

SPECIES PROFILE

American Black Duck

Anas rubripes

Federal Listing: Not listed

State Listing: Not listed

Global Rank: G5

State Rank: S4

Author: New Hampshire Fish and Game

ELEMENT 1: DISTRIBUTION AND HABITAT

1.1 Habitat Description

American black duck breeding habitat includes a variety of coastal and freshwater habitats, including brackish marshes, estuaries, river, lake, and pond edges, forested swamps, bogs, beaver ponds, emergent wetlands, and open boreal and mixed hardwood forests. Nests are usually laid on the ground and may be a mile from water. Wintering habitat includes brackish marshes bordering bay, estuaries, and open water areas on freshwater rivers and ponds (DeGraaf and Yamasaki 2001).

The black duck diet varies greatly with habitat. In marine habitats, black ducks feed primarily on mollusks, and in fresh water they feed mostly on aquatic plants. Ducklings and egg-laying females consume significant quantities of protein. Other foods include seeds, acorns, berries, waste corn, crustaceans, and amphibians.

1.2 Justification

Mid-winter black duck surveys indicated that populations were stable over the last 20 years, though wintering black duck numbers have declined dramatically both in total and in the Atlantic Flyway from population numbers in the 1950s (USFWS 2004). The American black duck was ranked as the highest conservation concern (HH) for both Bird Conservation Regions (BCR) 14 and 30 and ranked high Regional priority (rank = 3). The black duck is

the most important harvested duck in Canada and is considered a trophy species in the United States. The black duck was once the most common duck in New Hampshire (Lacaillade 1975), though since 1991 it has been only the third most abundant puddle duck harvested (NHFG duck kill unpublished data).

1.3 Protection and Regulatory Status

- Migratory Bird Treaty Act (1918): listed as game bird
- Federal trust species for the USFWS, United States Department of the Interior, through 50 CFR Part 20, establishes frameworks for migratory bird hunting regulations.
- NHFG, in accordance with RSA 209:6, establishes annual New Hampshire waterfowl hunting seasons in compliance with federal frameworks. See Marsh and Shrub Wetlands and Salt Marshes habitat profiles for habitat-based regulations.

1.4 Population and Habitat Distribution

Black ducks breed from Northern Saskatchewan across Canada east to Northern Labrador and Newfoundland and south to northern Illinois and North Carolina. Wintering populations are found primarily along the Atlantic Coast from New England south to North Carolina but occur as far south as Florida and west to Texas. In New Hampshire, black ducks are found throughout the state and are the third most commonly breeding duck species in the state (Northeast Breeding Plot Survey 2004, unpublished data). Black ducks winter primarily in coastal salt marshes and on Great Bay and are the most common winter puddle duck in coastal marshes (MWS 2005, unpublished data). During spring and fall migration, black ducks are observed statewide but are most common in coastal areas.

1.5 Town Distribution Map

Not completed for this species.

1.6 Habitat Map

Not completed for this species; See Marsh and Shrub Wetlands and Salt Marshes habitat profiles

1.7 Sources of Information

Information on American black ducks was collected from the North American Waterfowl Management Plan (NAWMP), The Atlantic Coast Joint Venture (ACJV) Plan, Long-term Eastern Waterfowl Survey, the federally coordinated Mid-Winter Waterfowl Survey, the Atlas of Breeding Birds in New Hampshire, NHFG survey data, Waterfowl and Their Management in New Hampshire, Atlantic Flyway Waterfowl Harvest and Population Survey data, The American Black Duck Symposium publication, and personal knowledge of the NHFG Waterfowl Biologist.

1.8 Extent and Quality of Data

North American waterfowl population and harvest surveys were initiated in 1952. The database pertaining to North American waterfowl species, including the American black duck, is one of the most reliable and extensive wildlife data sets in the world.

1.9 Distribution Research

As part of the North American Waterfowl Population and Harvest data sets, annual breeding, wintering, and harvest surveys are conducted throughout the black duck range to monitor population distribution and abundance. Close cooperation between Canada and the United States to maintain harvest parity and coordinate population surveys is critical to the long-term management of the black duck (Atlantic Flyway Council Technical Section-Black Duck Committee).

ELEMENT 2: SPECIES/HABITAT CONDITION

2.1 Scale

Black duck harvest and population monitoring surveys remain an international cooperative venture. Key wintering, breeding, and migratory areas were identified for New Hampshire.

