A DECADE OF SNOWY OWLS AT LOGAN AIRPORT

by Norman Smith

Each fall, as the cold Arctic winds, snow, and ice begin to secure their grip on the far northern landscape, a number of Snowy Owls begin their journey south. It is hard to imagine that a place like Logan Airport in East Boston, Massachusetts, with all its activity, megadecibel sounds, and constant jet fumes, provides one of the best locations in the state to encounter these magnificent raptors. The Snowy Owls usually arrive in early November (earliest date: October 24), and depart in late April (latest date: July 7).

Since 1981 I have spent countless days and nights in every imaginable weather condition observing and banding Snowy Owls and other raptors that inhabit the airfield at Logan Airport. My two assistants, thirteen-year-old daughter Danielle and ten-year-old son Joshua, have also put in a tremendous amount of time on this project. Over the years, we have observed, trapped, banded, and color-marked owls and have collected over 5000 Snowy Owl pellets.

The number of owls that comes through each winter has varied over the years, from a low of about five in the winter of 1980-1981 to a high of about forty-nine in 1986-1987. Because we do not go to the airport every day, some owls probably pass through that we never see, which would make our totals somewhat low. On January 11, 1987, we had a record high count of twenty-three different Snowy Owls on the airfield at one time. Perhaps they are attracted to Logan because of the 1800 acres of short- mowed rolling grassland habitat that looks very much like their home in the tundra and because of the Norway rats and other numerous prey items available.

Snowy Owls are the largest owl that regularly winters in Massachusetts. Males and females can usually be distinguished by the differences in their plumage. The females are typically larger and have more dark barring than the males, and the immature birds are the darkest of all. I have also seen at least one dark adult male and several very light plumage adult females, indicating that one cannot always sex them correctly without taking weight, wing, and tail measurements. No two Snowy Owls look the same in plumage, size, and shape, and no two owls have the same personality. All Snowy Owls have ear tufts but rarely hold them erect. They like to roost on the ground during the day but always remain aware of their surroundings. As the sun begins to set, they become very active and, like most other nocturnal owls, do most of their hunting at night. They will also hunt during the day, particularly if an easy meal presents itself. On the Arctic tundra where Snowy Owls breed, there are times of the year when the sun never sets, making hunting by daylight essential.

When hunting, Snowy Owls like to sit on an elevated perch or use a

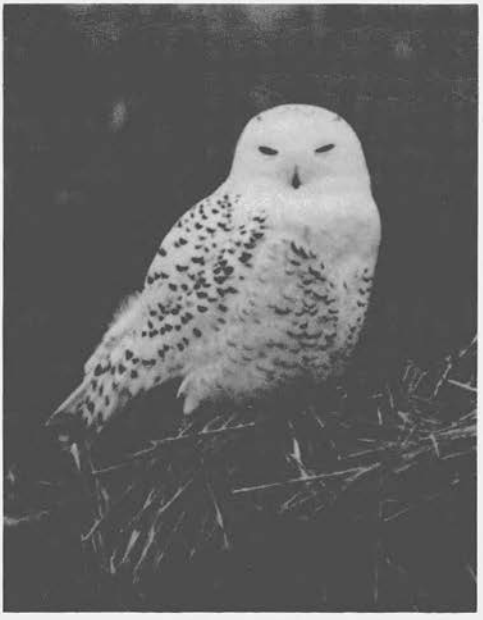
hovering method similar to American Kestrels or Rough-legged Hawks. They are surprisingly quick for such big birds, hunting much like a large falcon pursues and captures its prey while in flight. We have watched them outmaneuver and capture Snow Buntings and overtake Black Ducks in flight. Norway rats are by far the most common prey item taken. Other prey have included voles, muskrats, skunks, insects, fish, small birds, waterfowl, a Clapper Rail, an Upland Sandpiper, an American Oystercatcher, American Kestrels, a Northern Harrier, Short-eared Owls, and a Barn Owl, and we have even photographed them feeding on another Snowy Owl and a Great Blue Heron.

