

WHITE-BREASTED NUTHATCH - SITTA CAROLINENSIS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Sittidae Genus: Sitta Species: S. carolinensis

Habitat:

Biomes: White-breasted Nuthatches are birds of mature woods, and they're more often found in deciduous than coniferous forests (where Red-breasted Nuthatches are more likely). You can also find them at woodland edges and in open areas with large trees, such as parks, wooded suburbs, and yards.

Distribution:

In US: The breeding habitat of the white-breasted nuthatch is woodland across North America, from southern Canada to northern Florida and southern Mexico.

In Other Countries: NONE

Holistic Description: A common feeder bird with clean black, gray, and white markings, White-breasted Nuthatches are active, agile little birds with an appetite for insects and large, meaty seeds. They get their common name from their habit of jamming large nuts and acorns into tree bark, then whacking them with their sharp bill to "hatch" out the seed from the inside. White-breasted Nuthatches may be small but their voices are loud, and often their insistent nasal yammering will lead you right to them.

Species Richness: 9 SUBSPECIES

Population Dynamic: The white-breasted nuthatch is a common species with a large range, estimated at 8,600,000 km² (3,300,000 sq mi). Its total population is estimated at 10 million individuals, and there is evidence of an overall population increase, so it is not believed to approach either the size criterion (fewer than 10,000 mature individuals) or the population decline criterion (declining more than 30% in ten years or three generations) of the IUCN Red List. For these reasons, the species is evaluated as Least Concern.

Evolution and Systematics:

Evolution: NONE

Systematics: Complex geographic variation in body size. In general, wing length correlates positively with latitude, excepting that Appalachian populations have the wings longer than those at similar latitudes in lowlands and, west of the Great Plains, wing length increases somewhat from east to west. Along the Atlantic coast, wing and bill length vary as smooth clines, being longest in the north; mantle may average paler to the north.

Number of Species: 9 SUBSPECIES

Number of Genera: 9 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 5.1-5.5 in (13-14 cm) Weight: 0.6-1.1 oz (18-30 g)

Wingspan: 7.9-10.6 in (20-27 cm)

Coloration: White-breasted Nuthatches are gray-blue on the back, with a frosty white face and underparts. The black or gray cap and neck frame the face and make it look like this bird is wearing a hood. The lower belly and under the tail are often chestnut.

General Body Features: The largest nuthatch, this is still a small bird with a large head and almost no neck. The tail is very short, and the long, narrow bill is straight or slightly upturned.

Special Features of the Body: NONE, CHECK RED-BREASTED. CHECK LOCOMOTION.

Special Features of the Head and Sensory Organs: NONE, CHECK RED-BREASTED. CHECK LOCOMOTION.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: The white-breasted nuthatch forages along tree trunks and branches in a similar way to woodpeckers and treecreepers, but does not use its tail for additional support, instead progressing in jerky hops using its strong legs and feet.

Any Special Internal Anatomy: NONE, CHECK RED-BREASTED. CHECK LOCOMOTION.

Sexual Dimorphisms: Crown black in males, generally grayish in females. In some females, however, especially in the southeastern US, crown is so dark as to appear black under most conditions. Female duller and grayer overall than male.

Differences Between Juvenile Stage and Adult: uvenile paler than adult, especially on crown (sex for sex); also has more pronounced wing bars and loosely textured undertail coverts.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: White-breasted Nuthatches forage up, down, and sideways over tree trunks and around large branches. They often (though not always) start high in trees and move down them head first, pausing to crane their necks up and back, toward the horizontal, for a look around. They probe into bark crevices or chip away at wood to find food. When they find large nuts and seeds, they jam them into the bark and hammer them open. White-breasted Nuthatches often store seeds and insects one at a time, and somewhat haphazardly, under loose bark on their territory. They typically hide the food by covering it with a piece of bark, lichen, moss, or snow. White-breasted Nuthatches live in pairs year round and chase other nuthatches from their territory. Agitated birds fan their tails, flick their wings, or raise the feathers of the back. A bird backing down from a confrontation typically raises its bill and tail, and droops its wings. In winter White-breasted Nuthatches join groups of chickadees, titmice, and woodpeckers to forage.

Locomotion: Climb up, down, and around tree trunks and branches, and often cling upside down. While headed downward on the side of a tree, they commonly lean outward and hold the head horizontally while viewing their surroundings. On the ground, the birds hop. Modifications made for habitual trunk foraging discussed in detail by Richardson; e.g., feet placed far apart at slight angle to direction of trunk and tail not used for support. As a result, hallux large compared to other trunk foraging birds that do use tail for support (e.g., woodpeckers), and rectrices and skeletal parts of the tail reduced. Bill adapted for both probing and pounding.