2.2 Relative Health of Populations

The American black duck population in North America and in New Hampshire is considered stable. In response to concerns about the population, flyway harvest restrictions were instituted in the United States in 1983 and in Canada in 1984, and reduced harvest by over 40%. Mid-winter waterfowl survey data indicate that population sizes have remained generally stable during the period of harvest restrictions, and breeding surveys in Canada have shown increases (Kehoe 1990).

Black ducks are the fourth most common breeding waterfowl species in the State (4,346 breeding pairs) and breed in the highest numbers in northern areas (NHFG Waterfowl Plot Surveys 1993-2004, unpublished data). Great Bay and coastal salt marshes winter an average of 1,385 black ducks annually (NHFG Mid-winter surveys [MWS] 1952-2005, unpublished data). A small number of black ducks, 493 per year on average, winter at inland sites generally in open water areas below dams on rivers (NHFG Inland Winter Survey 1988-2004, unpublished data).

2.3 Population Management Status

The USFWS and the Canadian Wildlife Service (CWS) have jurisdiction over harvest regulations in their respective countries. In the Atlantic Flyway, provinces, federal agencies, and all states cooperatively fund and conduct population monitoring surveys that inform annual North American hunting regulations for the American black duck. State and provincial wildlife agencies establish annual hunting regulations according to frameworks established by the USFWS and CWS within the context of the Flyway system of waterfowl management.

2.4 Relative Quality of Habitat Patches

Not completed for this species. See Marsh and Shrub Wetlands and Salt Marsh Habitat Profiles.

2.5 Habitat Patch Protection Status

The NAWMP (1986) and the subsequent ACJV plan were established to conserve the most important habitats for waterfowl (breeding, migration, and wintering). Each state was asked to identify the most

important areas for future protection work. In New Hampshire, 3 waterfowl focus areas were established for to protect habitat for black ducks: Lake Umbagog National Wildlife Refuge (for breeding), Connecticut River Silvio O. Conte National Wildlife Refuge (for migration), and Great Bay National Wildlife Refuge (for wintering).

In all 3 areas, state, federal, and private partnerships provide tens of millions of dollars to protect thousands of acres of waterfowl habitat. In all wetland protection efforts, a minimum 91m (300 ft) wide upland buffer area is also protected to provide nesting habitat for waterfowl.

It is anticipated that significant acquisition of waterfowl habitat will continue in each area. It is also anticipated that the Merrimack River Corridor will be designated as a planning area in a future NAWMP update. The NHFG has protected habitat along the Merrimack River Corridor, and partnerships are being established to conserve thousands of acres of wildlife habitat along the river. The Merrimack River is a significant migration corridor for black ducks and is worthy of a “Planning Status” under the NAWMP. Future efforts will focus on establishing that designation.

2.6 Habitat Management Status

Habitat management and protection in New Hampshire began in the late 1940s. NHFG, in coordination with the Atlantic Flyway Council, began acquiring wetland habitat and constructing low-head water control structures to create and maintain habitat for native waterfowl species, including the American black duck. From the late 1940s through 1983, protection and management of these habitats was made possible by donated property value used to match Federal Aid Pitman-Robertson and Dingal-Johnson monies. In 1983, State legislation was passed which established a State Duck Stamp. Revenues from the sale of \$4.00 stamps and associated artwork are placed in a dedicated account for waterfowl management in the state. Today, NHFG owns or manages 49 State Waterfowl Management Areas, which include over 3,557 ha (8,790 ac) of habitat. Thirty of the Department’s Wildlife Management Areas include water control structures that allow water level manipulations to stimulate the growth of desirable aquatic plants.

Most waterfowl habitat in New Hampshire is in private ownership and is created and managed primarily by beaver (*Castor canadensis*). A healthy beaver population provides the majority of waterfowl habitat in the state for all life stages, with the exception of wintering habitat, which is primarily salt marsh. Historically, salt marsh habitat was degraded by ditching and draining salt marshes for hay production and mosquito control. Today, Ducks Unlimited, along with the other partners in the Great Bay Resource Protection Partnership (NHA, Great Bay National Estuarine Research Reserve, NHFG, TNC, Society for the Protection of New Hampshire Forests, USEPA, USFWS, and the NRCS) have conducted open water marsh management in a number of salt marsh locations to restore various drainage situations to improve black duck habitat.

2.7 Sources of Information

See element 1.7

2.8 Extent and Quality of Data

See element 1.8

2.9 Distribution Research

See element 1.9

ELEMENT 3: SPECIES AND HABITAT THREAT ASSESSMENT

3.1.1 Development (Habitat Loss and Conversion)

(A) Exposure Pathway

The loss or degradation of wetlands will reduce the number of sites available for breeding, wintering, or migrating American black ducks and other waterfowl. Development of upland buffers can reduce water quality of wetlands, increase disturbance to birds, and eliminate nesting opportunities or increase the disturbance or destruction of nests by humans, pets, or subsidized predators (e.g., raccoons).

