

## Snow Geese

Eyes to the skies and marvel at their migration.

Mid-December through much of February, when the snow geese migrate to our region, I marvel at the length of their flight formations. More than any other bird in winter, they mesmerize me. Most folks call the pattern a V but I would say it's more of a check mark. In general, one leg of the formation they create is extremely short and the other

often miles long. They are not necessarily a welcome sight to farmers, for these large omnivores can devour all matter of plants, seeds, and roots. They will also eat insects and aquatic invertebrates: not exactly a major component in a winter farmer's field. So if a cover crop is planted, it may soon be breakfast, lunch, and dinner.

The flight formation consists of each individual flying slightly higher than the bird ahead of it. Those in front create a draft and reduce wind resistance for those behind. The elevation also allows the birds to see the ones that are farther up the line. Geese flying in formation can glide more often and use less energy. Leading birds fall back in line as those in the rear progress forward, taking turns in the more strenuous position. Bicyclists use a similar strategy to conserve energy.

Western Cumberland County and parts of Salem are my favorite places to watch these flights. If you are walking through fields in a barren but rolling landscape, you likely will hear the din of their honking before you spy them leaving the ground en masse. The cacophony is often described as sounding like baying hounds. Their rapid elbow clipped wing beat, accented by black tips against their white bodies, is a sight to behold. In bright sun, it can seem very much like a snow blizzard. When thousands rise together, it is hard to pick out an individual bird as they create a storm of confusion, with their bodies and wings a mix.

Snow geese are powerful birds that breed in the remote tundra of Alaska and Canada. Pairs mate for life. The remoteness of their breeding grounds gives them a greater chance at successful production of young. They raise one clutch each year that is incubated for about a month. Chicks leave the nest with their parents one day after hatching. They are considered precocial 2, meaning they are mobile, covered in down, their eyes are open, and they find their own food. Juvenile geese are much like teenagers;

they can eat a lot more than their adult counterparts.

There would not be sufficient time for a second clutch even if one could be produced. "In fact, the young of arctic-breeding geese often do not have time to fully mature before winter conditions return." (Ehrilich, Dobkin, Wheye). The young encounter predation by foxes, eagles, wolves, and polar bears. Since the mid-1900s, their numbers have grown. Climate change could be in part responsible for increasing numbers, in that more young may mature to make successful migrations. Hunting regulations through most of the 20th century were conservative; however, in the 1970s bag limits became more liberal as wildlife managers sought to keep numbers in check. Today, bag limits and seasons continue to be even less restrictive. The Atlantic Flyway Council determines migratory game bird management actions and makes recommendations to the U.S. Fish and Wildlife Service each year.

Snow geese disperse from breeding grounds and eventually migrate south for the winter. North America is divided into four major migratory flyways for waterfowl: Pacific, Central, Mississippi, and Atlantic. Flyways are somewhat like aerial highways for waterfowl such as geese and ducks that make use of the skies as well as the habitat beneath. The Atlantic Flyway includes all the coastal eastern states in the U.S. and all of New England, as well as eastern Pennsylvania and Virginia. The Atlantic Flyway where we live is the most urbanized and populated of the routes. So here, habitats are the most threatened and the need for conservation is especially critical.

Although there are concerns about the overabundance of snow geese, their beauty is clearly striking. My uncle, William Morton, wrote a poem about geese that is a real favorite of mine. Here are a few of his lines: "Each V that plows the sky. Regard those few, who bear the

spark, the instinct of migration...
The man who does not raise his eyes has surely lost his soul." Join me in being transfixed by the snows.