Communication and Perception: Male White-breasted Nuthatches sing in late winter and spring, a rapid, nasal, fairly low-pitched wha-wha-wha that lasts 2-3 seconds. It's made up of a half-dozen to a dozen nearly identical notes. Males sing these songs at two rates, with the faster version packing in twice as many notes in the same amount of time. The fast version is thought to be the main one used for mate attraction.

Home Range: Live in pairs, generally in same territory year round. Some individuals appear to move from one territory to another. If a member of a mated pair disappears, such a floater may take its place. Territory typically 10–15 ha in wooded places and about 20 ha in semi-wooded sites.

Degree of Sociality: Normally territorial, nuthatches may leave their territories in winter to reach a rich food source such as a bird feeder. In such flocks, White-breasted Nuthatches are an example of what is called a “satellite species.” As a mixed-species foraging flock moves through the habitat, satellite species follow along after species termed “nuclear species,” e.g., chickadees and titmice.

Level of Aggression: Always chase conspecific intruders from their territory, usually via threat postures but sometimes using physical contact. In one case, two males flew at each other, “fluttering beak to beak in mid-air”

1. Tail-fanning. Bird raises and fans its tail, displaying the pied black and white coloration of the rectrices. Given by a female, usually, when male approaches the nest where female is dominant, or in conflicts with other pairs.
2. Wing-flicking. Combined with Tail-fanning, and used primarily as an antipredator display.
3. Threat Display. The bill is raised, wings lowered and tail raised. This posture is assumed by a subordinate bird when threatened by a dominant.

Migration: Resident.

Predators:

Predators: Small Hawks, Owls, House Wren, Red-headed Woodpeckers. Predators of adult nuthatches include owls and diurnal birds of prey (such as sharp-shinned and Cooper's hawks), and nestlings and eggs are eaten by woodpeckers, small squirrels, and climbing snakes such as the western rat snake.

Anti-Predator Defenses: White-breasted Nuthatches react to the presence of a predator by pecking, with rapid hn-hn sounds, while the tail is slightly raised and wings are occasionally flicked. Individuals closely approached realistic or crude models of snakes, sometimes hopping on the ground nearby. Are attracted to playback of the mobbing vocalizations of Black-capped Chickadees.

Diet and Nutrition:

Adult Diet: White-breasted Nuthatches eat mainly insects, including weevil larvae, wood-boring beetle larvae, other beetles, tree hoppers, scale insects, ants, gall fly larvae, caterpillars (including gypsy moths and tent caterpillars), stinkbugs, and click beetles, as well as spiders. They also eat seeds and nuts, including acorns, hawthorn, sunflower seeds, and sometimes crops such as corn. At birdfeeders they eat sunflower seeds, peanuts, suet, and peanut butter.

Juvenile Diet: ^^^^^

Special Adaptations for Getting Prey: While foraging, often chip away bark with beak to reveal food hidden in crevices; also probe bark crevices. When individuals find a food item they often wedge it into a bark crevice and hammer with the bill to open or tear it apart.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Socially monogamous, pairs remain together from the time they establish a territory until one of the partners disappears.

Mating Season: February to May

Courtship:

1. Breeding song. Given by males most actively in the first half hour of winter mornings. After a female approaches, a male may continue singing and start to display his plumage on the back of the head and body to her while she stays near.
2. Hit-tuck notes. Frequently exchanged between partners during the day in winter and early spring.
3. Phee-oo note. Presumably expresses a high level of sexual excitement and is given by a male when flying to his partner, precipitating a pursuit flight. It is also given by a female when inviting copulation.
4. Courtship feeding. Courtship feeding of three types begins in winter: (a) a female in a motionless pose raises her beak in a fixed position, causing a male to approach her with food; (b) a female gives the begging call typical of older nestlings, with beak open and wings quivering and (c) during the egg-laying period, a female may take repeated feedings from a male without display.

Territoriality: HOME RANGE

Mating: In one episode described by Kilham, a female initiated copulatory behavior by squatting low on a perch with the tail up, head upward, and gave phee-oo notes. She fluffed out her flank feathers, making her appear larger. The male hopped around the female with his tail cocked up, head stretched upward, and neck twisted at an angle of 45°. He then moved around to her right side, passed under her beak, hopped on her back, and fluttered to hold his position there. After bending his tail under hers, he fell sideways and moved away. The female remained briefly in the same position, continuing to call phee-oo and moving her beak from side to side.

