jet-plane posture, but may perch with wings either fully spread or closed. So tiny and fast-moving is the Common Roadside Skipper, it is easily overlooked or mistaken for a fly, while its relative the Pepper-and-Salt Skipper is barely more conspicuous. Another early flyer is the Indian Skipper, an uncommon resident of forest clearings, mostly in the eastern half of our region.

Many grass skippers are at their peak from late June through July, with identification challenges aplenty, for example trying to separate the various colour morphs of Long Dash Skipper from Peck’s Skippers or worm, late-flying Hobomok Skippers. It is important to be familiar with the European or Essex Skipper, an invasive species that often outnumbers native skippers and can become a pest in Timothy (*Phleum pratense*) grass crops. It is also widespread along roadsides in both forested and agricultural areas, especially where weedy alfalfa provides a nectar supply.



Arctic Skipper in spread-winged posture near Pinawa, 10 June 2019. Photo by Peter Taylor.

This species accounted for just over half of our grass-skipper records, making it a special challenge to detect the similar-looking Least Skipperling, which is usually found in waterside or emergent vegetation. We found the Dun Skipper to be the most numerous native species, and it was also the least variable in numbers from year to year. This uniformly dark skipper is an avid nectar feeder and a relatively late flier, peaking in mid to late July.

Though widespread and flying through much of June and July, the Tawny-edged Skipper proved fairly difficult to find, small size and zippy flight again making detection difficult. The Common Branded Skipper is a widespread species, native to Eurasia and northwest Africa as well as North America, but was scarce in our survey with totals of only two records and six individuals.

Among the rarer skippers we found were Leonard's Skipper (mostly in areas west of Bissett between late July and mid-August), Northern Broken-Dash (a challenging newcomer to the province, difficult to distinguish from other dark skippers), and Broad-winged Skipper (extending its range a little from the original discovery near Red Rock Lake in the Whiteshell). A Sachem was detected by Richard Staniforth on 11 July 2015, furnishing just the third provincial record for this migratory species – remarkably, all three were found in the East Braintree area.



*Another jet plane! A Long Dash Skipper visits a Self-Heal flower head near Culver, 3 July 2019.
Photo by Peter Taylor.*

Five prairie-dwelling skippers, all known to occur in southeast Manitoba, were not detected by us or our correspondents. The provincially endangered Poweshiek Skipperling is restricted to small vestiges of tall-grass prairie near the Minnesota border, and is the subject of ongoing research and conservation efforts. The much more widespread Garita Skipperling has occurred in the past as far east as Agassiz Provincial Forest; prior to this five-year survey, one was found at West Shoal Lake by Deanna Dodgson in 2008. The Delaware Skipper has a restricted range in central southern Manitoba; one was photographed by Deanna Dodgson near Stuartburn on August 3, 2008. The Dakota Skipper is a Threatened species at both the provincial and national level, with Manitoba populations persisting mainly in the southwest Interlake. The uncommon Dusted Skipper has previously been recorded at a dozen localities in the Red and Assiniboine watersheds, but its current status is uncertain; one online report was near the Shoal Lakes in 2019.



*A dozen European Skippers, part of a swarm nectaring on a roadside alfalfa patch near Hadashville, 11 July 2013.
Photo by Peter Taylor.*



A male Dun Skipper feasts on Canada Thistle nectar near East Braintree, 30 July 2008. Photo by Peter Taylor.



*Leonard's Skipper, a special find at a thistle patch near the Wanipigow River, 17 August 2016.
Photo by Peter Taylor.*

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Additional information was drawn from many sources, especially the following books:

Allard, S. H. (2013). *Manitoba Butterflies: A Field Guide*. Turnstone Press, Winnipeg.

Klassen, P., A. R. Westwood, W. B. Preston, W. B. McKillop (1989). *The Butterflies of Manitoba*. The Manitoba Museum [of Man and Nature], Winnipeg.

Layberry, R. A., P. W. Hall, J. D. Lafontaine (1998). *The Butterflies of Canada*. University of Toronto Press.