

JUNE 15-30, 2022, NATURAL HISTORY NOTES

By Dick Harlow

QUESTION

HOW DO I TELL A VICEROY BUTTERFLY FROM A MONARCH BUTTERFLY AS THEY LOOK VERY SIMILAR?

MONARCH



Monarch, *Danaus plexippus*, on Buddleia, dorsal view.

To the untrained eye the color is very similar. However, the first thing is the Monarch's size. The pictures don't really show the size difference, so you will have to take my word for the fact that the Monarch is larger than the Viceroy.

However, there is a very marked difference on the hindwing of the Viceroy compared to the Monarch. Notice the black band on the hindwing of the Viceroy. That black band can be seen in both the dorsal and ventral views of the Viceroy. That is a very significant difference. In older Viceroy's the black band could be hard to see, but there should be evidence of some of the black band still being visible. Monarch's DO NOT have a black band!

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Monarch, *Danaus plexippus*, on Buddleia, ventral view.

When I was a beginner, that black band was my primary key to telling the difference between these two species.

Monarch butterflies are known as Milkweed butterflies because the larva feed on milkweed. Milkweed sap or the white colored viscous liquid contains toxic chemicals. When the Monarch larva feed on the milkweed leaves it will ingest these toxic chemicals. As the larva feed the toxic chemicals build up in the body of the larva. The chemicals do not bother the Monarch larva but do certainly act as a deterrent to predators feeding on the larva and in fact on the developing adult when it turns into a butterfly.

Consequently, now that the Viceroy mimics the Monarch, even though the Viceroy may be palatable, but evidence shows that at least in Florida that is not the case. In Florida Viceroy butterflies are found to be unpalatable. Thus, one can see why this color combination would be avoided by most to all predators; it can be seen why birds would learn to avoid both of these species.

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VICEROY



Viceroy, *Limenitis archippus*, on Buddleia, dorsal view

Notice white and orange dots at the ends of the dorsal forewings of the Viceroy. Now compare them with the dots at the end of the Monarch dorsal forewing. Notice the Viceroy has four orange dots in line along the outer long edge of the forewing, while the Monarch's dots are various shades of orange and scattered.

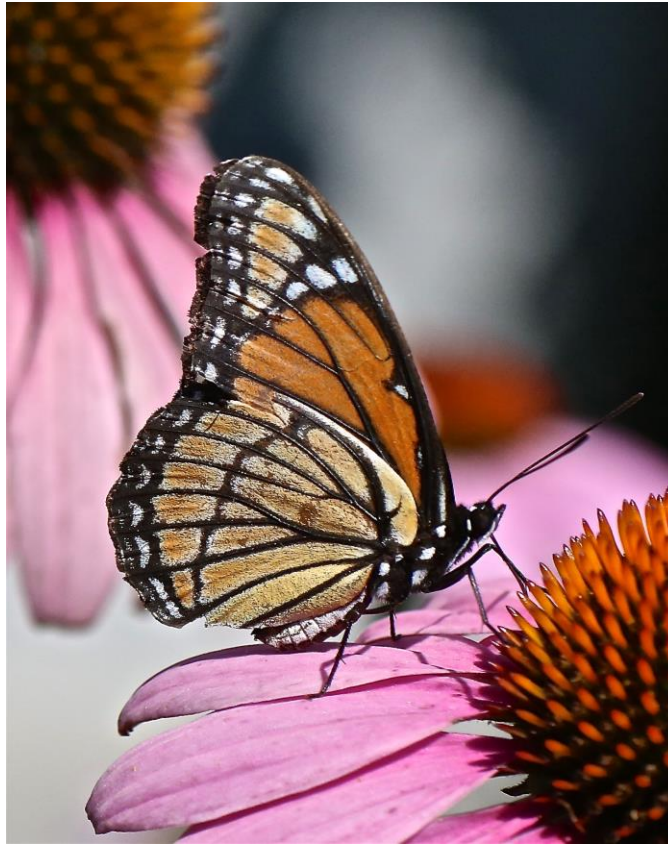
Also notice that the Monarch has a double row of white dots on the **ventral** outside edge of the hindwing, whereas the Viceroy has a single row.

It is important that you are articulate with the meaning of the words **Dorsal** and **Ventral**.

If you look at the ventral side of the forewing of the Monarch, you will notice three orange markings or dots that are in line with the outer lining of the wing.

To help you keep it straight, the terms dorsal, equals top side and ventral equals' bottom side. This is to prevent confusion of the characteristics of dots or markings on the wing of both species.

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Viceroy, *Limenitis archippus*, on Purple Coneflower, ventral view

OBSERVATIONS

MAMMALS

Meadow Vole
Field Mouse

REPTILES

Garter Snake

BUTTERFLIES

Monarch
Viceroy
Cabbage White

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All Measurements taken at solar noon (1230 EST).

PRECIPITATION

Average June Precipitation for Vermont = 3.7 inches.

TOTAL June Rainfall: 1st Wk.= 7.0mm; 2nd Wk.= 39.4mm; 3rd Wk.= 3.0mm; 4th Wk.= 33.5mm for a total of 82.9 mm or 3.02 inches. June Average is 3.7 inches, which leaves a deficit of 0.44 inches for the month. June had 15 overcast days and 15 days where there was some sort of precipitation.