(B) Evidence

The major threats to bird populations in the ACJV are habitat loss, fragmentation, and degradation. Along the Atlantic Coast, there has been a 76% increase in the human population from 1950 to 2000 (ACJV Plan). New Hampshire is the fastest develop-

ing New England state, and though wetland loss in New Hampshire has been minimal over time (94% of original wetland habitat remains) (NHOSP 1989), the upland edges along marshes, ponds, lakes, and rivers are rapidly being developed (see Marsh and Shrub Wetlands profile-Threats).

3.1.2 Acid Deposition, Non-Point Source Pollution (Runoff and Sedimentation, Chemical Contaminants)

(A) Exposure Pathway

A number of different water quality issues affect the black duck. Acidification of wetland habitats can decrease the amount of invertebrate food required by duckling and egg-laying females (Kehoe 1990). Runoff, including salt, petroleum products, and silt, from increased road development affects water quality, as do fertilizers from lawns that are adjacent to wetlands, lakes, ponds and rivers.

(B) Evidence

Literature on the negative effects of water quality on wildlife is abundant (see Watershed Profiles). At Great Bay, poor water quality because of untreated sewage from coastal treatment plants has resulted in periodic outbreaks of a “wasting disease” that kills eelgrass (*Zostera marina*). Eelgrass is a critical life-cycle component for most fish and wildlife species that use Great Bay (Short 1992).

3.1.3 Predation and Herbivory

(A) Exposure Pathway

Predators, particularly along wetlands where the upland edge has been reduced in size or quality due to development or other causes, can significantly harm eggs, ducklings, and nesting females. Good wetland habitat and upland buffer habitat minimize the effect of predation.

(B) Evidence

In New Hampshire, raccoons, skunks, foxes, coyotes, weasels, mink, snapping turtles, and a variety of hawks and owls prey on ducks and eggs. The raccoon has long been considered the most significant waterfowl predator in New Hampshire, but after the outbreak of raccoon rabies in the 1980s, the raccoon population was substantially reduced. Warm water

fish populations, including largemouth bass (*Micropterus salmoides*), pickerel (*Esox* spp.), and northern pike (*Esox lucius*) can kill ducklings.

3.1.4 Scarcity (Hybridization)

(A) Exposure Pathway

Black ducks and mallards readily hybridize throughout the black duck breeding range. As mallards continue to occupy traditional black duck range in eastern Canada and northern New England, the opportunity for hybridization also increases. There is still significant disagreement among waterfowl experts about the extent and seriousness of hybridization by mallards and black ducks. Where mallards occupy black duck habitat, they tend to do so permanently. Mallards are generally significantly more tolerant of people and their associated disturbances and more tolerant of agricultural practices. It is anticipated that as residential development and agricultural operations expand, the mallard will continue to replace the black duck in breeding habitats.

(B) Evidence

In New Hampshire, mallards over the last 30 years have replaced the black duck as the most common breeding and harvest species. In New Hampshire, during the 1999 to 2002 hunting seasons, 4.3% of the total number of mallards and black ducks shot by hunters were classified as hybrids (Serie and Raftovich 2003).

Competition between mallards and black ducks during the winter is considered minimal in New Hampshire. Black ducks winter primarily in coastal habitats and outnumber the mallard 2.2 to 1. Between 1990 and 2005, wintering black ducks and mallards in coastal areas averaged 1,159 and 526 birds per year respectively (MWS 2005, unpublished data). Mallards winter in much larger numbers on open fresh water sites where they outnumber the black duck 9.7 to 1.0. Between 1988 and 2004, an average of 4,533 mallards per year wintered at inland sites, compared to only 439 black ducks (NHFG Inland Winter Survey, unpublished data).

3.2 Sources of Information

Literature reviews, NHFG and Regional waterfowl surveys, and professional experiences.

3.3 Extent and Quality of Data

The database pertaining to North American waterfowl species, including the American black duck, is one of the most reliable and extensive wildlife data sets in the world. The effects of upland and wetland habitat loss are known.

3.4 Threat Assessment Research

None suggested at this time.

ELEMENT 4: CONSERVATION ACTIONS

Habitat protection and management as described in elements 2.5 and 2.6 are priorities. For other habitat-based actions, see Marsh and Shrub Wetlands and Salt Marshes habitat profiles.

ELEMENT 5: REFERENCES

5.1 Literature

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