Nest Placement: White-breasted Nuthatches typically build their nests in natural tree cavities or abandoned woodpecker holes. They sometimes enlarge these holes but rarely excavate them entirely on their own (as Red-breasted Nuthatches often do). Nuthatches are smaller than woodpeckers, and White-breasted Nuthatches don't seem bothered by nest holes considerably larger than they are. Despite their association with deciduous woods, they nest in both coniferous and deciduous trees. White-breasted Nuthatches sometimes use nest boxes.

Nest Description: Females build the nest on their own, lining the nest cavity with fur, bark, and lumps of dirt. She then builds a nest cup of fine grass, shredded bark, feathers, and other soft material. White-breasted Nuthatches often reuse their nest holes in subsequent years.

Egg-Laying: Clutch Size: 5-9 eggs Number of Broods: 1 brood Egg Length: 0.7-0.8 in (1.8-2 cm) Egg Width: 0.6 in (1.5 cm) Incubation Period: 13-14 days Nestling Period: 26 days Egg Description: Creamy white to pinkish-white, speckled with reddish brown, gray, or purple.

Hatching and Incubation/Gestation: Helpless and naked except for some down.

Development: Cavity nests limit access, although this species does use nestboxes; thus nest cams would allow hatching and other details at the nest to be recorded.

Parental Care: Both parents feed young. During the first days after hatching, the male brings most of the food while the female spends much time in the nest. Only the female broods.

Lifespan: The estimated average lifespan of this nuthatch is two years, but the record is twelve years and nine months.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: White-breasted Nuthatch is common and widespread, and populations increased between 1966 and 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 9.2 million with 85% occurring in the U.S., 5% in Canada, and 10% in Mexico. The species rates a 6 out of 20 on the Continental Concern Score, and is not on the 2016 State of North America's Birds Watch List. Like all birds that nest in holes in trees, White-breasted Nuthatches depend on having dead or partially dead trees left standing in their habitat. Too much pruning or felling of dead wood can reduce the nesting opportunities for this species.

Conservation Efforts: ^^^^^^

Extra Facts:

1. The White-breasted Nuthatch is normally territorial throughout the year, with pairs staying together. The male has to spend more time looking out for predators when he's alone than while he's with his mate. That's the pattern for most birds, and one reason why birds spend so much time in flocks. But the female nuthatch has to put up with the male

pushing her aside from foraging sites, so she spends more time looking around (for him) when he's around than when she is alone.

2. In winter, White-breasted Nuthatches join foraging flocks led by chickadees or titmice, perhaps partly because it makes food easier to find and partly because more birds can keep an eye out for predators. One study found that when titmice were removed from a flock, nuthatches were more wary and less willing to visit exposed bird feeders.
3. If you see a White-breasted Nuthatch making lots of quick trips to and from your feeder – too many for it to be eating them all – it may be storing the seeds for later in the winter, by wedging them into furrows in the bark of nearby trees.
4. The oldest known White-breasted Nuthatch was at least 9 years, 9 months old when it was found in Colorado.

Notable Species:

Subspecies	Range	Appearance
<i>S. c. carolinensis</i>	Nominate subspecies, northeast North America west to Saskatchewan and eastern Texas	Palest back and cap
<i>S. c. nelsoni</i>	Rocky Mountains, from northern Montana south to extreme northwest Chihuahua	Darker gray upperparts, darker cap, less contrast in wings
<i>S. c. tenuissima</i>	From British Columbia through the Cascade Range to southern California	Smaller than <i>S. c. nelsoni</i> , with slightly paler upperparts and a more slender bill
<i>S. c. aculeata</i>	Western parts of Washington, Oregon and California, northernmost Baja California.	Smaller than <i>S. c. tenuissima</i> , with buffer underparts, slightly paler upperparts and a more slender bill
<i>S. c. alexandrae</i>	Northern Baja California	Larger than <i>S. c. aculeata</i> , with marginally darker upperparts. The longest-billed race
<i>S. c. lagunae</i>	Southernmost Baja California	Smaller than <i>S. c. alexandrae</i> with slightly darker; underparts and more buff. Bill relatively stout
<i>S. c. oberholseri</i>	Southwest Texas and eastern Mexico	Very similar to <i>S. c. nelsoni</i> , but upperparts and underparts slightly darker
<i>S. c. mexicana</i>	Western Mexico	Duller than <i>S. c. oberholseri</i> with grayer flanks
<i>S. c. kinneari</i>	Southern Mexico in Guerrero and Oaxaca	Smallest subspecies, similar to <i>S. c. mexicana</i> but female has more extensively orange-buff underparts. Short, stout bill