



# Wood Duck

The wood duck is Pennsylvania's most brilliantly colored duck. Its scientific name, *Aix sponsa*, can be loosely translated as "a waterfowl in wedding dress." This somewhat-secretive bird is home in brushy swamps and bottomland streams surrounded by woodlands. Nicknames include Carolina duck, squealer, summer duck and woodie. Most authorities place the species with the dabbling ducks, a group distinguished by its habit of feeding on and near the surface of shallow waters, rather than diving for food.

The primary range for wood ducks is deciduous forest habitats from the eastern Great Plains east to the Atlantic coast, and from the Northern Great Lakes Region south to the Gulf of Mexico. Most of them winter from the Carolinas south to the Gulf and west to eastern Texas. A small population of wood ducks also inhabits the Pacific Northwest. In Pennsylvania, woodies are common migrants in March and April; summer breeding residents; common migrants in September, October, and early November; and occasional winter residents in the southeast and southwest corners of the state.

## Biology

An adult wood duck is 18 to 20 inches long, has a 26- to 28-inch wingspan, and weighs between 1 and 1¾ pounds. The male is called a drake, the female a hen. The drake's coloration is nothing short of exotic. His head is iridescent green, shading into blue and purple, with a slicked-back crest of feathers and a white chin-bib. His eyes are bright red, his bill reddish-orange, his legs yellow. His chest, a rich chestnut, is separated from his golden-yellow sides by vertical bars of white and black. The hen's plumage is drab, a combination of gray, white, and brown. She has a small head crest and a circle of white surrounding each eye.

Wood ducks do not quack. The hen, more vocal and louder than her mate, squeals a shrill warning call, *hoo-eeek hoo-eeek*. The drake whistles an ascending, finch-like *twee twee*. Wood ducks are excellent swimmers and fast, agile fliers. Above open terrain they can wing along at up to 45 to 50 mph. In woodlands they twist and turn between the trees, moving their heads almost constantly in flight.



The wood duck feeds in thick marshes, brushy swamps and along woodland streams. A dabbler, it tips its head into shallow water and probes the bottom for vegetative parts and seeds of arrow arum, various grasses and sedges, smartweeds, burreed, pondweeds, duckweed and wild rice. It also eats grapes, berries, and nuts—acorns in particular—which are swallowed whole and crushed, inside the gizzard, into digestible bits. High-protein animal foods such as mollusks, insects and spiders comprise an important portion of the diet for egg-laying hens and young ducklings. In winter, wood ducks may turn to waste corn if natural foods are scarce.

Breeding occurs in late March and April, extending into July in the north. Most pairs form on the wintering range, following an intense courtship. The male preens behind his



wings, spreading them to show off their iridescent sheen, he tucks in his chin, erects his crest, and fans his tail. He swims at the hen then circles her

When the birds migrate north, the hen homes in on last year's nest tree, or, if she is a yearling, on the same general locale in which she was hatched. The male sets up no actual territorial boundaries but will defend his mate from the attentions of other males. Several breeding pairs may share the same wetland. Nesting concentrations are largely determined by the availability of nest sites. The mated hen seeks out a cavity in a tree. The male follows her on these search flights, but the hen apparently picks the exact spot. Wood ducks prefer to nest in trees standing over water, but sometimes will settle for sites up to a mile away. They normally use natural cavities with entrances too small for raccoons to enter, often choosing excavations made by pileated woodpeckers. They also nest readily in man-made boxes.

The hen lays 8 to 15 eggs (one per day) in the bottom of the cavity, on accumulated wood chips covered with down from her breast. The eggs are light beige in color and unmarked. Incubation, by the female alone, starts with the last egg and takes about a month. Unlike most other male ducks, the drake woody stays with his mate well into her incubation. He has usually left the scene, though, by the time the eggs hatch.

All the eggs hatch on the same day. The hen usually keeps her brood in the nest overnight, and then in the morning she flies out and lands on the ground or water below where she begins calling softly. The day-old ducklings leap out of the nest to join her. They tumble down perhaps 60 feet, sailing like cotton puffs and usually land unharmed. The hen leads them to safety in thick marsh or swamp cover.

If a raccoon, snake, or squirrel destroys her first clutch, the female may lay a second. A few hens raise two broods in southern U.S. breeding range, but the vast majority raise only one.

Ducklings, and some adults, are preyed upon by mink, otters, raccoons, herons, hawks, owls, snapping turtles and predatory fish such as pike, bass and bowfin. In Maryland, scientists found that half of the young were killed in their first month. The brood begins to break up after six weeks or so, and the young can fly when two months old.

After leaving his incubating mate, the drake woodie joins other male wood ducks in the dense cover of a swamp or wooded pond. Here he molts into eclipse plumage: dull feathers resembling the drab plumage of a hen. Like all waterfowl, during part of the annual summer molt, wood ducks, both drakes and, later, hens, lose their wing flight feathers and cannot fly for a period of approximately one month. In late summer or early fall, a second molt begins, restoring the breeding or nuptial plumages.

Wood ducks migrate south for the winter. Some seek out common roosting and feeding sites, grouping in flocks of less than a hundred to several thousand. Pennsylvania band recoveries show homegrown woodies winter primarily in the Carolinas, and also along the Gulf Coast from Louisiana to Florida.

## Population

In the early 1900s, the wood duck was nearing extinction. Many woodland swamps, the species' favorite habitat, had been drained. Widespread logging had removed the mature trees needed for nesting. And for years the woodie had been hunted hard for its flavorful flesh.

In 1913, wood duck hunting was banned for five years by the U.S. Department of Agriculture to spur a population recovery. That effort was followed by the ratification of the Migratory Bird Treaty Act between the United States and Canada, which established the framework needed to manage waterfowl on a broader scale than with inconsistent state plans. The wood duck was also aided by Pennsylvania's beaver reintroduction program, which began in 1917, and the construction and placement of thousands of wood duck nest boxes by conservation organizations.

The wood duck population grew steadily. In 1941, hunting was again permitted. In 1976, waterfowl scientist Frank Bellrose reviewed many local studies and concluded that the adult population of wood ducks was about 1 million before each year's breeding. By the early 1990's he estimated the annual post breeding population at over 6 million. Population trends have steadily increased since that time.

Today, the wood duck has reclaimed its historical range and populations are healthy. The wood duck is the first or second most common duck species harvested in the Atlantic and Mississippi Flyways.

## Habitat

Wood ducks inhabit slow-moving creeks, vernal woodland ponds, lakes, swamps, marshes, and beaver ponds. They rest in thick growths of buttonbush, swamp rose, alder, swamp

loosestrife, water lilies, arrow arum, smartweeds, and other emergent plants; hens hide their ducklings in vegetation, under overhanging banks, and among fallen, partly submerged trees.

Wood ducks nest in cavities of mature sycamore, maple, oak, basswood, elm, and gum trees. Where big trees are scarce, they will use man-made nest houses. Artificial nests should be made predator-proof, as they attract raccoons, squirrels and other predators looking for a meal. Ideally, nest boxes should be placed on poles near or over water; attach metal predator barriers or shields partway up the poles, and make sure the boxes' entrances are small enough to exclude raccoons.

Studies in Pennsylvania show that hens and broods having to travel more than a mile from their nest box to brood-rearing wetlands experience the highest mortality. Consequently, it is a good idea to place nest boxes over suitable wetlands. Wood duck boxes also provide nesting space for American kestrels, common screech owls, mergansers, squirrels and occasionally, wrens and tree swallows.

The Game Commission offers pre-assembled nest boxes for sale, as well as free wildlife home plans for do-it-yourself woodworkers.

