

# Canada Geese in New York

## RESIDENTS OR VISITORS?

BY JOSHUA STILLER | PHOTOS PROVIDED BY AUTHOR

Often viewed as a sign of the changing seasons, V-shaped lines of migrating Canada geese have annually passed through New York since pre-colonial times, en route to northern Canada after wintering in their southern range (or vice versa). Their presence here was once that of a passing visitor during fall and spring migrations; however, today it is difficult to escape their distinctive honk, as they have established themselves as year-round residents. Depending on your viewpoint, they can be a welcome guest and a great opportunity to experience wildlife up close, or, if you've ever stepped in something they've "left behind" in a local park, you've experienced a common problem that causes some people to deem them a nuisance.

Part of the reason for the conflicts between people and Canada geese is the tremendous ability of these birds to adapt to human disturbance and thrive. But to fully understand what causes the public's varied views on these birds, it is important to understand the complex history of the species, their subspecies, and how their populations are managed at state,

national, and international levels. When it comes to these birds, not all geese are the same, even though they may look it.

In the early 1900s, Canada geese in the Atlantic Flyway bred almost exclusively in Ontario, Quebec, and Newfoundland and Labrador. The only nesting geese found in New York State were likely the offspring of the small number released by private individuals.

Canada geese have a complex taxonomy, or classification scheme, and during the past 50 years, there have been many changes to their taxonomic tree.

Currently, the species is differentiated into seven subspecies (Note: At one time, there were thought to be eleven subspecies; however, the four smaller varieties were different enough to be reclassified as a separate species entirely—the cackling goose).





While they may be difficult to tell apart, three distinct subspecies of Canada geese are frequently encountered in New York. Two are migratory populations: interior Canada geese (*Branta canadensis*, the Atlantic Population) and Atlantic Canada geese (*B. c. canadensis*, the North Atlantic Population). The third is a resident: the Atlantic Flyway resident Canada goose, which is a mixture of various subspecies. The resident subspecies is the most abundant and the most frequently associated with nuisance situations in New York.

Historically, Atlantic Canada geese bred in the U.S. portion of the Atlantic Flyway; however, these birds were extirpated (regionally wiped out) from the U.S. during pre-colonial times. The resident geese presently breeding in the eastern U.S. are the result of private and government stocking efforts to reestablish nesting Canada geese during the early 1900s through the 1960s and 1970s.

Although there are only minor differences in their physical appearance, the many subspecies have very different life histories. About the only thing they have in common is that they all migrate to some extent, making the term “resident” a bit of a misnomer. The resident Canada geese that nest in New York do indeed migrate, most notably during the summer.

Around the time of the summer solstice (June 21), you may have noticed large flocks of Canada geese heading north. These birds were adults that failed to successfully nest or were too young to breed (1–3 years old). Many migrate up to 1,500 miles north of where they started, taking advantage of high-quality food resources in northern Quebec and Ontario. Others will travel shorter distances and settle in New York and adjacent states. Then, like clockwork, they begin to return to their normal breeding areas during the third and fourth weeks of September. Their last big movement of the year happens in the inland areas, when ice forces them to move; however, in this situation, they typically only go as far as they have to, seeking open water and accessible food.

In New York, the cards are stacked heavily in favor of resident Canada geese thriving, while migratory geese must deal with many challenges. Resident geese have the luxury of breeding in a temperate climate with few significant predators. Rarely does weather have a major impact on productivity, and adults can re-nest multiple times if their first clutch is destroyed by predators or severe weather events. Resident geese can also put on considerably more weight and tend to exploit areas where their chances of encountering predators (including humans) are far less. By staying in the same area for longer periods of time, these long-lived birds learn how to avoid predators and hunters.

In contrast, migratory geese that breed in northern Quebec are migrating to and breeding in areas that don't even thaw by mid-June. As such, their window for a successful breeding season is much smaller. For example, on June 19, 2018, geese breeding on the Ungava Bay in northern Quebec (Atlantic Population) arrived to mostly frozen waterbodies with heavy snow cover and temperatures between 30°F and 40°F. By comparison, resident geese in the Albany area of New York were able to enjoy lush green grass, artificial feeding from people, and temperatures in the 60°F to 70°F range. In addition, when migratory geese move through New York, they are relatively unfamiliar with the landscape and area, leading to higher mortality than their resident counterparts.

