

## OCTOBER 15 - 31, 2018 NATURAL HISTORY NOTES

By Dick Harlow

### A CURRENT HYBRIDIZATION

It is not every day when an example can visibly occur from nature to show hybridization in the Natural World during our lifetime or for that matter here at EastView. To be exact this is a butterfly seen here at EastView in 2014, but has evaded notice since. However, I felt it was a good example of what people could be looking for when they are out and about during the summer either at EastView or elsewhere looking at various gardens. Thus, the following discussion along with pictures of a very striking butterfly that is currently hybridizing.

### WHITE ADMIRAL/RED-SPOTTED PURPLE



(1) **White Admiral**, *Limenitis arthemis arthemis*

Dorsal view © Dick Harlow.

The White Admiral butterfly of the Northeast (ME, Northern NH, VT NY) and the Red-spotted Purple butterfly (Southern PA, MA, RI, Ct to Northern FL). The overlap is the territory between each of these distinct areas, which include (NY, PA, Southern NH, VT, Northern MA, RI, CT).

If speciation, (the separation into different species) did not occur then each butterfly would retain its own specific characteristics. Each will stay unique to its own colorations and behavior. If, in fact, they interbreed, then some characteristics of each will end up in the offspring; this is known as hybridization.

Consequently, taxonomists (those that name organisms) have to justify why they are condensing what was before known as two distinct species into a single variety of a known species called race.

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(2) **White Admiral**, *Limenitis arthemis arthemis*  
Ventral view © Dick Harlow.

The White Admiral in picture (1) has no red spots on the dorsal side of the wings, just a wide white band through both fore and hindwings along with blue dashes at the wing's edge and blue markings at the terminal ends of the hindwing.

The ventral side in picture (2) of the fore and hindwings are striking with the white band and red, white markings along with blue markings along the edges of the wings.



(3) **Red-spotted Purple**, *Limenitis arthemis astyanax*,  
Dorsal view, © Donald Hall

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(4) **Red-spotted Purple**, *Limenitis arthemis astyanax*,  
Ventral view, © Jerry Butler

You can see that there is a definite difference between picture (1) and picture (3). The Red-spotted Purple butterfly doesn't look anything like the White Admiral, so you can understand why initially taxonomists put these two butterflies into separate species.

Even the ventral side of the Red-spotted Purple is different than picture (2). However, there are some similarities.

Notice the blue dashes along both dorsal and ventral wing margins and the orange dots along the underside of the hindwing in picture (4) as compared to picture (2).



(5) **White Admiral hybrid** *Limenitis arthemis albofaciata*  
© Dick Harlow

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Picture (5) suggests a White Admiral until you see the red dots on the dorsal side of the wing. Compare this picture to image #1 a true White Admiral that does not have red dots on the dorsal side of the wing.

Consequently, picture (5) because of those dorsal red dots is considered a hybrid of the Red-spotted Purple. To have this happen, a White Admiral and a Red-spotted Purple had to have mated producing this hybrid. The White Admiral and the Red-spotted Purple are therefore lumped together as two races of one species, Red-spotted Purple. It is the characteristics of the White Admiral that have changed, not the Red-spotted Purple. Therefore, taxonomists consider the Red-spotted Purple to be the dominant species.

There is an old adage, "if you can hybridize, then the hybrid, does not deserve a separate species designation, it simply becomes a race".

Obviously, some specific observations had to have occurred, i.e. observations of a White Admiral and a Red-spotted Purple actually mating, along with what the offspring looked like before taxonomists could affirmatively change the species designation to one being a race of the other. Plus, they also had to determine which of the two was genetically dominant. Thus, White Admiral is a race of the Red-spotted Purple. Whatever the case, these are some beautiful examples of what nature has to offer.

**NOTE:** There has been a large influx of White-crowned Sparrows, mostly immatures, during October 2018, both here in VT and also reported in MA, suggesting either a good breeding season in Canada or movement of western populations towards the east. In either event I hope you all have a chance to see one. Adults are easy with white bands on top of the head. Remember that the immatures have brown-red patches on top of their head instead of white. See the picture of an immature.



**White-crowned Sparrow**, immature - Dana Point, CA

© Tom Benson

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## OBSERVATIONS

### MAMMALS

Coywolf – barking and howling  
Gray Squirrel

### BUTTERFLIES

Cabbage White  
Clouded Sulphur

### Weather Tidbits

Month of OCTOBER 1-31, 2018 Cooler than normal.

### PRECIPITATION

Total Precipitation: 179.8 mm or 7.1 inches. Average for Middlebury is 3.8 inches per month.

Overcast Days: 16