

## WILSON'S SNIPE - GALLINAGO DELICATA

This species was considered to be a subspecies of the common snipe (*G. gallinago*) until 2003 when it was given its own species status, though not all authorities recognized this immediately.

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Charadriiformes Family: Scolopacidae Genus: *Gallinago* Species: *G. delicata*

### **Habitat:**

**Biomes:** Wilson's Snipes can be found in all types of wet, marshy settings, including bogs, fens, alder and willow swamps, wet meadows, and along rivers and ponds. They avoid areas with tall, dense vegetation, but need patches of cover to hide in and to provide a safe lookout for predators. In the western U.S., look for Wilson's Snipes in wetlands with sedges, rushes, and cattails, including wet pastures and other agricultural fields. In the South, Wilson's Snipes winter in rice and sugarcane fields.

### **Distribution:**

**In US:** They breed in marshes, bogs, tundra and wet meadows in Canada and the northern United States. They are year-round residents on the U.S. Pacific coast. The eastern population migrates to the southern United States and to northern South America.

**In Other Countries:** Iceland, Faeroes, Shetlands, United Kingdom, Ireland, Russia, Siberia, Spain, Austria, Ukraine, Kazakhstan, Siberia, China, Denmark, Italy, Bulgaria, Turkey, Africa, Yemen, China, Korea, Japan, India, Sri Lanka, Singapore, Philippines

**Holistic Description:** Though the long tradition of "snipe hunt" pranks at summer camp has convinced many people otherwise, Wilson's Snipes aren't made-up creatures. These plump, long-billed birds are among the most widespread shorebirds in North America. They can be tough to see thanks to their cryptic brown and buff coloration and secretive nature. But in summer they often stand on fence posts or take to the sky with a fast, zigzagging flight and an unusual "winnowing" sound made with the tail.

**Species Richness:** NO SUBSPECIES

**Population Dynamic:** The Wilson's snipe was reduced near the end of the 19th century by hunting and habitat destruction. However, this bird remains fairly common and not considered threatened by the IUCN, although local populations are sensitive to large-scale draining of wetland.

### **Evolution and Systematics:**

**Evolution:** Reported from Pleistocene of California, Nevada, Texas, Pennsylvania, Florida, and the Bahamas. In Eurasia from Ireland, England, Italy, Germany, Czechoslovakia, Hungary, and Azerbaijan. Also found in Tennessee.

**Systematics:** Formerly known as Common Snipe and considered a subspecies of that species for much of twentieth century. Wilson's Snipe regarded as distinct species by Banks based on differences in morphology and winnowing display sounds. Not known to vary in plumage or size across range. No recognized subspecies.

**Number of Species:** NO SUBSPECIES

**Number of Genera:** NO SUBSPECIES

### **Physical Characteristics:**

**Size and Length:** Length: 10.6-12.6 in (27-32 cm) Weight: 2.8-5.2 oz (79-146 g)

**Wingspan:** 16.1-17.3 in (41-44 cm)

**Coloration:** These birds are intricately patterned in buff and brown stripes and bars. The dark head has prominent buffy to whitish stripes. The dark back has three long buffy streaks, one running down each edge, one down the center. The buff chest is streaked and spotted with brown; the sides are heavily barred with black. In flight, the wings are dark above and below.

**General Body Features:** Wilson's Snipes are medium-sized, pudgy shorebirds with short, stocky legs. The bill is straight and very long (several times the length of the head). The head is rounded and the tail is short.

**Special Features of the Body:** Shorebirds are designed, or adapted, to survive in open habitats. Their brown, rust, black, and white plumage makes them less conspicuous to predators. Their bi-coloration, dark on the back and lighter on the belly, further camouflages them from predators. Their light bellies blend in against the light sky when seen from below. When observed from above, by a falcon for example, their dark backs blend in with the beach or mudflat below.

**Special Features of the Head and Sensory Organs:** Plovers are visual feeders and have large eyes so they can see their prey. Their bills are highly adapted tools for finding food. Some species will probe for invertebrates in mud or water, poking their bills up and down in rapid succession like a sewing machine until they feel something to eat. Others have bills perfectly adapted to swishing through the water to filter food from the water column.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Shorebirds have long legs for wading. Their long toes give them the stability they need for their seemingly endless walking and running along the water's edge and in soft mud.