These birds have incredible vision, far better than I could have imagined. Late one afternoon while the sun was disappearing into darkness, my daughter and I were about to leave Logan when we noticed through our binoculars a Snowy Owl perched in a tree across the harbor in Winthrop. My daughter tried to convince me to capture the bird and band it. I was the one who had read many books and papers on owl vision: I knew that owl eyes lack the ability to magnify objects at a distance, and it therefore would be a waste of time. As she continued to tell me I was missing an easy opportunity to catch that Snowy, I set the bow net with a starling as a lure to show her how wrong she was. By this time, it was very dark, and I could barely make out the speck in the tree with my 10 x 50 binoculars. In less than thirty seconds the owl was sitting in the middle of the trap, causing me to lose my credibility with my assistant, and, to this day, I still have not heard the end of it.

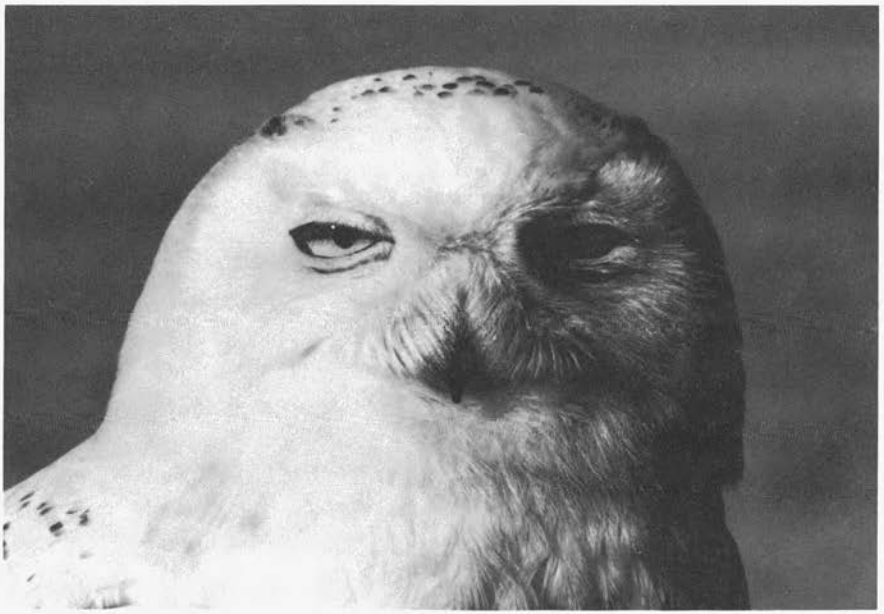
Last winter, Danielle, Joshua, and I watched an adult male Snowy Owl hunting after a snowstorm had deposited eight inches of new snow on the airfield. The owl was perched one hundred feet from us on the top of a small bush and kept staring at the undisturbed snow in front of our vehicle. After several minutes, he left the perch, flew toward us, plunged into the snow just five feet in front of our parked vehicle, and came up with a vole. All three of us could not believe how the owl knew the vole was under the snow cover. He must have heard it moving, despite all the noise of jets taking off and landing. How well can Snowy Owls hear? No one knows.

One way we gather information on the owls is to live trap them using a bow net. Extreme care is used to make sure that capturing the owls will in no way harm or injure them. The birds are banded with U.S. Fish and Wildlife Service bands, weighed, and wing and tail measurements taken. External parasites are collected, and the overall condition of the birds checked as well. In years when we observe many owls, most of them are immature birds and appear to be in good health. This observation leads me to believe that there was a good food supply on the breeding grounds, which in turn resulted in good numbers of young and an abundance of Snowy Owls here. In years when few Snowy Owls are observed, a higher percentage tend to be adults that are often underweight, which perhaps means that food was scarce on the breeding grounds and few

A Gallery of Snowy Owls



Photos by Norman Smith



young were produced, thereby resulting in fewer owls wintering here.

Over the past twelve years, we have banded 186 Snowy Owls at Logan, most of them immature birds. Five of the banded owls returned to the airport the following winter, and one returned six years later. Two birds banded at Plum Island also showed up at Logan one year after they were banded. Other recoveries have included a Snowy Owl live trapped one year later in Collinewood, Ontario, by another bander, one captured at the Toronto Airport the following year, and one shot in Chisasibi, Quebec, a year after it was banded.

