

BLACK-THROATED GREEN WARBLER - DENDROICA VIRENS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Parulidae Genus: Setophaga
Species: S. virens

Habitat:

Biomes: The Black-throated Green Warbler occurs in a wide variety of forest habitats. They nest in conifer forests in the northwest of their range, mixed hardwoods forests in the southern Appalachians, and cypress swamps on the mid-Atlantic coast. Wintering birds are most common in the canopies of tall forests.

Distribution:

In US: The breeding habitat of the black-throated green warbler is coniferous and mixed forests in eastern North America and western Canada and cypress swamps on the southern Atlantic coast. These birds' nests are open cups, which are usually situated close to the trunk of a tree. These birds migrate to Mexico, Central America, the West Indies and southern Florida. One destination is to the Petenes mangroves of the Yucatán. Some birds straggle as far as South America, with the southernmost couple of records coming from Ecuador.

In Other Countries: ^^^^^^^

Holistic Description: A delicate, lemon-faced canopy dweller, Black-throated Green Warblers are standouts in a family that does not lack for spectacle. It's a common breeder from northern boreal forests to hardwoods of the southeastern U.S., and even cypress swamps. Many bird watchers know its distinctive and persistent song, sometimes transcribed as trees trees I love trees, that's easy to remember. Black-throated Green Warblers are the easternmost representative of a quartet of closely related warblers including Townsend's, Hermit, and Golden-cheeked.

Species Richness: 2 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: NONE

Systematics: With the possible exception of the southeastern coastal subspecies D. v. waynei, virens not known to vary geographically in plumage. Spruce-dwelling birds from coastal Maine larger than deciduous-dwelling birds from New Hampshire, with significantly larger maxilla width, tibiotarsi, tarsometatarsi, and radii. These differences characteristic of coniferous and deciduous-nesting populations of other species elsewhere and warrant attention in other parts of the Black-throated Green's range.

Number of Species: 2 SUBSPECIES

Number of Genera: 2 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 4.3-4.7 in (11-12 cm) Weight: 0.3-0.4 oz (7-11 g)

Wingspan: 6.7-7.9 in (17-20 cm)

Coloration: These are olive-green birds, white below, with yellow faces and black on the front. Adult males are stunning, with a bright yellow face and extensive black on the throat turning to black streaks on the flanks. Two bright white wingbars. Females and young birds are patterned like males, but duller and lacking the extensive black on the throat.

General Body Features: The Black-throated Green Warbler is a medium-sized warbler similar in size and shape to many others in the Setophaga genus. Plump and seemingly large-headed, with a thick, straight bill and shortish tail.

Special Features of the Body: NONE

Special Features of the Head and Sensory Organs: NONE

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: Breeding males have striking black chin, throat and upper breast; bright yellow face with dull olive auriculars; white belly streaked with black on sides and washed with pale yellow on lower breast and across vent; grayish wings with 2 white wingbars. Adult female resembles male but duller, less black on throat; immature female often little or no black on throat. In both sexes, much white in outer three pairs of rectrices. Little seasonal change in plumage.

Differences Between Juvenile Stage and Adult: Pre-juvenile molt complete; plumage retained Jun-Aug. Resemble Basic I female, but upperparts washed brown, underparts buff, and yellow in face reduced. Sexes generally alike except some individuals may be sexed by amount of white in outer rectrices.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Black-throated Green Warblers hop through arboreal vegetation, flying between trees but seldom above trees. The males are aggressive when on territory, attacking and chasing rivals. This is sometimes followed by the victor undertaking a shallow, mothlike flight. Males singing on territory often choose an exposed perch from which their yellow head will be conspicuous. Pairs are seasonally monogamous, remaining together until shortly after the young leave the nest. In fall migration this species often forms mixed-species flocks with other species of southbound warblers and resident songbirds. Black-throated Green Warblers also join mixed flocks of tropical species in winter.

Locomotion: Hops exclusively, usually on arboreal vegetation, but also on ground. Most flight, other than migration, within or between trees, seldom above trees. Will fly across open spaces in forest, and sometimes between islands over water as much as 1 km.

Communication and Perception: Like most warblers, male Black-throated Green Warblers sing two similar songs, one directed at males during territorial interactions, and the other at females. The former, also known as the “unaccented song,” is a high, cheery-sounding buzz, zee zee zo zo zee. The latter, zee zee zee zee zo zee, is called the “accented song” and is sung by males to attract and communicate with female birds.

Home Range: Adults during breeding season generally intolerant of approach of conspecifics of same sex. In Central America, flocks form only during migration season in some areas. Territorial during breeding season. Territories formed shortly after return in spring and maintained during much of summer, often breaking down after young have left nest and wander out of territories. Breeding territories all-purpose.

Degree of Sociality: During breeding season consort only with mate, until young are cared for at nest and later in field. Individuals may join mixed flocks in late summer and early fall.

Level of Aggression: Males exhibit elaborate patterns of chasing and fleeing behavior in flight, which may change at territorial boundary. Fighting includes striking with wings, jabbing at head with bill, occasionally locking beaks or feet and sometimes dropping, wings partly opened, to ground, where combat may be continued. Fights sometimes followed by slow, shallow, “rowing” flight. Females seen to attack each other in apparent territorial encounters. Frequently supplant conspecifics and other species or are supplanted by others in mixed flocks during late summer and fall.

Migration: Long-distance migrant. In spring, most Black-throated Green Warblers head overland around the Gulf of Mexico, though some fly across the Gulf, reaching the southern states by the end of March. The southeastern “Wayne’s” population arrives even earlier and is on breeding grounds by late March, nearly 3 weeks before the rest of population arrives at those latitudes. In fall, they migrate broadly across the whole of eastern North America, peaking in late September.

