



Common Name: WOOD STORK

Scientific Name: *Mycteria americana* Linnaeus

Other Commonly Used Names: Wood ibis, ironhead, flinthead, gourdhead, gannet, preacher, Spanish buzzard, Colorado turkey, wood-pelican

Previously Used Names: None

Family: Ciconiidae

Rarity Ranks: G4/S2

State Legal Status: Endangered

Federal Legal Status: Endangered

Federal Wetland Status: N/A

Description: The wood stork is a large, long-legged wading bird about 85-113 cm (33-44 in) in height with a wingspan of 150-165 cm (59-65 in), and a large, down-curved bill. The plumage is mostly white, but the wing-tips, trailing edge of the wings, and tail are black with a greenish sheen. The legs are black, but the toes are pink. The neck and head of adults is not feathered, and the skin is grayish black with a scale-like appearance; the bill is also grayish black in color. Juveniles have a yellow bill, and the head and neck are covered with sparse, hair-like feathers.

The bill gradually darkens, and the feathers on the head are lost with full adult plumage reached in the bird's fourth year. Male and female plumages are similar.

Similar Species: The adult white ibis (*Eudocimus albus*) can look similar to the wood stork from a distance and in flight, but it is substantially smaller (63 cm; 25 in long) with pinkish-red to pinkish-orange face, bill, and legs, and only the very tips of the wings are black. Also, white feathers cover the neck and top of the head. Young juvenile white ibis have a dark head, bill, and legs and a white rump. The upper surface of the wings and the upper back are dark brown while the underside of the wings is white with a dark brown trailing edge, which can look similar to that of the wood stork.

Habitat: Wood storks use a variety of freshwater and estuarine wetlands for breeding, feeding, and roosting. They are colonial nesters, and several nests are often located in the same tree. Colony size in Georgia has ranged from fewer than 12 to more than 500 nests. Nests may be located in large or small trees; but the trees must be in standing water or on islands surrounded by water. Height of nests above the water ranges from 1 to 2 m (3-7 ft) in small trees to over 20 m (66 ft) in cypress trees. Storks will occasionally use the same large colonies for many years, but most colonies are shorter lived, and many are established and abandoned after a single year; few last more than 20 years.

Diet: Primarily fish; sometimes amphibians, crayfish, and other small aquatic animals.

Life History: Wood storks feed by tactolocation or grope feeding. The birds wade through shallow water, moving their partially-opened bill back and forth beneath the surface. When the bill touches a fish or other prey, it snaps shut with an exceedingly quick reflex motion. They also feed by holding their bill still and stirring the sediment with their feet. When a fish is caught, the bird raises its head and swallows the prey. They often shuffle their feet and flash their wings while feeding to startle potential prey, which are then captured. Preferred prey includes fish from about 2 to 25 cm (0.7-10 in) in length. This feeding strategy is very effective during seasonal drawdowns of wetlands when fish are concentrated in shallow pools. In southern Florida, the onset of breeding begins at the start of the dry season, when drying wetlands concentrate prey. The birds depend on successive drying of the wetlands to provide adequate prey to raise their young, and rising water levels can cause the adults to abandon nestlings, which subsequently starve. Wood storks use a variety of feeding sites in both freshwater and estuarine wetlands to obtain adequate food. In coastal Georgia, wood storks feed in small tidal creeks at low tide when prey fish, especially mummichogs (*Fundulus heteroclitus*), are presumably concentrated. Storks often forage at considerable distances from the nesting colony. The birds take advantage of thermal updrafts to soar and glide to feeding sites. Birds followed to feeding sites from a colony in east-central Georgia usually chose sites that were within 20 km (12 mi) of the colony, but occasionally foraged as far as 29 km (18 mi) from the colony. In Georgia breeding usually begins in March. Clutch size ranges from 2 to 5 eggs (usually 3), and incubation takes about 27-32 days. After hatching, one adult remains with the young, shading the chicks when necessary from the sun. Both adults feed the young by regurgitating food onto the nest platform. Young storks begin learning to fly at about 8 weeks of age; however, the young often remain at the colony and return to the nest platform to be fed by adults until around 12 weeks old. Although a few birds have been documented to breed in their third year, most birds probably first breed

when adult plumage is obtained in their fourth year. Survivorship data are lacking. The maximum longevity of a bird in the wild is 11 years, 8 months, but the wood stork may live to over 30 years of age in captivity.