Every year, biologists from the Canadian Wildlife Service and partnering Atlantic Flyway U.S. states (including New York) travel north to the breeding grounds to band migratory geese to learn how many of the young geese are reproducing. In 2018, the majority of migratory geese either failed to nest or didn't even make an attempt, and biologists banded a record-low 30 goslings compared to 3,839 adults, or 0.01 goslings per pair. The number of juveniles per adult pair gives biologists information on productivity. Conversely, in good years, like 2005, migratory geese can be very productive—banding crews marked 1,209 adults and 2,022 goslings. But such boom years only happen occasionally for migratory geese, whereas resident geese encounter high quality breeding conditions and have tremendous reproduction on an annual basis.



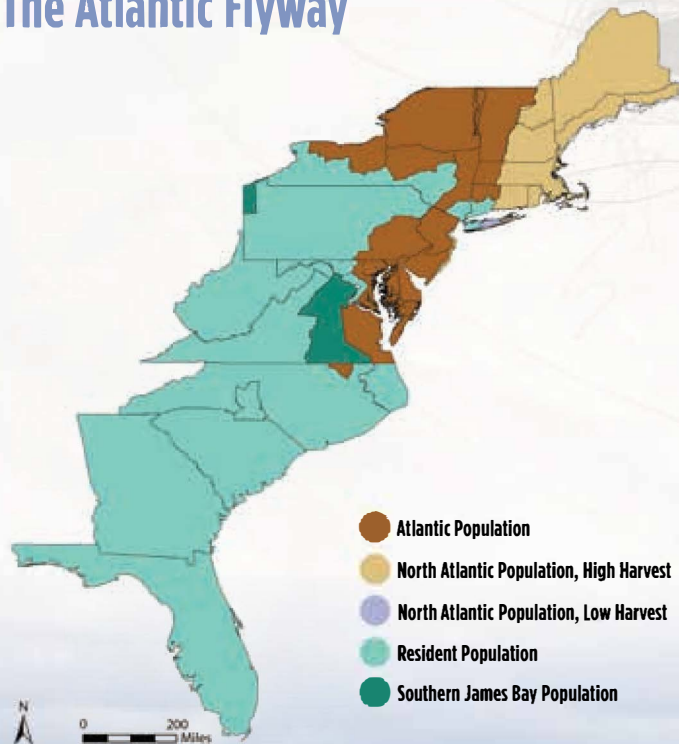
**Biologists band birds to determine survival rates (the proportion of the population that survives from one year to the next), harvest rates (the proportion of the population taken by hunters), and reproductive success (the number of young produced per adult).**





Resident geese enjoy lush green grass, food handouts from people, and a predator free environment.

## The Atlantic Flyway



Canada goose hunting zones in the Atlantic Flyway identify which population is considered when biologists establish annual hunting regulations. Areas managed based on migratory Canada goose populations (Atlantic, North Atlantic, and Southern James Bay populations) typically have more restrictive seasons compared to the light green areas that are managed based on the population of resident Canada geese.

Resident Canada geese have also adapted in a number of ways to take better advantage of their easier life. Unlike migratory subspecies that take four to five years to sexually mature, have small clutches of three to five eggs, and achieve variable nest success, resident geese can breed at just two to three years old, lay five to seven (or more) eggs, and generally enjoy consistently high nest success.

Because of the differences in the life history traits between resident and migratory geese, and the fact that their ranges during the fall and winter heavily overlap, managing their populations is exceedingly challenging from both a regulatory and a public perception standpoint. Wildlife professionals primarily manage game species populations through regulated hunting. This can be complicated in New York, as there are nine Canada goose hunting zones with different season dates and bag limits depending on which geese are migrating through and being harvested in each zone.

