Prized for ages by coastal hunters; considered by many to be the king of ducks on the Atlantic flyway; once the predominant duck in the hunter’s bag. All describe the American Black duck, *Anas rubripes*. Unfortunately, black duck numbers have recently declined by as much as 60 percent in some areas, while remaining stable in others.

When this happens, biologists question why. What’s happening in certain areas to cause wildlife numbers to drop, and can something be done to correct the situation? Such is the dilemma facing biologists with regards to the American black duck, a close cousin of the more common and ubiquitous mallard.

In 2004, staff from Ducks Unlimited’s (DU) Great Lakes/Atlantic Regional Office began questioning why black duck populations were seriously declining in many of its wintering areas along the Atlantic Coast, but remaining relatively stable on New York’s Long Island. What was it about Long Island that allowed black duck populations to thrive, while other populations along the Atlantic Coast and many inland locations had declined? And could knowing the answer prevent further decline, or better yet, reverse it?

To answer these questions, DU, a science-based wetland conservation organization, helped initiate a study of black ducks on Long Island. The goal was to examine black ducks’ breeding and wintering habitat, and food availability.

Before the black duck study began, several possible explanations were given for the regional decline. A commonly accepted factor was loss of wintering habitat, specifically Atlantic Coast marshes.

These marshes were critical for wintering black ducks, and by 1940, 90 percent of the salt marshes between Maine and Virginia were ditched and degraded. This meant fewer available wintering sites for black ducks, as well as reduced food resources.

To determine which type and how many acres of coastal wintering and staging habitat are required to
support black ducks along the Atlantic Flyway, DU needed to obtain several important pieces of data, including winter habitat use in coastal marshes, food availability and depletion over time, and a landscape analysis of habitat availability.

Tracking Birds

The initial study was centered on Long Island, a traditional wintering and staging area for black ducks, and importantly, an area where black duck numbers have been stable. The study had two major components: food depletion and habitat use. By documenting the rate of food depletion over the season, biologists could determine when food resources became limited. Likewise, discovering how these birds used the available habitat enabled biologists to note important wetland types for black ducks.

In November 2004, biologists set swim-in style traps at three locations: Smithers/Hubbard County Park, near Flanders; Wertheim National Wildlife Refuge, in Shirley; and the John F. Kennedy Memorial Wildlife Sanctuary in Oyster Bay. In the following month, biologists captured 30 black duck hens, gave them leg bands, and fitted them with radio transmitters.

To monitor habitat use, black duck hens were followed from capture through their departure from Long Island. Early results showed that black ducks spent most of the winter resting, loafing or feeding. Salt marsh and mudflats were most often used for feeding, while freshwater habitats, open water bays, shoreline habitats and brackish water habitats were used for resting and loafing.

During December 2004, eight hens left the area. After a mid-January blizzard hit the island, two more hens left and never returned. One of the 10 missing hens was located in New Jersey by biologists conducting a flight search over Long Island, the New Jersey coast and portions of Connecticut in mid-February. Periodic searches and daily scans failed to locate the remaining birds. Biologists suspect that these hens flew further from the study site, perhaps as far as Chesapeake Bay.

Returns of leg bands indicated that two hens were taken by hunters during the Long Island waterfowl season, and two others were taken during hunting seasons in Maine and New Brunswick. Another six hens were lost within a week of the blizzard; three of their carcasses were located before they were disturbed by scavengers. Necropsies performed at Southern Illinois University demonstrated that starvation was the cause of death for all three.

The study showed that black ducks spent most of their time eating and sleeping during the winter.

In the winter of 2005-2006, the highest-use areas were salt marsh and freshwater habitats. However, the refuge impoundments were open throughout most of the season, resulting in an increased use of these areas. Interestingly, many of the streams used by the radioed hens during the first field season were also occupied by them in the second year of the study.

Hens mostly fed in mudflats and salt marshes, whereas they slept and loafed in fresh and brackish water habitat. Not surprisingly, most invertebrate foods are found in mudflats and salt marshes. The ducks' feeding habits were timed with the tides, except during hunting season when they spent most of the day hiding in protected areas and feeding after dark.

More to Learn

Additional study sites in Virginia and New Jersey offer the opportunity to examine how food resources, habitat use and behavior differs over the flyway. To ensure long-term region-wide survival of black ducks, it may be critical for managers to provide undisturbed, food-rich habitat on a flyway-wide scale. This would allow birds to move out of an area when severe weather hits and into another area where they can still meet their energy demands for survival, migration and nesting.

So, what began as a study of a single area (Long Island), has expanded to include two additional study sites to address wintering issues on a larger scale. Hopefully, findings from these additional studies will provide the answers to why certain black duck populations are on the decline.
For more information on DU’s Long Island study, and to follow black duck hens banded in New Jersey and Virginia, visit DU’s website: www.ducks.org, then search for the black duck study.

Montezuma Black Ducks

Another DU project with the potential to benefit black ducks in New York focuses on habitat restoration in and around Montezuma National Wildlife Refuge. Here, DU is working with the U.S. Fish and Wildlife Service to implement a habitat restoration plan that will benefit waterfowl populations as well as public uses such as waterfowl hunting and wildlife observation.

As the benefits of wetlands become more evident to wildlife managers, increased numbers of mucklands are being restored in central New York’s Montezuma Wetlands Complex (MWC). The 50,000-acre MWC is one of the largest and most important wetland complexes in the Atlantic Flyway. The MWC is an ongoing cooperative project that has been funded by a combination of Environmental Protection Fund, Bond Act, private conservation organization donations, and federal funds. MWC is a priority in the State Open Space Conservation Plan. This year, another 500 acres are being prepared for the transition back to wetland, in an effort known as the Foster Malone project. Using the same tools as farming—berms, pipes and pumps—work is being done to restore the hydrology to MWC’s muck fields. The very important and obvious difference is that water is held in, rather than being forced out. Existing berms will hold the water in and a pumping station will provide additional water as needed from the adjacent Seneca River.

There are thousands of acres just like the Foster Malone project which need to be protected and restored in the MWC to ensure available habitat for waterfowl and many other wildlife species. Like other mucklands previously restored, the Foster Malone project can be expected to abound with waterfowl and other wildlife and diverse wetland vegetation as soon as wetland hydrology is restored.

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American Black Duck

The American black duck is native to the eastern United States and Canada. Approximately the size of a mallard, black ducks are sooty-brown in color with slightly lighter heads. Although similar in appearance, male black ducks have a yellow bill, while female black ducks have a mottled dull-green bill. On both sexes, the speculum is an iridescent violet-blue with black margins and the white underwings are visible while in flight.

Black ducks are most common in the Atlantic and Mississippi Flyways, with most birds distributed along the Atlantic Coast from the Maritime Provinces of Canada, inland to Hudson Bay, and south to Florida and the Gulf Coast. They are most abundant on coastal wetlands along Lake Erie, in central Quebec and the Maritime Provinces in Canada. High concentrations of wintering birds can be found on the mid-Atlantic Coast, between Long Island and North Carolina.

About Ducks Unlimited

Ducks Unlimited was organized in 1937, after the winds which created the Dust Bowl began. At that time, many acres of prairie wetland habitat had been drained and lost to agriculture, and with them went the promise of generations of waterfowl. A group of early conservationists realized that the majority of North America’s waterfowl bred in the Canadian prairies and created an organization to raise money for waterfowl conservation in Canada and the U.S. Today, Ducks Unlimited works to conserve, restore and manage wetlands and associated habitats for all of North America’s waterfowl. The habitats benefit not only ducks, but other wildlife and people as well. Visit Ducks Unlimited online at www.ducks.org for more information.