

Wood Ducks in Mississippi



The wood duck (*Aix sponsa*) is the state duck of Mississippi and one of three waterfowl species that nest annually in the state. Many decades ago, wood ducks were on the brink of extinction in Mississippi due to habitat loss and overharvest. Habitat management, hunting regulations, and artificial nest structures have restored this beautiful waterfowl species to sustainable levels.

Although Mississippi supports a strong population of resident wood ducks that breed locally, many of the wood ducks seen during fall and winter are migratory birds from farther north. These migratory wood ducks use Mississippi's wetlands as important stopover and wintering sites.

Wood ducks are among the most abundant ducks in Mississippi and make up a large percentage of the waterfowl harvested in the state each year. They are also excellent table fare.

Description and Identification

The male or drake "woodie" is easily recognized by his white throat and chin strap, as well as bright green and purple feathers. The female or hen, like most female ducks, is

brownish; she has a white throat patch and a prominent white eye-ring. Both male and female wood ducks have well-defined head crests and long, dark, and square tails, which can help identify them during flight.

Woodies grow from 1 ounce to 1 pound in 6 weeks and generally weigh about 1.5 pounds when mature.

Wood ducks are known as "the bird of the shadows" because of the heavy cover they use. Their large eyes allow them to see better than most birds.

Habitat

For wood duck populations to thrive, they need a habitat favorable to nesting, feeding, and rearing young. They typically nest in natural tree cavities within a half mile of a suitable wetland. The closer the nest is to water, the better; however, the nest may be as far as 4 to 5 miles from where the female normally feeds and rests.

Suitable nest cavities, at a minimum, must provide room for the hen to incubate her eggs easily. The cavity entrance can vary from 5 to 70 feet above the ground.

Good brood-rearing habitat may consist of water, dense vegetation, and low-hanging bushes. This combination produces an abundance of insects and plant matter to feed the ducklings. It also provides protective overhead cover for young ducklings. Scientists at Mississippi State University have reported that wood duck duckling survival was greatest in wetland areas with abundant scrub-shrub, such as buttonbush, privet, and willow. Wetlands with plenty of emergent vegetation, like lily pads, also provide good cover for ducklings.

Feeding areas for adults vary throughout the year, from flooded bottomland hardwoods filled with acorns and other hard mast to marshy areas that provide native aquatic and semi-aquatic vegetation and seeds.

Nesting

Unlike most ducks, which nest on the ground, wood ducks naturally nest in the cavities of hollow trees. The female wood duck does not build a nest but instead nests atop decayed wood at the bottom of the cavity. She lays one egg each day, usually in the early morning. When the female wood duck leaves her nest, she covers the eggs with the loose material at the bottom of the cavity. Later in the egg-laying cycle, she adds fine down feathers found under the tougher exterior feathers, plucked from her breast, to the nest each day until she has finished laying.

Generally, she lays 5 to 19 small, round dull-white eggs. The average number is around 15; however, as many as 70 eggs,

several layers deep, have been found in wood duck nests. The large number of eggs occurs when more than one female uses the same nest.

This is called a “dump nest” and is the result of having more breeding birds than nesting cavities or a result of eggs laid by females in poor shape and are not healthy enough to incubate a nest of their own. After the females begin incubating their eggs, the male wood ducks leave them and join other males in secluded areas locally or elsewhere.

The eggs hatch in 27 to 30 days. Around 24 hours after hatching, the female calls to her young from the ground or water. The ducklings use their sharp claws and hooked nail at the tip of the bill to climb out of the nest and then jump to the ground or water. The nestlings are so light, they literally float to the surface without being injured. The female gathers her brood and leads them to the nearest water. They remain with the female duck until they can fly, which is about 8 weeks later.

In Mississippi, nesting can start as early as January and continue until it peaks in April or May. Much of the later nesting in June or July is likely by re-nesting females whose nests were destroyed by predators.

Aside from tree cavities, they will readily nest in manmade or artificial nesting boxes. These nesting boxes, along with protection from overharvest, are the main factors contributing to population increases.



Molt

Molting is the process of shedding old feathers to grow new ones. Wood ducks lose and replace their flight feathers, becoming temporarily unable to fly, and remain quiet and inactive during the molt to avoid attracting predators.

Both males and females undergo a complete molt (replacing all feathers) after the breeding season, but males generally molt earlier, while females delay molting until after broods are more independent. After molt, wood ducks grow a fresh set of feathers and regain flight ability in late summer, allowing them to prepare for fall migration or local movements to wintering areas. During this time, males temporarily lose their bright breeding colors and enter what is known as their “eclipse” or “non-breeding” plumage, a drabber coloration that offers camouflage during the vulnerable flightless period.