Any Special Internal Anatomy: Not only used for finding food, bills are used for preening as well. A special oil gland located at the base of their tails helps to keep their feathers dry. The birds spread the oil from this gland with their bills or the backs of their heads when preening themselves. The oil repels water from the feathers, keeping them warm and dry

Sexual Dimorphisms: Although sexes are similar in plumage, females have longer bills and shorter outer rectrices than males.

Differences Between Juvenile Stage and Adult: Juvenile plumage similar to Definitive Basic plumage, but outer edgings on feathers of neck and back, scapulars, and wing coverts broader and more buffy; rump more cinnamon.

#### **Behavior:**

Diurnal, Nocturnal, or Crepuscular: Crepuscular, CHECK ACTIVITY

Activity: This elusive bird sleeps much of the day, then feeds around dusk and dawn. They probe for insect larvae and other prey in marshes, bogs, along pond and river edges, and in other wet settings, using the sensory receptors at the tip of their long, straight bills to locate food. Despite their somewhat pudgy, unbalanced look, Wilson's Snipe are strong, fast flyers reaching speeds of more than 60 miles per hour. If you flush one, it will burst from cover with a characteristic zigzagging flight that distinguishes it from other sandpipers. These birds are best known for their dramatic "winnowing" courtship displays: as a snipe (usually a male but sometimes a female) circles and dives over the breeding territory, air rushes over the outspread tail feathers. This creates a haunting, whirring hu-hu-hu sound. Both males and females winnow as part of courtship or to rebuff potential predators, and males perform the winnowing flight when advertising and defending territory. Like many sandpipers, a Wilson's Snipe with eggs or chicks will attempt to distract a predator with an elaborate show of feigned injury, fluttering up from the nest and falling to the ground, or flopping on its side or breast and beating its wings.

Locomotion: Usually walks, but can run. Will land and sit on posts, trees, and wires, but does not climb. Incubating female will walk to feeding areas within 70 m of nest, fly to more distant ones. Strong and rapid; top speed estimated at 95-105 km/h. Pectoralis muscle is 24.8% of body mass, the highest of all shorebirds. Flies in zigzag when flushed, but otherwise straight and direct. Swims occasionally; has been observed swimming and feeding like phalarope. Dives and flies underwater when pursued by raptor.

Communication and Perception: Both male and female Wilson's Snipes give an array of calls on the breeding grounds. They also make a scaipe call when they flush or at night during migration. Breeding birds give a repeated hard, sharp jick call when excited, a chip-per call between males and females, and a harsher chip that the male makes when landing to court a female, or the female makes as a male winnows overhead.

Home Range: Establishes and maintains breeding territory mainly by Winnowing Flight; Sparring, Displacement-Feeding, and rarely fighting also play a role. Winnowing Flights of males at first cover large area; then center around female, later around nest site, and with advancing incubation around male's resting site; and end with hatching. New males thus establish themselves in area as season progresses. Nondisplaying males are tolerated, and feeding areas both on and off territory are not defended.

Degree of Sociality: Forages singly, but will fly in small flocks. Fairly dense concentrations of up to a few hundred can occur where concentrated food sources are patchily distributed. Not really gregarious, but may occur in small flocks of up to 50 birds during flight, but typically leave flock as singles or very small groups when alighting. Concentrations can occur where food is abundant in migration and winter. When other snipe come too close during feeding, distance defended by Flutter Leaps.

Level of Aggression: Usually between males, although females repulse males, and males occasionally attack females. Leap into air and buffet each other and fence with bills; land and often repeat until one takes flight. Fights on ground are less violent; bird usually moves closer to intruder in short flights, finally landing in the spot vacated by opponent; both birds may spar or slip about briefly before intruder takes flight. Meet breast to breast, with tail cocked vertically and fully fanned; fence with bills.

Migration: Medium- to long-distance migrant. Wilson's Snipes breed across northern North America and winter from the southern U.S. through Central America to Venezuela. Some Wilson's Snipes in the Northwest remain there year-round.

