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Female Monarch butterfly. Photo credit: Kim Mann

MISTAKING MONARCHS

MONARCH ID AND DISTINGUISHING LOOKALIKES

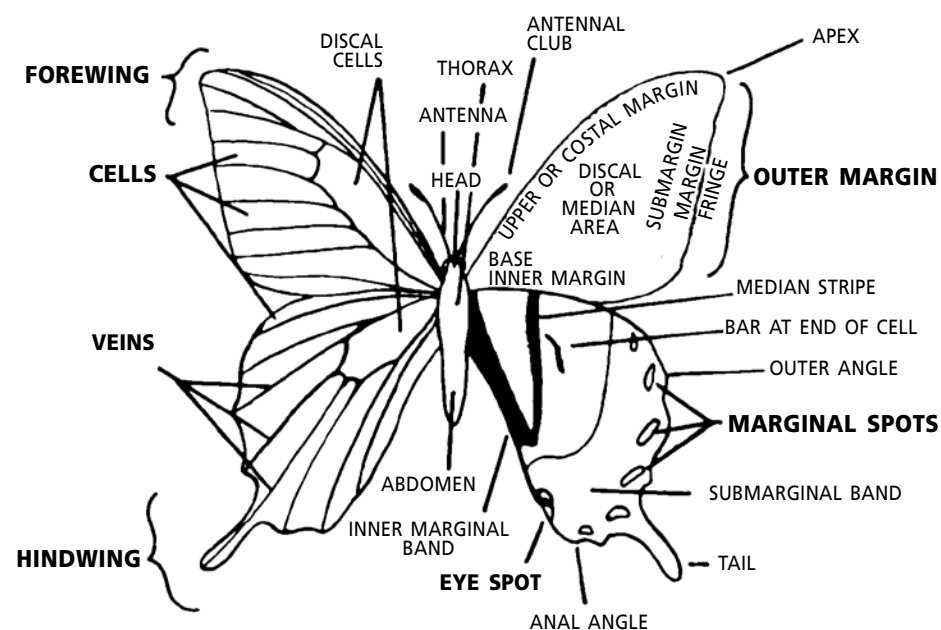


FIGURE 1. Illustration "Parts of a Butterfly (Tiger Swallowtail)" from Ron Hooper's *Butterflies of Saskatchewan*. Bolded are features used in this article to identify butterflies.

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Doing any kind of identification in the field, whether it be birds, plants, or invertebrates, can be tricky at the best of times. Usually you have limited time to observe a specimen before it continues on its way. Any skill or resource that can help to quickly identify between families or species saves you time and allows you to be more confident in your identification ability. Being confident in your ability to ID in the field is beneficial to both beginners and experienced personnel in order to identify a larger volume of specimens in the same amount of time. It is fairly easy to tell a mammal



FIGURE 2. Monarch (right) and a Viceroy (left). The white arrow points out the black vein that isn't present on Monarchs. Also notice the two rows of white spots on the wing margin of the Monarch compared to only one on the Viceroy. Photo credit: Fran Kerbs

from a bird, but what about those tricky cases where only minor variations occur between species? The first that comes to mind is the plentiful amount of little brown sparrows. Another very common identity crisis is that of monarch butterflies (*Danaus plexippus*) and their lookalikes. There are two butterflies commonly mistaken for monarchs that are found in Saskatchewan: viceroys (*Limenitis*) and painted ladies (*Cynthia*). This article explains the most reliable ways to visually identify each as well as compare and contrast them to monarchs, so you can feel confident when in the field or in your backyard.

Monarch butterflies are listed as a Species of Special Concern under the Species at Risk Act; however,

the Committee on the Status of Endangered Wildlife in Canada has recently recommended they be uplisted to Endangered. Populations have declined due to habitat loss from logging, agriculture, urban development and pesticides that affect milkweed (*Asclepias* spp) and wildflowers. They are limited to laying their eggs on species of milkweed plants, which the caterpillars rely on for food. This plant affords them protection as it causes them to become toxic to predators into adulthood. Female butterflies lay eggs throughout their two-to-six week life and eggs hatch four to six days after being laid.