Predators:

Predators: Primarily birds and mammals. Sharp-shinned (*Accipiter striatus*) and Cooper's (*A. cooperii*) hawks have probably traditionally been the most important predators of adults. Numbers of these hawks have probably been severely depressed over much of their range during past 40 yr. With their return to former abundance, overall predation on warblers likely to increase. Predation by both Cooper's and Sharp-shinned hawks observed in Maine spruce forest during 1992 for first time in 30 yr. In same forests, red squirrels (*Tamiasciurus canadensis*) and Blue Jays (*Cyanocitta cristata*) most important predators of eggs and young.

Anti-Predator Defenses: Mob and scold predators about nest. However, at approach of red squirrel to nest, incubating female quietly slips away. Sometimes members of mixed groups mob owls. Give alarm calls (high-pitched, sibilant) to avian predators, and lower-pitched calls to non-flying predators. Both males and females may scold non-flying predators near nests. Displays sometimes given near nest or fledglings; e. g., both females and males drop and flutter away from immediate vicinity of nests with young, thus closely resembling a young bird barely able to fly.

Diet and Nutrition:

Adult Diet: They eat almost exclusively insects during the breeding season, especially caterpillars, which they glean from small branches on both coniferous and deciduous trees. They also take berries in migration and feed on the buds of cecropia trees while wintering in the tropics.

Juvenile Diet: ^^^^^^^

Special Adaptations for Getting Prey: Diurnal forager, with especially high pulses of activity during early and mid-morning and in late afternoon and early evening. During breeding season forages very actively through entire day. In conifers, gleans small branches and to lesser extent twigs and larger branches. Locates prey more proficiently on upper than lower surfaces of leaves. Also frequently feeds on undersides of vegetation by hovering immediately beneath them and occasionally captures insects in mid-air.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Monogamous, but occasional presence of quiet second males on territories consistent with occurrence of “sneak” copulations.

Mating Season: March to June

Courtship: Perform courtship displays about female, including Fluffing. Males apparently guard females, often remaining close to them during nest-building and immediately before egg laying.

Territoriality: HOME RANGE

Mating: NONE

Nest Placement: The female chooses the nest site, which is usually 3-10 feet off the ground (sometimes much higher) in a small tree or sapling, and is located close to the trunk. The "Wayne's" subspecies often nests higher up and farther from the trunk, in a cypress, oak, or magnolia.

Nest Description: The nest is small and cup-shaped, made of twigs, bark, and spider silk and lined with hair, mosses, and feathers. Finished nests are 3–4 inches in diameter and about 2 inches tall. The female does most of the nest building, taking 4–8 days to complete the task.

Egg-Laying: Clutch Size: 3-5 eggs Number of Broods: 1 brood Egg Length: 0.6-0.7 in (1.5-1.8 cm) Egg Width: 0.5-0.5 in (1.2-1.3 cm) Incubation Period: 12 days Nestling Period: 8-11 days Egg Description: Whitish with variable brown blotches or speckles.

Hatching and Incubation/Gestation: Helpless with sparse down.

Development: Down feathers distributed chiefly over dorsal tracts of otherwise naked young, longest (5 mm) on crown. Eyes closed. 1.7–1.9 g at 1 d. ALTRICIAL.

Parental Care: Over first 8 h, only small insects fed, which were “billed” before given to young, for a total of 15 meals to 3 young. Caterpillars then offered. Female performed all feeding in one of these nests; in the other, male did not contribute until 2 d before young left the nest, when he brought 11 meals—female brought 245 during this period. Initially females perform all feedings, although male may provision female with some of this food.

Lifespan: Up to 5 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Black-throated Green Warblers are common and their populations increased by an estimated 41% between 1970 and 2014, according to Partners in Flight. The group estimates a global population of 8.7 million and assigns the species a Continental Concern Score of 9 out of 20. It is not on the Watch List, meaning it is a species of low conservation concern. The largest conservation issue for Black-throated Green Warblers is habitat degradation and loss. Despite its expansive breeding range, Black-throated Green Warblers are more commonly found in forest interiors than edges, so they're susceptible to fragmentation. Invasive insects like woody adelgids have also caused the widespread death of conifers in some parts of the species' range, leading to the disappearance of local populations in affected areas. Deforestation on the tropical wintering grounds removes some wintering habitat, although Black-throated Green Warblers will use native canopy trees on shade-grown coffee plantations or logged areas provided that some emergent vegetation remains.

Conservation Efforts: ~~~~~

Extra Facts:

1. One male Black-throated Green Warbler was observed singing 466 songs in one hour.
2. Black-throated Green Warblers are often thought of as birds of mountain forests, but a disjunct population nests in cypress swamps along the coast of Virginia and the Carolinas. Called “Wayne’s” Black-throated Green Warbler, this subspecies averages smaller than other populations.
3. In areas where multiple species of warblers breed close together, Black-throated Green Warblers are generally dominant to Blackburnian Warblers, Yellow-rumped Warblers, and Northern Parulas, but subordinate to Magnolia Warblers.
4. The oldest recorded Black-throated Green Warbler was a male, and at least 4 years, 11 months old. He was banded and found in Nova Scotia.

Notable Species:

1. The Black-throated Green Warbler itself is currently divided into two subspecies, the nominate race (*S. v. virens*), which occupies the vast majority of the breeding range, and *S. v. waynei*, a little-studied breeder in certain swamps of the southeastern U.S. coastal plain.