#### **Predators:**

Predators: Peregrine Falcon, Great Horned Owl, Merlin, Northern Goshawk, Cooper's Hawk, Northern Harrier(COMMON)

Anti-Predator Defenses: Freezes and relies on cryptic coloration and marshy cover; flushes and flies erratically at last moment. Distraction Display is elaborate and varied; given by female at nest, and by both sexes with young: Flutters up from nest or young, falls back to ground, flutters and spins about, falling on side and beating one or both wings repeatedly, or lying on breast, beating both wings as if held by legs. In open areas, may lure predator by alternating between crouching and

running away from predator and facing it, cocking its tail to expose the prominent black spot. Creeps rapidly, using cover to disappear and reappear; repeatedly snaps tail open and shut, may drop or flutter wing-tips. Habit of sitting at tops of trees and calling on breeding area may be form of distraction display.

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

Adult Diet: Wilson's Snipes feed mainly on insect larvae, including flies such as crane, horse and deer flies as well as beetles, dragonflies, crickets, grasshoppers, ants, mayflies, butterflies, caddis flies and moths. Other invertebrate prey include snails, crustaceans, and worms. Wilson's Snipes use their flexible bills to probe for food in wet soil and can swallow small prey without having to pull their bill from the soil. They occasionally eat small vertebrates including lizards, frogs, fish, and nestling birds. Plant materials make only a minor contribution to their diets.

Juvenile Diet: ^^^^^^^

Special Adaptations for Getting Prey: They plunge that long bill into the mud and use sensory pits at its distal end to locate their prey. It turns out that snipes and a few other birds that feed in a similar manner have a trick up their sleeves called rhynchokinesis. The beak is far from rigid and the tip is very flexible so that tip can be opened and closed in the mud while capturing prey with no movement at all at the bill's base. In this photo, taken several years ago, we can see some of the flexibility of the tip of the bill because the maxilla is bent sharply upwards at its distal end. This allows these birds to open and close the tip of the bill while it's buried in mud without opening its entire length to some degree.

#### **Reproduction:**

Mode of Reproduction: Monogamous

Mating System: Monogamous, but extra-pair copulations are frequent in both sexes. Male will attempt to mate with other females until involved in care of young. Probably a male-biased sex ratio.

Mating Season: April-May

Courtship:

1. Rolling-Flight Display. Switches back and forth, dives, calls jick-jick, flips back and forth so that first one wing is vertical, then the other, wings held in shallow V. Occasionally flips upside down during dive, sometimes flies in a vertical loop. Given by male in presence of female; some dives aimed at female on ground.
2. Nuptial Flight Display. Pair fly close together in undulating flight with wings held at 45°, circling over territory.
3. Strutting Display. Male struts around female with drooping wings and erect fanned tail, while female remains in one spot spasmodically drooping her wings and fanning her tail.
4. Flight Leap. Wing-assisted leap to about 0.3 m; usually by female. May occur before copulation, attract other males, and interrupt sequence.
5. Ground Chase. Strutting male pursues strutting female; almost always ends in copulation. Female abruptly squats with partially drooping wings and tail fanned and twisted sideways; male flutters on her back and copulates with slowly beating wings.

Territoriality: HOME RANGE

Mating: EXTRAPAIRCOP: COP NOT INCLUDED. Male attends female closely and drives other males away with displays; fighting rarely necessary. Extra-pair copulations are frequent in both sexes. Tuck described an incident in which a pair was joined by a second male; both males copulated with the female and tried to copulate with each other. The males courted the female simultaneously, and although occasional sparring occurred, episode lasted 42 min.

Nesting: Followed by her partner, the female Wilson's Snipe makes several scrapes before selecting a nest site on the ground close to or even surrounded by water. The nest is often placed atop or on the edge of a hummock and well hidden by sedges, grass, or sphagnum moss. Willow, alder, or other brush may obscure the nest from above. The female Wilson's Snipe makes a shallow scrape in moist soil, then weaves a lining of coarse grasses to build a nest up to 7 inches across and 3 inches deep. She adds finer grasses to the inside, creating a more elaborate nest than the simple scrapes most shorebirds make. Before and after laying each egg the female adds a few grasses or sedges from the edge of the nest site.

Egg-Laying: Clutch Size: 2-4 eggs Egg Length: 1.4-1.7 in (3.5-4.3 cm) Egg Width: 1.0-1.2 in (2.6-3 cm) Incubation Period: 18-20 days Egg Description: Olive brown splotched with dark brown, black or purple.