The brightly striped black, yellow and white caterpillar gorges on the milkweed plants and can grow 2,000

times in size during this stage in life. Approximately two weeks after hatching, the caterpillar attaches itself to a sturdy surface and uses silk to transform into a chrysalis. About two weeks later the adult emerges and begins to feed on the nectar of wildflowers such as goldenrod (*Solidago* spp) and asters (*Aster* spp).

The eastern population of monarch butterflies migrates south to Mexico for the winter. In the spring they begin their journey north and some make it all the way to Saskatchewan. It takes as many as four successive generations of monarchs to complete a round trip. Each generation lasts only a few weeks as they make their way north, laying eggs along the way. In August, the final generation of the trip lives for as long as nine months, making the flight back south and overwintering until spring, when they begin the journey all over again.

Monarchs are true royalty in the butterfly world, and are the largest butterflies in Saskatchewan. Their wingspan is 9-10 cm, dominantly orange with black veins and margins, and two rows of white spots (Figure 1). Their body is black with paired rows of white spots. Male monarch butterflies have two black spots on their hind wings, while the female's wing margins are thicker and they lack the hindwing spots of the males.



FIGURE 3. Underside of a Painted Lady wing. Notice the eyespots that run parallel to the outer margin. Photo credit: Wikipedia



FIGURE 4. Side-by-side comparison of a monarch (left) and a painted lady (right). The most noticeable difference is the brown colouration and the lack of true veining in the painted lady. Photo credit: Fran Kerbs

The butterfly most likely to be incorrectly identified as a monarch is the viceroy (Figure 2). The mimicking of appearance has evolved because of the monarch's poisonous nature to potential predators. In other words, if you look like something that is poisonous, fewer predators will try to eat you. Viceroys are slightly smaller than monarchs in size, but have the same general colouring — orange wings with black veins and margins with white spots. The key differences are in the veins and spots. Viceroys will have a single vein on the hindwing that runs perpendicular to the others, whereas monarch veins all go in the same general direction. The spots on the margins of the wing can also help to distinguish between them, as monarchs have two rows of white spots on the margins while viceroys only have one row. Viceroys also lack the white spots on the length of their body when seen from above.

When compared side-by-side, it is obvious to see that a painted lady is not a monarch butterfly, but you are much more likely to come across a painted lady in the field (Hooper, 1973). These butterflies are significantly smaller than monarchs but have the same colour scheme: orange, black and white. The underside of painted ladies is a dull brown with a row of brown spots

that resemble eyes, called eyespots, placed just inside the outer margin (Figure 3). This is the easiest way to distinguish them from monarchs. Just remember, if you see any brown colour on the body or wings, it isn't a monarch.

Butterflies hardly ever sit as still as a picture and one often catches a glimpse of the upper side of the wing, seeing black margins, some white spots, and an orange wing. But it's important to note that painted ladies don't have veining around the cells of the wing, and the black margin is only on the forewings. Painted ladies also lack white spots along the margin of their wings and their body colour ranges in shades of brown (Figure 4). Finally, they also have a single row of black spots along their hindwings that reside just inside the outer margin.

The best way to see a monarch butterfly at home is by planting milkweed and other wildflowers in the spring. Monarchs rely on naturalists more than ever to provide habitat in urban spaces that were historically breeding grounds. By planting milkweed you are helping to ensure these monarchs reign over the butterfly kingdom for generations to come.

HOOPER, R. 1973. Butterflies of Saskatchewan. Saskatchewan Department of Natural Resources.

For more information about monarchs, or the Stewards of Saskatchewan program for all Species at Risk, please e-mail Ashley Vass at outreach@naresask.ca.

Nature Saskatchewan is asking the public to report monarch sightings to its toll-free line: 1-800-667-4668.



Viceroy butterfly. Photo credit: Fran Kerbs