In fall, wood ducks undergo a second molt, which restores their bright breeding plumage. Males regain their striking colors while females also refresh their plumage in preparation for winter courtship.

Food Habits

The diet of wood ducks changes as they grow and varies with seasonal food availability.

Newly hatched ducklings feed mostly on insects, crustaceans, and other invertebrates. These protein-rich foods are essential for rapid growth and development in the first few weeks of life. Invertebrates are also important for adult birds during molt.

As they mature, wood ducks shift to a predominantly plant-based diet, although they continue to consume some animal matter year-round. Adult wood ducks feed on a wide variety of natural foods found in forested wetlands, swamps, beaver ponds, and marshes.

Key plant foods include:

- hard mast such as acorns and hickory nuts
- seeds and fruits from buttonbush, swamp privet, and dogwood
- aquatic vegetation such as pondweed, lotus, coontail, and duckweed
- seeds and tubers from natural grasses, sedges, and forbs like barnyard grass, sprangletop, and smartweeds
- grains and seeds from agricultural crops like rice, corn, and millets when available

Invertebrates, including aquatic insects, snails, and small crustaceans, are especially important for females during the breeding season when protein demands are higher for egg production.

Wood ducks forage in shallow water by dabbling and upending. They also feed on land, particularly in agricultural fields or forested areas with abundant mast. Their flexible diet and adaptability to various wetland and bottomland habitats help explain their success in a range of landscapes across Mississippi.

Predators

Raccoons, snakes, and opossums eat wood duck eggs. Other birds, such as starlings and woodpeckers, puncture the eggs, and squirrels crack them. Raccoons and bobcats are probably the worst enemies because they often trap and kill the female wood duck in the nest.

If the female is not killed, she will re-nest in another location. If a nest is not disturbed, the same bird will come back and use the cavity subsequently. Snakes, mink, raccoons, turtles, owls, hawks, herons, alligators, bullfrogs, and fish (e.g., bass, gar) prey on young ducks. Inclement weather also takes its toll.

Management

Effective wood duck management requires more than providing nest boxes. It involves creating and maintaining diverse wetland habitats that supply both food and cover throughout the year. Natural food sources, such as acorns from bottomland hardwoods, seeds and fruits from scrub-shrub wetlands, and moist-soil plants are essential for supporting both adult and juvenile wood ducks.

Landowners can enhance foraging opportunities by conserving mast-producing trees like oaks and hickories, protecting seed- and fruit-producing shrubs such as buttonbush and swamp privet, and managing shallow wetlands to promote native seed-bearing plants. Flooding these areas in fall and winter ensures that both resident and migratory wood ducks have reliable food when they need it.

When natural food is scarce, plant Japanese millets on exposed mud flats, beaver ponds, sloughs, or farm ponds and fields. Flood the area to attract wood ducks and other waterfowl species. For more detailed habitat management guidance, refer to Mississippi State University Extension Publication 1864 *Waterfowl Habitat Management Handbook for the Lower Mississippi River Valley* online at extension.msstate.edu.



One of the best ways to boost the number of wood ducks is to provide adequate nesting sites protected from predators. For more information on how to build nest boxes, refer to [A New Nest Box for Wood Ducks](#).

Additionally, a properly constructed nest shield should improve nest success. Place boxes in or near water at least 5 feet above the water line; avoid locations where flooding could cover boxes. Locate boxes within or adjacent to scrub-shrub vegetation (e.g., buttonbush). Research has shown that duckling survival is greatest in these habitats, where hens and young have dense cover from predators.

The publication [Wood Duck Broods: Striving to Survive Early in Life](#) provides more information on nest box placement to improve duckling survival.

While wood ducks are the most well-known cavity-nesting ducks in Mississippi, they are not the only species that rely on tree cavities or artificial nest boxes. Two other species, the hooded merganser and the black-bellied whistling duck, also use cavities for nesting and can benefit from habitat management efforts aimed at wood ducks.

As black-bellied whistling ducks continue to expand into Mississippi, they are increasingly competing with wood ducks for nesting cavities and boxes. Whistling ducks often occupy cavities and nest boxes intended for wood ducks and, in some cases, may reduce available nesting opportunities. Monitoring nest box use and maintaining enough boxes in suitable habitat can help minimize direct competition and support healthy populations of both species.

Maintaining a diversity of habitat features and adequate nesting structures will be important to conserve all of Mississippi's cavity-nesting ducks into the future.

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