

ACCIPITERS

There are three species of **bird** predator hawks in North America that fall under this category. They have long tails and short wings so they can maneuver easily among tree branches and brush to ambush their prey. They have long legs, long toes and long talons to nimbly catch their prey. They will easily dive into a shrub or bush to catch their meal.



Cooper's Hawk, *Accipiter cooperii* (M) perched on a crabapple support stake. Photo © Dick Harlow

This picture of a Cooper's Hawk was taken August 3rd of this year. August is a time for birds, both young and adults, to move about. For most birds nesting is almost over and by the second week in August young and adults are moving about the landscape learning and feeding and avoiding predators.

This is the fellow that has been feeding on two pigeons and a Mourning Dove that I know of this summer at EastView. Fortunately, he stopped long enough to catch his breath, take stock of what to do next, after missing a Mourning Dove for breakfast. He isn't as arrogant as usual, but definitely has a defiant attitude, a characteristic of Cooper's Hawks. And because Ralph Noyes' phone call alerted me of a hawk outside the Inn, several people in the dining hall were able to see an adult Cooper's Hawk sitting on a rock just outside the northeast side of the Inn.

The three species of Accipiter's that make up this group from smallest to largest are: Sharp-shinned Hawk, Cooper's Hawk, and Northern Goshawk. The Sharp-shinned and the Cooper's reside in the lower forty-eight states with summer ranges deep into Canada for the Sharp-shinned, and only slightly across the border in the west for the Copper's. The Northern Goshawk is found primarily in the northern part of the United States including mountainous regions, and most of Canada and Alaska.

All three species have been observed here at EastView, either hunting as this fellow was, or flying through our property as did a Goshawk in 2013. EastView, it seems, has some easy pickings. Of course, there are other raptors that either use our property or have been seen from our property.

AUGUST 15-31, 2015 NATURAL HISTORY NOTES FOR EAST VIEW

Other families of Raptors include, Falcons, Eagles, Osprey, Kites, and Buteos, e.g. Red-tailed Hawk, Rough-legged Hawk

Each of these groups I will talk about in future notes.

MONARCH



Monarch, *Danaus plexippus* feeding on Buddleia
Photo © Dick Harlow

I enjoy seeing the graceful flight of the Monarch Butterfly as it looks for a Milkweed to deposit its eggs upon or a plant that will provide nectar. One of the reasons I plant Milkweed and Buddleia in our garden.

As a biologist the reason this butterfly is of such interest to me is the biological evolution that causes it to dissuade predators. Unlike some larva (caterpillars), you can pick up a colorful Monarch larva and not be stung or hurt. It is the evolution of what these larva feed on and the parents laying their eggs on plants that have latex sap that results in the Darwinian adage of the "survival of the fittest", who survives and by what format an organism survives. Plants, such as milkweeds, dogbanes and heliotropes have the ability to produce cardiac glycosides and PA's, (pyrrolizidine alkaloids). The chemicals produced can cause retching in small doses to death in larger doses. PA's on the other hand are slow acting liver poisons. One can see why predators learn quickly to stay away from an organism that has that kind of protection.

Another reason why this butterfly is so appealing is that it migrates. People didn't know that insects migrate until Kenneth Bruegger in 1975 found a large roost of over-wintering Monarch Butterflies in Michoacan, Mexico. Now, through studies on the Monarch since 1975, we know that practically the entire population of Monarchs in North America, between August and November, moves to a few concentrated overwintering sites in the south. To consider the Monarch a true migrant they have to return north. This they have partially done. Even though Monarchs from Vermont might hole up in Georgia or Florida, they might not return to Vermont, but make it back to North Carolina or Virginia. Still, because they lasted long enough through the winter months to begin their flight back this is considered migration.

Of course, this doesn't leave the Monarch free of danger. Destruction or degrading of habitat by humans as well as natural disasters, host plant destruction, parasites and migration dangers, e.g. cars, wind, storms, etc., to name just a few, all present serious hazards to this beauty.

If evolution saw fit to benefit a smaller butterfly with very similar colors and markings, the likeness to the Monarch would certainly help in its protection. Enter a mimic, the Viceroy!

VICEROY



Viceroy, *Limenitis archippus* feeding on Buddleia
Photo © Dick Harlow

If you look at these two butterflies, the Monarch and the Viceroy, you can see how close the coloring is to each other. In fact, people get these two mixed up when viewing them separately in the field even though the Viceroy is smaller. The color differences are subtle, but they are there and the marked black bar on the hindwing of the Viceroy is a very evident difference. Yet predators do not make that distinction; they see these two species as the same; and the fact that the Monarch is distasteful and toxic, obviously benefits the Viceroy.

However, the deceptions through evolution by the Viceroy don't end there. The Viceroy's eggs look like a plant gall (enlarged growth of a plant) on the host plant; its larva looks like a large bird dropping and its cocoon looks like a dead leaf. If a bird had retched by trying a Monarch for lunch, it will not go after a Viceroy! For that matter, a predator who has learned that that color combination can be painful will avoid any look alike to a Monarch.



Viceroy, *Limenitis archippus* caterpillar looking like a large bird dropping.
Photo © <http://www.backyardbutterflygarden.com>

AMERICAN VERVAIN



American Vervain, *Verbena hastata*, also known as blue vervain Photo © Dick Harlow

Blue Vervain, also called swamp verbena, is a plant that likes water, but is drought resistant. It is called American Vervain because it is native to North America, unlike the *Verbena officinalis*, which is a native of Europe. Also, *officinalis* carries mauve flowers rather than blue. It seems that people have a hard time calling something purple, but that is what "Blue Vervains" look like to me. However, *officinalis* was brought to this country because of its herbal value in natural medicine.

The mint family of plants, not all, but many, has square stems and Blue Vervain is one of them. But, unlike many mint family plants, it is not a plant that will take over your garden. You do not need to put up a barrier around a single or group of Blue Vervain plants.

OBSERVATIONS FOR AUGUST

MAMMALS

- Eastern Cottontail Rabbit
- Gray Squirrel
- Muskrat
- Meadow Vole

AMPHIBIANS

- American Toad
- Green Frog
- American Bullfrog

BUTTERFLIES

- Black Swallowtail
- Cabbage White
- Clouded Sulphur
- Orange Sulphur
- Monarch

AUGUST 15-31, 2015 NATURAL HISTORY NOTES FOR EAST VIEW

- Viceroy
- Common Wood Nymph
- European Skipper
- Least Skipper
- Dun Skipper
- Delaware Skipper

MOTHS

- Hummingbird Clearwing Moth
- Snowberry Clearwing
- Straight-toothed Sallow

DRAGONFLIES

- Common Green Darner
- Common Whitetail
- Widow Skimmer
- 12-spotted Skimmer

DAMSELFLIES

- Eastern Forktail

Weather Tidbits for AUGUST

All Measurements taken at solar noon (1130 EDT).

PRECIPITATION

AUGUST 2015 Total Precipitation: 55.2 mm or 2.2 inches. > than 1.5 inches below normal.

AUGUST Overcast Days: 4

WIND

Highest wind in AUGUST: 44 MPH, Direction: South

Average Wind speed for AUGUST 2015: 2.0 mph,

Dominate Wind Direction: South

Days w/wind gusts 20-30 MPH: 9

Days w/wind gusts 30 MPH or greater: 1

TEMPERATURE

Mean Temp: 24.0 C⁰ 75.2 °F

High Temp: 34.7 C⁰ 94.5 °F

Low Temp: 13.9 C⁰ 57.0 °F