JANUARY 15 - 31, 2019 NATURAL HISTORY NOTES
By Dick Harlow

SNOW/ICE

Deer-meadow snow scene at EastView,
© Dick Harlow

Snow is beautiful to look at, although it can be difficult to travel through either by foot, car, skies or snowshoes. When it gets too cold, we can pop into our apartment or cottage and be nice and cozy warm. If during the winter we need to travel, we can ride in a car, train, bus to our destination warm and content; wildlife, on the other hand, have to travel by their own power.

However, my intent here is not to talk about us, but to explain the trials and tribulations that some wildlife have to go through to survive the winter.

Life is not that simple for wildlife that live outside our windows. Birds, and mammals that don't hibernate in the winter, have to survive. They have to find food, which isn't easy when there is ice and snow on the ground.

As mentioned in the last Field Notes, first order consumer, otherwise called plant eaters, require plant products all year. Unless one only survives for the summer there has to be a mechanism for survival during the winter. Since many 2nd order consumers depend on 1st order consumers for their sustenance, this note is on those 1st order consumers such as field rodents and garden rodents who take up residence in our gardens, lawns and under our sheds during the winter.

Plants either go dormant or die during winter in the Northern Hemisphere. Therefore, for a 1st Order Consumer it has to be able to store collected plant products or be in a safe place underground where it can feed on plant parts as well as stored remains of plants.

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Meadow Vole, *Microtus pennsylvanicus*, on snow,
© Tomi Tapio/Foter

Snow helps! A cover of snow over the ground allows a mouse or vole to make tunnels under the snow which helps in protecting its whereabouts while searching for food. Tunneling is easy for a rodent. However, if snow turns to ice, then tunneling becomes difficult or impossible.

To our way of thinking, animals instinctually, for the most part, are able to expend enough energy, but not too much energy, to reach a projected goal. However, if the animal is starving it could die expending too much energy trying to obtain food by clawing through or trying to dig through ice.

Will plant roots and dead leaves provide enough sustenance to a rodent for the winter. No! Mice and Voles could get by for the most part, but they also need seeds and plant parts that have been stored by them over the fall.

Meadow Vole in snow, © Dick Harlow

Therefore, residence has to be established in a safe spot; a cavity needs to be dug underground where plant parts can be stored. All of this activity of digging cavities and tunnels in grass and dirt, collecting and storing seeds, leaves, plant remains takes energy and makes noise. Ah, noise and odor (i.e. urine) are the bane of a rodent's existence. These are the very tell-tale features a predator smells, hears, and looks for to find food. Much easier to accomplish with sharp eyes, a good nose and excellent hearing!

SNOWY OWL

One of those predators that feeds on voles or mice as well as other prey is a Snowy Owl. They have very sharp eyes and acute hearing. They see movement in the field, on top of the snow or smell a vole's urine trail. Whatever the case, this is one predator we have here in New England only during Winter.

Snowy Owl, *Bubo scandiacus*, © Dick Harlow

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We are not lucky every year, but in the past six winters at EastView, I have witnessed Snowy Owls in Addison County four of those six years.

It should be understood that the Snowy Owl is one of the most efficient evening predators on our continent.

Because we see the Snowy Owl out in the open during the day, we tend to think of them as hunters during the day. That is the furthest from the truth. The Snowy Owl rests during the day and hunts during the night. It eats lemmings in the Arctic where it nests and is dependent on lemmings. When it moves south during the winter, either in southern Canada or northern US, its food choice changes from lemmings to rodents, such as voles and mice and also along the coasts of sea, lake or pond, ducks, roosting shorebirds or seabirds.

We know this because of the research by Scott Weidensaul. He was the speaker at the Otter Creek Audubon dinner gathering at the Kirk Alumni area at Middlebury College November 8.

Scott Weidensaul is a renowned author, naturalist, and Hog Island Audubon Camp instructor. The Snowy Owl irruption of 2013-2014 became a source of excitement because we/I saw so many owls during that period. I saw 27 Snowy Owls in one day!

When there are that many owls in the Champlain Valley, as well as in other parts of the eastern U.S., it creates the opportunity for new science discovery concerning the Snowy Owl. What better way than to capture some owls, transfix a GPS recorder which transmits data where and what the owl does over a year. Thus, "Project SNOWstorm was created as an effort to track Snowy Owls in real time using GPS/GSM transmitters. The data gathered from this project has led to unexpected discoveries about the life history of Snowy Owls."

Scott found that this species should have been named the Ice Owl, for the amount of time it spends on ice hunting for ducks and other roosting or sleeping water birds during the winter.

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OBSERVATIONS

MAMMALS

Eastern Cottontail – tracks
Weasel – scat and tracks
Coywolf – tracks
Fox - tracks

Weather Tidbits

Month of JANUARY 1-31, 2019

All Measurements taken at solar noon (1230 EST).

PRECIPITATION

Total Precipitation: JAN 15-31 = 56.0 mm or 2.2 inches. Month = 71.2 or 2.8 inches. This is below normal precipitation, suggesting that most of the snow we received this month was cold dry snow with minimal water content.

1-14 days Overcast: 5

1-31 days Overcast: 19