Hunting zone boundaries were developed using data from band recoveries, neck collar observations, and satellite telemetry studies over the past 30 years. In areas where few migratory geese are harvested, DEC and the U.S. Fish and Wildlife Service can create more liberal seasons, both in terms of bag limits and season length. During the 2019–2020 hunting season, these zones are allowed up to an 80-day season, with a 5-bird bag limit. However, in areas where higher numbers of migratory geese are harvested, the bag limits are more restrictive. The seasons in upstate migratory zones (Atlantic Population) are restricted to a 30-day season and a 2-bird bag limit; restrictions that have been put in place due to a steep decline in their breeding population and several years (7 of the past 10) of poor

Migratory geese face tough conditions on the breeding grounds in Canada.



## STAFF SPOTLIGHT

### Josh Stiller—A Life of Birds and Bills



When he was young, Josh Stiller's parents would take him and his siblings to Iroquois National Wildlife Refuge each spring to watch Canada geese and ducks fly back from their wintering grounds. It clearly left an impression on him, fostering his love of birds and nature.

Josh earned a bachelor's degree in wildlife management from SUNY Cobleskill, spent a few years as a seasonal technician at DEC, and went on to get a master's degree in fish and wildlife management from SUNY ESF (College of Environmental Science and Forestry). In 2011, he began working full-time at DEC as a wildlife biologist on Long Island, and in 2015, moved into "the position I wanted since I was young"—a migratory game bird biologist in DEC's Central Office. Josh now coordinates statewide migratory game bird management and research programs, and represents New York on the Atlantic Flyway Technical Section, a multi-state advisory group of wildlife biologists who develop management recommendations for the East Coast migratory bird route.

Like many of his colleagues, Josh may have found his dream job, but it took a lot of effort, including working long, odd hours in challenging conditions, and many volunteer hours to get his foot in the door, but he believes it was worth it. "Any day I get out in the field is a good day," he says, noting that times he can go out with project collaborators or graduate students are "a rewarding experience."

Josh also takes great satisfaction every time he and a team complete a research project that adds to their collective knowledge and understanding of a bird species. He will soon be traveling near the Arctic Circle as part of a five-year collaborative project that will involve helicopter trips to corral and band flightless Atlantic brant, cackling geese, and snow geese on their breeding grounds on Baffin Island, the largest island in Canada.

Josh is an avid outdoorsman and enjoys being out on the water fishing, duck hunting, or just relaxing in nature. When asked why he became interested in waterfowl, Josh cites a quote from Aldo Leopold: "To arrive too early in the marsh is an adventure in pure listening..." Such focus may offer some balance to Josh and his wife, who are "obsessive" fans of the New York Mets and Buffalo Bills—in fact, they had a Bills-themed wedding.

productivity due to the weather up north. Downstate, the Long Island seasons (North Atlantic Population) are 60–70 days with a 2-bird bag limit. The goal of such complex regulations is to maximize the harvest of the overabundant resident population, while ensuring the migratory populations remain abundant.

Managing Canada geese in North America will always be a challenge due to the complexities of managing populations and subspecies within the larger complex of Canada geese. Their overlapping ranges ensure there will always be situations where regulations are more restrictive to protect migratory geese even though there are many resident birds in the same area. Unfortunately, the situation often leads to confusion and frustration. As we move forward, DEC and wildlife agencies throughout the country will continue to explore innovative ways to reduce resident Canada goose populations to levels that are more compatible with the social carrying capacity (i.e., the number of geese people are willing to accept on the landscape).

In the meantime, it's important to recognize and enjoy the good qualities of this species. It is one of the great success stories in wildlife conservation. Canada geese were brought back from the brink of extinction due to the efforts of people and wildlife agencies across the country that wanted to ensure the birds' ubiquitous honks will continue to be heard throughout North America.

So if you see or hear Canada geese, know that DEC and its partners are working to properly manage the population. And, don't forget to watch where you step.

**Joshua Stiller** is a Wildlife Biologist in DEC's Albany office, specializing in migratory game birds.

John O'Connor