Hatching and Incubation/Gestation: Active, covered with tan to chestnut down blotched with black, with a white streak on crown and over eye. The chicks leave the nest on the day of hatching.

Development: Mass of 2 chicks at hatching 10.8 and 11.0 g, about 10% of adult weight. Covered with down; remarkably short bill; wings mere stubs; long legs and huge feet. As soon as dry, about 1 h in dry weather, chicks become restless and climb on female's back or onto rim of nest and wander away. If female is brooding other eggs or young, will go to peeping chick about 1 m away, brood it, and entice it back into nest.

Parental Care: Brooding begins at hatching, and continues, when necessary, for several days. Parents lead young to wet area with soft, organic soil. Parents feed young, bill to bill, processing food before delivery. Young also peck at food on their own, begin to probe at 6 d of age, gradually increasing so that they obtain most of their food on their own by age of about 10 d, but parents continue to feed for several weeks. Young continue to beg occasionally when at least 2 mo old. Tuck thought that most accounts of carrying of young could be explained by male's having led one of the chicks away before female was flushed from nest. He thought the best-documented account was that of Nash, in which a young was grasped with both bill and feet and carried in flight for about 30 m.

AND

Male usually leaves nest with first 2 of hatched chicks; female takes last 2. Apparently no contact between mates afterward.

Lifespan: Around 6 years.

**Conservation:**

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Wilson's Snipe is widespread and overall populations remained stable between 1966 and 2014, according to the North American Breeding Bird Survey. The global breeding population, which is shared between the U.S. and Canada, is estimated at 2 million individuals. The species is not on the 2014 State of the Birds Watch List. Approximately 105,000 Wilson's Snipe were taken annually by hunters between 2006 and 2010 in the U.S. and Canada combined; this number was probably several times higher during the mid-twentieth century. Wilson's Snipes depend on wetlands, and draining or conversion of wetlands is detrimental to this species. Other threats include collisions with lighthouses, radio, TV, and cell towers, buildings, and cars.

Conservation Efforts: ^^^^^

**Extra Facts:**

1. Wilson's Snipe look so stocky thanks in part to the extra-large pectoral (breast) muscles that make up nearly a quarter of the bird's weight—the highest percent of all shorebirds. Thanks to their massive flight muscles this chunky sandpiper can reach speeds estimated at 60 miles an hour.
2. Wilson's Snipe feed by burying their bills deep into soft, wet soil to probe for insect larvae, worms, and other invertebrate prey. The bill's flexible tip can open to grasp food while the base of the bill stays closed. Snipe can slurp small prey from the mud without having to remove their bill from the soil.
3. Because a Wilson's Snipe's eyes are set far back on its head, it can see almost as well behind as in front and to the sides. This arrangement makes it difficult for a potential predator to sneak up on a feeding snipe—it almost literally has “eyes in the back of its head.”
4. The word “sniper” originated in the 1770s among British soldiers in India who hunted snipe as game. The birds are still hunted in many countries, including the U.S., though their fast, erratic flight style means they are difficult targets.
5. Although only the female tends the eggs and nestlings, Wilson's Snipe parents split up the siblings once they're ready to fledge. The male takes the two oldest; the female takes the younger two with her. After they leave the nest the mates have no further contact.
6. Researchers have done wind tunnel tests with Wilson's Snipe feathers to try and duplicate the “winnowing” sound that's made as birds fly with their tail feathers fanned. They found that it's the outermost tail feathers, or rectrices, that generate the sound, which apparently happens at airspeeds of about 25 miles per hour.
7. The oldest known Wilson's Snipe was at least 9 years, 3 months old, based on a band recovered from a bird that was shot in Newfoundland and Labrador, Canada.

**Notable Species:**

Very similar to Common Snipe. Morphological differences between Wilson's and Common Snipe include: Wilson's typically has more rectrices (16 vs. 14); outer rectrices  $\leq 9$  mm wide with narrower and more distinct barring (Common Snipe also orange on inner web of outer rectrices); mostly dark underwing coverts with narrow whitish barring (Common Snipe appears much whiter on underwing), and only narrow white trailing edge to secondaries (white tips to secondaries  $\leq 5$  mm) vs. much broader and more noticeable white trailing edge to secondaries on Common (white tips to secondaries  $\geq 6$  mm)