In an effort to track individual birds, we started color marking the back of the owls' heads in 1988. We originally marked the owls on the chest, but it seemed that the birds rarely faced us, and we could never see the marks. Danielle came up with the idea of marking them on the back of the head. Her reasoning was that no matter which way the owl sits, eventually it would turn its head in every direction to look for intruders and reveal its mark. Also, the color would not be visible when photographing the bird from most angles. A temporary dye, which lasts approximately six months, is painted on the back of the owl's head. Each bird is uniquely marked with either a single color or a combination of colors (one over the other or side by side). By marking the owls, we can tell how long they stay at Logan and, sometimes, track their movements elsewhere. Besides Massachusetts, we have received reports of color-marked birds from Maine, New Hampshire, Vermont, Rhode Island, Connecticut, Long Island, New York, and Delaware. If you should see a color-marked Snowy Owl, note its location, date, colors, and duration the bird is present, and contact either Simon Perkins or Wayne Petersen at the Massachusetts Audubon Society headquarters (617-259-9500).

Most of the owls that come to Logan generally stay for a short period of time and then disappear, often returning later in the season. A few have stayed at Logan for the entire winter. One of the most interesting owls was a bird we caught at the airport on November 9, 1991, and color marked green. It was seen near Bath, Maine, on December 19, 1991, and later photographed during their Christmas Bird Count. On January 24, 1992, the bird was back at Logan. It was then sighted on Martha's Vineyard on February 2, 1992, and in Rhode Island at the Ningret Wildlife Refuge on February 25. The lighthouse keeper at Boston Light reported it sleeping on a rock next to the lighthouse on March 16, 1992. The bird was back at Logan on March 23, and was seen on a regular basis until it departed on May 20, 1992.

In the future I would like to secure funding to place radio satellite transmitters on several wintering Snowy Owls. Transmitters would track these birds year round and determine where they spend the summer, what their migration routes are, and whether they choose the same destination each year. Such a study would illustrate how nomadic these owls really are.

I have been fortunate over the past decade to have the unique opportunity to observe these beautiful creatures both at Logan Airport and Barrow, Alaska, where I was privileged to travel with Denver Holt, director of the Owl Research Institute, Missoula, Montana, to assist in capturing and banding Snowy Owls on their breeding grounds in the summer of 1992. The participation of my two young "assistants" in this project has given me a new appreciation for how energetic and resourceful young minds can be. I realize now, more than ever, how important it is to provide education about our environment, especially to our children so that they can learn to appreciate, protect, and preserve it for us as well as for future generations.

NORMAN SMITH is a self-taught naturalist who has worked for the Massachusetts Audubon Society (MAS) for twenty years. He is the director of the Blue Hills Trailside Museum and Chickatawbut Hill Education Center, which is operated by MAS for the Metropolitan District Commission. He has assisted Nature Science Network with two video tapes produced for the National Audubon Society, "Hawks Up Close" and "Owls Up Close." During the past twenty-five years, he has rehabilitated injured raptors and successfully reintroduced over 600 orphaned hawks and owls of various species into foster nests. Norman continues to pursue raptor research projects, trapping and banding migrating and nesting hawks and owls in the Blue Hills Reservation, and monitoring the Snowy Owl population at Logan Airport.

SPRING HAWK WATCH

The Eastern Massachusetts Hawk Watch (EMHW) encourages everyone to hawk watch this spring. Prime spring migration time is from mid-March to mid-May, with the largest numbers of hawks seen from mid-April through early May. We seek hawk reports from anyone seeing numbers of hawks at any time, or who has hawk watched for an hour or more and sees few, if any, hawks. We are also organizing coordinated coverage for the weekends of April 16-17, 23-24, and April 30-May 1. If you are able to hawk watch for part of a day or longer on one of these dates, please contact Paul Roberts (see below). We also seek observers able to commit in advance to hawk watching on Plum Island in Newburyport, Wachusett Mountain in Princeton, or Mount Watatic in Ashburnham at any time during the last two weeks of April and the first week of May.

To receive more information on the spring hawk watch, including a Spring 1993 EMHW Migration Report and directions to a number of convenient hawk watch sites, or to obtain report forms, call Paul Roberts at 617-483-4263 (after 8:00 PM) or write him at 254 Arlington Street, Medford, MA 02155.