Survey Recommendations: Helicopter surveys of all known nesting sites in early May to determine the number of active nests. Survivorship and productivity can be assessed at selected sites and used as an index of overall population health.

Range: The wood stork's breeding range includes the southeastern U.S., both coasts of Mexico and Central America, Cuba, Hispaniola, and South America from Columbia to Argentina. In the U.S., it breeds in Florida, Georgia, South Carolina, and North Carolina. This species was first recorded nesting in Georgia in 1965 at Blackbeard Island NWR. Breeding colonies have been documented at least once at 56 different locations in 18 counties along the coast and across the eastern and central portion of southern Georgia. Following the breeding season, wood storks may disperse northward to North Carolina, Tennessee, and Arkansas. A few wood storks may be seen in the Georgia Piedmont, well north of breeding colonies, during late summer and fall, but the most heavily used habitat during fall is the coastal marshes. Beginning in late summer, wood storks from many widely separated breeding colonies gather into communal roosts along the coast. Over 100 birds may roost at favored sites, which are used year after year. The birds rest at the roost during high tide and move out into the saltmarsh to feed during low tide. Birds that nested in Georgia have been tracked south to southern Florida in winter; however, in most years a few birds remain along the coast in McIntosh, Glynn, and Camden counties.

Threats: The breeding population of wood storks in the southeastern U.S. declined from an estimated 15,000-20,000 pairs in the 1930s to a low of 4,500-5,700 pairs from 1977-1980. The lowest annual estimate occurred in 1978 when 2,500 pairs bred. However, this probably reflected the combined influence of a low population and poor nesting conditions; many storks may not have attempted to breed that year. Prior to the mid-1970s, nesting in Georgia was sporadic with only small numbers of nesting birds. Nesting in South Carolina did not start until 1981. As large colonies in southern Florida steadily declined in the early 1980s the number of nesting birds in South Carolina and Georgia steadily increased resulting in a shift of the breeding distribution of this species. Loss of habitat is the primary threat to stork populations. In addition to direct loss of feeding habitat through draining and filling of wetlands, the disruption of the natural cycle of seasonal drying in southern Florida is believed to have caused the loss of major breeding colonies in Everglades National Park. Although wood storks benefit from seasonal drying of foraging habitat, water levels in the colony must remain deep enough to prevent access by predators. When a nesting colony dries up, raccoons are able to invade the area and eat the stork's eggs or young. Human disturbance and contaminants are other potential threats to wood storks.

Georgia Conservation Status: Harris Neck NWR, Big Dukes Pond NA, Ossabaw, St. Catherines, Sapelo, Little St. Simons, and Cumberland Islands, Kings Bay Naval Submarine Base.

Conservation and Management Recommendations: The U.S. Fish and Wildlife Service's Recovery Plan goal for down-listing the wood stork to threatened is a population of 6,000 pairs

(3-year average) and regional productivity greater than 1.5 chicks per nest. The goal for delisting is 10,000 pairs (5 year average), with regional productivity greater than 1.5 chicks per nest, and 2,500 successful pairs in south Florida. Recovery tasks include identification and protection of existing foraging and nesting habitat, restoration of historically important habitat in the Everglades, and monitoring of the population through periodic surveys. Georgia populations averaged 1,389 pairs per year from 1992-2005. The largest nesting population ever recorded in the state occurred in 2008 when 2,292 pairs nested. Indications are that the state's population is presently stable or increasing slightly. On a local scale, management of artificial feeding lakes and construction of artificial nesting structures where nest trees have been lost can enhance wood stork reproductive success. Both have been used effectively at Harris Neck National Wildlife Refuge on the Georgia coast. Protection of breeding colonies is critical for recovery of the wood stork. Habitat management guidelines developed by the U.S. Fish and Wildlife Service provide information on buffers for nesting colonies and important roost sites.

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Date Compiled or Updated:

M. Harris, 1999: original account

B. Winn and J. Ozier, 2010: Breeding Bird Atlas species account

T. Schneider, July 2010: modified and edited text

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