

# CHUCK-WILL'S-WIDOW - CAPRIMULGUS CAROLINENSIS

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Caprimulgiformes Family: Caprimulgidae Genus: Antrostomus Species: A. carolinensis

## **Habitat:**

**Biomes:** Chuck-will's-widows breed in pine, oak-hickory, and other forests of the Southeast and Mid-Atlantic states. They tend to live in more open areas than the similar Whip-poor-will. In winter you can find them in brush, woodlands, hedgerows, thickets, and fields as far south as Colombia, Venezuela, and the Caribbean.

## **Distribution:**

**In US:** It is found in the southeastern United States near swamps, rocky uplands, and pine woods. It migrates to the West Indies, Central America, and northwestern South America.

**In Other Countries:**

**Holistic Description:** Listen at dusk and at night for the rolling, seemingly endless call of the Chuck-will's-widow. If you are lucky and have a keen eye, by day they can be found resting motionless on the ground or on a horizontal branch. This is the largest nightjar in North America, but their dappled brown plumage makes them blend in perfectly to dry woodlands of the Southeast.

**Species Richness:** NO SUBSPECIES

**Population Dynamic:** CHECK THREATS

## **Evolution and Systematics:**

**Evolution:** NONE

**Systematics:** No geographic variation described, and even body size varies little across the breeding range of this species. No subspecies.

**Number of Species:** NO SUBSPECIES

**Number of Genera:** NO SUBSPECIES

## **Physical Characteristics:**

**Size and Length:** Length: 11.0-12.6 in (28-32 cm) Weight: 2.3-6.6 oz (66-188 g)

**Wingspan:** 22.8-24.0 in (58-61 cm)

**Coloration:** Warm brown tones with intricately patterned feathers make them extremely well-camouflaged. The wings are entirely brown; the outer tail feathers have white inner webs that you might see as one flushes from a roost or passes through your headlights. More often, you won't see white in the tail—this helps separate it from Whip-poor-will, in which the white is more prominent.

**General Body Features:** The surprisingly large Chuck-will's-widow has a huge flat head and long wings. It's significantly larger than Common Nighthawk and Whip-poor-will.

**Special Features of the Body:** Their cryptic appearance blends perfectly into their habitat and they are very difficult to spot during the daytime, when they are usually hidden away sleeping. They are most easily detected at night when light from car headlights are reflected ruby-red from their eyes, as they are sitting on tracks or roads. However, their presence is most often made known by their loud calls given at dusk.

**Special Features of the Head and Sensory Organs:** The beak has evolved to be much wider than it is long, and it opens wide both - vertically as well as horizontally. The resulting big gaping mouth allows it to more easily scoop up insects in flight. Its large eyes are placed on each side of the head (laterally) - which significantly increases its visual field.

**Dentition:** BEAK/LAMELLAE/GIZZARD

**Special Features of the Limbs and Digits:** Their feet are weak and their legs short - and they usually hop about awkwardly on the ground.

**Any Special Internal Anatomy:** A reflective membrane behind the retina (tapetum) enhances its vision at night by augmenting the light-gathering ability of its eyes. They also have forward-facing whiskers that may either help them funnel food into the mouth or protect the eyes.

**Sexual Dimorphisms:** On this female note the lack of white in the inner webs of the outer tail feathers. Adult males have extensive white, but females and juveniles lack white. The rufous throat is an important distinction from the darker-throated Whip-poor-will. Wing-chord, tail, tarsus, exposed culmen, and middle-toe length generally larger in males than females, but there is significant overlap.

**Differences Between Juvenile Stage and Adult:** Juvenile resembles adult female (indistinguishable when not in hand) but averages paler overall with narrower and more tapered remiges.

## **Behavior:**

Diurnal, Nocturnal, or Crepuscular: Nocturnal

Activity: The Chuck-will's-widow's most apparent behavior is its incessant calling at night—the most typical experience people have with these birds. They do most of their foraging at dusk and dawn—though during full moons or under streetlights, when visibility is good, they may forage much of the night. They are buoyant and maneuverable in flight, catching flying insects with a short dive or chase followed by a snap of the bill. Long, stiff feathers around the mouth, called rictal bristles, help guide prey into their very wide gapes. Territorial males chase each other up to a quarter-mile while making a growling call. In courtship, males droop their wings, spread their tail feathers, ruffle their feathers and puff themselves up while calling to the female.

Locomotion: Can jump upward quickly; perhaps a defensive tactic while individuals are on ground but probably more often a foraging technique, presumably to catch insects as they pass overhead. Typically silent flight—numerous flaps and a glide. When prey, usually a flying insect, is encountered, opens mouth quickly, sometimes with a quick dive and chase when additional pursuit is required. These flights take place at heights ranging from a few meters to about 20 m above ground.

Communication and Perception: Song a loud "Chuck-will's-widow," with the first "chuck" being quiet and inaudible at a distance.

Home Range: Individual territory size not documented. Both males and females respond to tape playback by approaching area from which sound was played, likely indicating some degree of territoriality. Adults presumed to be dominant over subadults wintering on islands that require less over-water travel and shorter migration flights.

