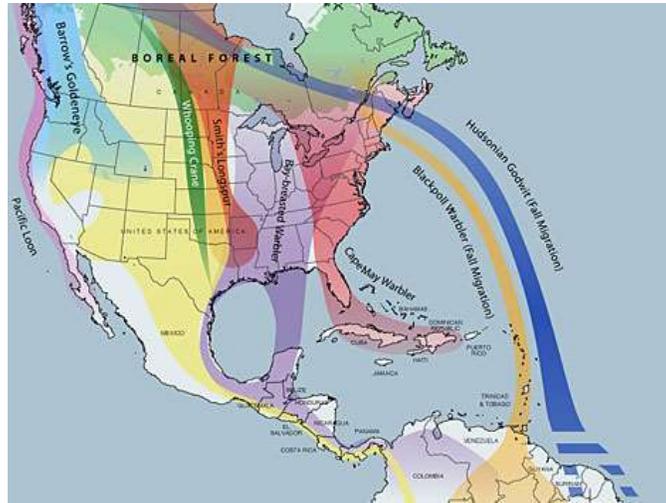


NOVEMBER 15 – 30, 2019 NATURAL HISTORY NOTES

By Dick Harlow

FALL BIRD MIGRATION



© Bird Canada, A voice for the northern bird.

Many people look forward to Fall Migration of birds almost as much as they look forward to Spring Migration. Of course, Fall leads into Winter and Spring leads into Summer; even so, I can't really say they are equal, I'll just let the readers decide for themselves.

However, fall migration means different things to different folks. For the hunter it means a chance to shoot a goose or a turkey or ducks, either for sport or for the table. Personally, I have a hard time understanding the sport of killing if it is not for the table!

For a birder it means something entirely different. As there are different hunters who hunt for different reasons, so there are birders who bird for different or a combination of reasons. Being outside, communing with nature, trying to see and know what one is looking at is a challenge that is pure excitement for many. Others look at a chance to add to their week, month, state or year lists. Whatever the case, being outside checking on who and what one sees, the day, the climate, the scenery is what's important.

Consequently, when a birder is in an area that he/she wants to bird for fall migration, then he/she needs to know where to go, and to pay attention to the weather. Here in Vermont, even though some species like the Tree Swallow have already started their migration in August, others wait until September or even the first part of October.

In the Northeast fall arrives from the beginning of September and continues into November. The bulk of the migration depends on weather related events that will motivate birds to move. It doesn't make much sense for birds to migrate in a hurricane or during a Northeaster. Although at times they will get caught migrating when a storm hits, they will not intentionally start their migration during a storm.



Snow Geese migration in Vermont, Dead Creek Wildlife Refuge, © Dick Harlow

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Don't forget, here in Vermont, weather in Canada will affect birds migrating either through, over or by us. As fall approaches the angle of the sun diminishes, there are less hours of sunlight; birds are born with this instinct about when it is time to move south. Think about what has been going on in your area all summer and how you know that fall is approaching. Cooler temperatures, storms, the rainy season, all add to the mix within the brain of a migrating bird. Add to that the fact that much of the food that birds have been consuming in your area is now harder to find. Birds are generally nomads and they move to find greener pastures. Generally, birds tend to migrate at night. Yes, they move during the day, but they also rest and sleep during both day and night.



Snow Geese, *Chen caerulescens*, during fall migration, Dead Creek Wildlife Management Area, © Dick Harlow

Remember, they always have to be on the lookout for predators. Having an innate urge to migrate, making sure to stop in an area that might have food, along with dealing with the vagaries of travel, it is amazing when one reads about migrants that have been moving from the Arctic to South America and back again to the Arctic for 10 or more years!

Once young birds have left the nest and can survive on their own, the parents are now ready to migrate or move to a different area. Young birds need to explore, but not for long. They too will flock usually with their own kind and either move in groups or in mass. All birds young and old need to eat to survive and learn where the likely areas are for migrating birds to find food. Remember that young birds are exploring as well as looking for food and do not have the experiences of an adult. Therefore, they will be more conspicuous in many instances than adult birds, but not always.

It has been estimated that from a nest of 6 young, only 1 will survive into the next year. There are many perils that will affect a young bird as it tries to make its way in its new world. It has to eat to survive, it has to move, it has to migrate to an unknown area of the globe, it has to gain experience. Not all birds are born with the same sense, depth of instinct, ability to adjust and learn about how to survive; and simply, some have better luck than others.

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By Dick Harlow

FALL FOLIAGE



Fall color © Dick Harlow

As much as we love watching the change of fall colors in the forests of Vermont and the trees in our neighborhood, have you ever wondered what is the science behind this change?

Deciduous trees grow new leaves during the spring of the year and lose those same leaves come September or October of the same year. Increase in stems and trunk width are all due to the leaves conducting photosynthesis and producing energy. Come fall that must all come to an end so that the tree can rest and become dormant during the winter. There must be something that acts like a trigger to put in motion the development of change, putting the tree into winter rest.

The leaf conducts photosynthesis which produces sugar which forms carbohydrates. The main vehicle inside a plant that allows photosynthesis to function is chlorophyll, a green pigment that uses sunlight energy at a specific frequency. Within this electromagnetic radiation spectrum there is a visible spectrum that can be seen by the human eye; all the rest cannot be seen. The wavelengths run from 400nm to 700nm within this visible spectrum. Without going into too much detail each color in the visible spectrum exists at a particular frequency or wavelength. The longest wavelength is red and has the least energy and the shortest is violet/purple and has the most energy. Red is at 700 nm and purple is at 400nm.

Consequently, over time, the evolution of plant leaves develops other energy sources of plant pigment colors that allow for photosynthesis to occur within other color frequency ranges. Even though green is the dominant color, reds, oranges and yellows hidden under the green color are also producing energy for the tree. Not until green chlorophyll is absorbed via changes to its molecular structure due to freezing or the change in daylight of the day length cycle of the season, will other colors become visible.

Cold weather and frost speed up this pigment breakdown. We see the active color change of yellows, reds, oranges and every hue in between as a beautiful scenery change; when in fact the result is due to biochemical reactions in the seasonal development of deciduous trees and some plants. Once all the pigments are degraded the leaf turns brown and falls to the ground.

Hope you enjoyed the fall colors. Vermont is renowned for having beautiful fall foliage.

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Note: Please disinfect your bird feeders before putting them out this Fall and Winter. It is easy for birds to pick up disease from feeders.

Make a weak solution of Clorox, then rinse thoroughly. Or, you can purchase bird feeder cleaners, e.g. from Amazon or other stores.

Many Thanks.

OBSERVATIONS

MAMMALS

Coyote

Gray Squirrel

Weather Tidbits

Month of NOVEMBER 1-30, 2019

All Measurements taken at solar noon (1230 EST).

PRECIPITATION

Total Precipitation: 121.6 mm or 4.8 inches, which is 1.65 inches above normal.

November Average for Middlebury is 3.15 inches

Overcast Days: 18