



# Wood Duck

## North Carolina Wildlife Profiles



David Iliff

## Wood Duck

(*Aix sponsa*)

The wood duck, as its name implies, is most often found in wooded swamps, beaver ponds, freshwater marshes, and along streams and rivers near forests. It is one of seven North American ducks that regularly nest in natural cavities, particularly those found in trees. The wood ducks' body and eyes are well adapted to the wooded habitat it favors. Its slim body allows it to fit into natural tree cavities to nest and its large eyes help the wood duck avoid limbs and branches as it flies through the forest canopy.

## Description

The drake, or male wood duck, is one of the most strikingly beautiful ducks of any species. Its head has a large crown, or crest, and is colored with iridescent greens, blues, and purples. The drake's distinctive facial pattern includes a white throat with finger-like extensions onto the cheek and neck. The eyes are a deep red and the bill is colored red, white, and yellow with a black tip. The drake's breast is burgundy, and the belly is white. Dark, bronze-green and black feathers cover the back. The hen has a drab plumage in comparison, which helps conceal her from predators during nesting and brood rearing. The brownish-to-gray female wood duck is distinguished by a pronounced white patch surrounding the eye, white throat and gray chest.

## History and Status

Beginning in the late 1800's, wood duck populations plummeted due to over-harvest, deforestation, and loss of wetland habitats. Many ornithologists believed the wood duck might go extinct by the early 20<sup>th</sup> century. In 1918, the Migratory Bird Treaty Act protected the wood duck from legal harvest in the United States and Canada. Since that time, the use of artificial nesting boxes, expanding beaver populations, which create some of its favored wetland habitat, and restrictive harvests have contributed significantly to its remarkable comeback. Today, wood duck populations are stable throughout its range, despite continued losses of wetland habitat.

## Habitats & Habits

In late summer, wood ducks began forming breeding pairs, continuing into fall and winter. Wood ducks migrating to northern breeding areas are paired prior to their arrival in early spring. Hens will select a suitable nesting cavity and begin laying eggs as early as late January in southern latitudes such as North Carolina, in March and April in more northern breeding locations. Hens prefer natural cavities in large, mature trees high above the ground in wooded swamps and bottomlands, old beaver ponds, freshwater marshes, and along creeks, streams and rivers. Hens choose sites near good brood-rearing habitat, which consist of low, shrubby vegetation such as buttonbush, willow, and alder, or dense stands of emergent plants such as arrow arum, duck potato,



Male wood duck (Photo: Frank Vassen)



Female wood duck (Photo: Frank Vassen)

## Range and Distribution

The wood duck's breeding range includes extreme southern Canada from British Columbia east to Nova Scotia. In the United States, wood ducks breed primarily from east Texas north to the eastern Dakotas, east to Maine, and south to Florida and Cuba. It winters in southern latitudes throughout its range, with highest wintering densities occurring in the southeastern United States. In North Carolina, the wood duck is most numerous in the Coastal Plain, both during the breeding season and in the winter.

## Range Map



# Wood Duck

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smartweeds and bur-reed. They are usually interspersed with small areas of open water.

Wood duck hens will also nest in man-made nesting boxes placed in optimum brood-rearing habitat. The hen will lay 10-15 eggs, usually at the rate of one per day, and after approximately 30 days of incubation, the eggs will hatch. In North Carolina, the peak of hatching occurs in April and early May. The drake will leave the hen during the later stages of incubation and collect in areas with other males to molt, a process by which old feathers are replaced with new ones. A day after eggs hatch, the hen will call softly from a branch or beneath the nest, and the ducklings will exit the nest cavity. Exiting ducklings are gathered together and then moved quickly by the hen to nearby brood rearing areas.

When adequate food and cover are available, ducklings grow quickly, particularly in the first two weeks. After six to eight weeks, broods are normally independent of the hen. On average, approximately one half of a hen's brood does not survive to flight stage, primarily due to predation. Major predators of ducklings include great-horned owls, mink, snapping turtles, bullfrogs, large predatory fish, snakes and alligators.

### Human & NCWRC Interactions

Overharvest was a primary contributing factor in the sharp decline in wood duck populations in the early twentieth century. Since that time, regulated hunting of wood ducks through the Migratory Bird Treaty Act has not adversely affected wood duck populations, and, in combination with sound habitat management, wood ducks will continue to thrive. Wood ducks are the most popular species with waterfowl hunters in North Carolina, and are the number one harvested duck in N.C. As human populations grow, loss of suitable nesting habitat continues to be the largest threat to wood duck populations. However, to offset this, wildlife managers continue to focus efforts on maintaining older stands of swamp and bottomland timber, which provide suitable nest cavities, stable beaver populations, which provide brood rearing areas, and active nest box programs to supplement existing natural cavities.

Each year during the summer, NCWRC biologists trap and place leg bands on wood ducks throughout the state. Wood ducks are enticed into wire traps or captured using large nets powered by explosive rockets after the trap or netting site has been pre-baited with corn. Once the ducks are captured, biologists determine the sex and age of each duck by examining the plumage, the wear on certain wing feathers, and the presence, size and shape of the sex organs. An aluminum band with a unique series of identifying numbers is placed on the duck's leg before it is released at the capture site. The band number, location of banding, and the sex and age of the bird are recorded and sent to the federal Bird Banding Laboratory, which maintains information for all birds banded in the United States in a database.

The band has information on how to contact the Bird Banding Lab. When hunters harvest a wood duck with a leg band and contact the lab with information on when and where the band was recovered, they are sent a certificate of appreciation with information about the bander, where the wood duck was captured, and the sex and age of the bird. The band recovery data supplied by hunters are used to examine distribution and migration patterns, and to estimate wood duck harvest and survival rates, which are critical data when establishing annual hunting regulations.

### Wild Facts

#### Classification

Class: Aves

Order: Anseriformes

#### Average Size

Length: 17 to 21 inches

Weight: 1.5 pounds

#### Food

Seeds, fruits, vegetative parts of aquatic plants, and aquatic and terrestrial invertebrates. Also wheat, corn, rice left in agricultural fields.

#### Breeding/Young

Pair formation complete by December. Nesting begins from late January in south to early May in north, peak in April. Only North American duck that regularly produces two broods in one breeding season; will quickly nest again after the first brood becomes independent, or after the first nesting attempt fails.

#### Life Expectancy

Short-lived. About 45% of immature wood ducks die during the first year of life, with about 48 percent mortality in each year thereafter.



Female wood duck with ducklings (Photo: Jessica Bolser-USFWS)

#### References

- Hepp, Gary R. and Frank C. Bellrose. Wood Duck (*Aix sponsa*). In *The Birds of North America*, No. 169. (The Academy of Natural Sciences, Philadelphia, and the American Ornithologists Union, Washington, D.C., 1995).
- Bellrose, Frank C. and Daniel J. Holm. *Ecology and Management of the Wood Duck*. (Mechanicsburg, Pa.: Stackpole Books, 1994)
- Bellrose, Frank C. *Ducks, Geese and Swans of North America* (Harrisburg, Pa.: StackpoleBooks, 1980).
- Bent, Arthur Cleveland. *Life Histories of North American Wild Fowl* (New York, N.Y.:Dover Publications, Inc. 1987

#### Credits

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