Degree of Sociality: Generally solitary, but known to congregate during migratory flights. Family groups also spend time together after young are able to fly.

Level of Aggression: Males chase one another during territorial disputes. Chasing is accompanied by Growl. "Another pursuit, accompanied by the same peculiar growling sounds, was noted on June 6, as one chased a rival from one woodland edge to another, across intervening fields, a distance of some 320 yards". Females known to chase males, possibly in mating events.

Migration: Medium-distance migrant. Stage of molt may contribute to timing of migration, and timing of molt may depend on food abundance and nesting success.

#### **Predators:**

Predators: Variety of Snakes and Mammalian Predators.

Anti-Predator Defenses: Both male and female become increasingly defensive as nesting cycle progresses, eventually flying at potential predators. Adults and young perform intimidation and distraction displays. Female spreads tail, droops wings, and walks away from nest while Hissing to distract predators. Cryptic coloration of young and adults, plus good sight at night, may decrease predation on this species. Adults reported to move eggs/young after being approached by potential predators.

#### **Diet and Nutrition:**

Adult Diet: Chuck-will's-widows catch flying insects at night. They eat mainly moths, beetles—including June beetles, scarabs, longhorned beetles, and click beetles—and dragonflies. Very occasionally, they have been seen eating birds such as Hooded, Palm, Yellow, and Cape May Warblers, Common Yellowthroat, Swamp Sparrow, Carolina Wren, Cuban Emerald (a hummingbird), as well as bats.

Juvenile Diet: Crepuscular flying insects, including moths and beetles.

Special Adaptations for Getting Prey: Forages most often at dusk and dawn, but also in late afternoon or on rainy days. Like whip-poor-wills, crepuscular behavior may be because of "visual constraints rather than changes in insect availability". This may also help explain why this species remains active all evening during full moons. While in flight, "scoops" up insects using rictal bristles, which serve as sensory mechanisms and help funnel insects into the large bill. Also sallies up from ground or low perches, catching insects as they fly overhead.

#### **Reproduction:**

Mode of Reproduction: Monogamous

Mating System: No information.

Mating Season: March to May

Courtship: As female watches, male droops wings, spreads tail, and inflates its body, by ruffling feathers and air intake, while giving calls and moving in quick, jerky motions. If successful, male then perches next to the female quietly. One reported display was either courtship or precopulatory. With female nearby, a male started with soft Growling, then began display. "He then did a little 'dance,' variously growling and clucking throughout. His crest feathers were alternately erected and depressed. He shuffled about, making little darts this way and that, wagging his head from side to side, flicking one wing occasionally, jumping into the air a foot or two and coming back".

Territoriality: HOME RANGE

Mating: NONE

Nesting: Nest sites are typically in dense thickets near openings such as road edges or forest clearings. Chuck-will's-widows don't build nests; they simply lay their eggs on the ground among dead leaves, pine needles, or bare dirt. Incubating adults are incredibly well camouflaged and virtually invisible unless you nearly step on them.

Egg-Laying: Clutch Size: 1-4 eggs Number of Broods: 1 brood Egg Length: 1.3-1.6 in (3.3-4 cm) Egg Width: 0.9-1.1 in (2.3-2.8 cm) Incubation Period: 20-21 days Nestling Period: 16-17 days Egg Description: White to gray, with variable dark markings.

Hatching and Incubation/Gestation: Weak but with eyes open, covered in long, light-brown down, able to walk.

Development: Semi-precocial, open eyes, covered in a long, light-brown down; can walk; gape and bill gray.. Egg tooth still present on young at day 8. No additional information.

Parental Care: By female only, but unknown how much time female spends at nest brooding. Male not known to help in care of young.

Lifespan: Up to 14 years and 10 months.

**Conservation:**

Official Federal Status: Near Threatened

Special Statuses in Individual States: NONE

Threats: Chuck-will's-widow numbers declined by about 2.3% per year between 1966 and 2015, resulting in a cumulative decline of 69%, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 6 million with 100% spending some part of the year in the U.S., and 13% in Mexico. The species rates a 12 out of 20 on the Continental Concern Score. Chuck-will's-widow was on the 2014 State of the Birds Watch List, which lists species most in danger of extinction without significant conservation action, but was not included in the 2016 State of North America's Birds' Watch List. It is a U.S.-Canada Stewardship species. Chuck-will's-widows aren't active during most of the day, so they can be difficult to survey. Interested individuals can help count nightjars, including the Chuck-will's-widow, by joining the United States Nightjar Survey organized by the Center for Conservation Biology at William & Mary College. Chuck-will's-widows may be vulnerable to pesticide use since they have such an insectivorous diet. They are also very sensitive to disturbance at their nests.

Conservation Efforts: ^^^^^^

**Extra Facts:**

1. The Chuck-will 's-widow hunts actively by flying low over the ground in search of insects. Occasionally, small birds and bats are included in its diet.
2. The oldest recorded Chuck-will's-widow was a male, and at least 14 years, 10 months old when he was shot in the Dominican Republic and Haiti in 1992. He had been banded in Florida in 1978.

**Notable Species:** NONE