



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Blackpoll Warbler *Setophaga striata*

State Status: **Special Concern**
Federal Status: **None**

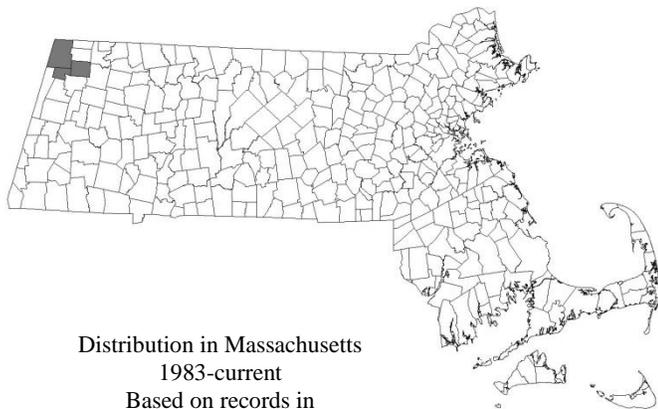
DESCRIPTION: The breeding male Blackpoll Warbler is a striped smoky-grey with a solid-black cap; white cheeks; and a white throat. It is streaked black above; white below with black streaks running from the chin along its sides almost to its tail; has two white wing bars; and white spots on the outer two or three tail feathers. The females are less heavily streaked, without the black crown patch or white cheeks; otherwise marked much like the male on its back, wings and tail but with an olive-green to grey body color and olive-yellow sides. The female also has a pale ring around the eye and a light streak above it. Both the male and female have a brown iris; light brown legs; and yellowish-brown feet. The non-breeding male has no black cap but rather a pale olive-yellow head streaked with stray black feathers and an indistinct streak above the eye. This warbler is from 12.7-14.6 cm (5-5 3/4 in) in length with a wingspan of 21.1 - 24.6 cm (8-9 3/4 in). The female is smaller than the male.



Robbins, C.S., B. Brunn, and H.S. Zim. 1983. Birds of North America. New York: Golden Press.

SIMILAR SPECIES IN MASSACHUSETTS: In its breeding plumage, the male Blackpoll Warbler resembles the Black-and-white Warbler (*Mniotilta varia*) in overall coloration; yet, unlike the Black-and-white Warbler, the Blackpoll has a distinct black cap. Their feeding behavior as well as their preferred habitat distinguishes them from one another. The Black-and-white Warbler feeds from side to side on a tree trunk and prefers deciduous woods; while the Blackpoll feeds by hopping from twig to twig among the branches preferring coniferous woods.

In its winter plumage, the male Blackpoll is often confused with the Bay-breasted Warbler (*Dendroica castanea*) but lacks the chestnut-colored sides of the Bay-breasted; and the Blackpoll's under tail-coverts are always white. The best field mark in distinguishing between these two warblers is the color of the legs, which in the Blackpoll is light, approaching a yellowish color, while in the Bay-breasted it is dark brown, and in some instances almost black. Both the Bay-breasted Warbler and the Blackpoll Warbler are birds of coniferous woods.



Distribution in Massachusetts
1983-current
Based on records in
Natural Heritage Database

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Massachusetts Division of Fisheries & Wildlife

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RANGE: The breeding range of the Blackpoll Warbler is from Alaska east to northern Ontario, northern Labrador, and Newfoundland south to central Manitoba, central Ontario, central Quebec, and locally, at high elevations, to western Massachusetts. It winters in northern South America, from Colombia and Venezuela south to Peru, Chile, Brazil and Ecuador and migrates through the West Indies.

HABITAT IN MASSACHUSETTS: The Blackpoll Warbler is limited in Massachusetts by the lack of its preferred habitat - stunted spruce-fir forest. Near the summit of Mt. Greylock, in northern Berkshire County, breeding Blackpoll Warblers are found in patches of stunted balsam fir (*Abies balsamea*). The breeding sites are conifers of medium to small size. The occurrence of very young or stunted balsam firs, cool woods, and filtered light seem to be a prerequisite for attracting the Blackpolls.

LIFECYCLE/BEHAVIOR: In the spring in Massachusetts, the main migration wave of Blackpolls arrives late in May. They travel a distance of not less than 2,500 miles, and the extremes of the range - Alaska and Brazil are twice that distance. It is one of the very few warblers that migrate directly across the West Indies from South America to Florida. Usually they are among the last of the wood warblers to appear, and although they arrive in great numbers, they keep mostly in leafy tree-tops where they are lost to view with only their frequent song as evidence of their presence.

The song of the Blackpoll Warbler is one of the highest pitched songs of any North American passerine. It is an insect-like trill, a high, thin *tree-tree-tree-tree-tree-tree* given on one pitch of equal length, beginning very softly, gradually increasing in the middle, then falling softer at the end. The last notes are sometimes run rapidly together, with an almost sputtering effect. The call note is a high-pitched lisp which resembles *zeet*. During the fall migration, the diurnal note *tsit* is the most common sound heard.

Males establish territories during June and courtship and nest building ensues in a slow deliberate procedure. Eggs are not laid before the second or third week of June. The Blackpoll Warbler is a bird of the northern spruce-fir forests and it is this habitat that seems to be an essential requirement for its nesting. Their nest, approximately 11.4 cm (4 1/2 in) in diameter and 8 cm

(3 in) in depth, is normally placed low in young conifers, commonly two to seven feet above ground. It rests snugly against the trunks of trees, supported by horizontal branches and well concealed by overhanging foliage. The nest is constructed of small twigs and sprays of spruce, pieces of bark, dried grasses, and weeds mixed with bits of moss, lichens, and wool, and are lined with fine rootlets, hair, and a liberal lining of white gull feathers. The lining of feathers is characteristic, being as essential to the nest structure as the spruce tree is for a nesting site. The kind of feathers used, of course, depends on the kind that is available.

Nest construction, incubation of the eggs, and brooding of the young are performed mainly by the female. The eggs vary from 3-5, with 4 or 5 being the norm. They may be white, light creamy buff, or sometimes a pale green ground color, with brown and amber specks scattered over the whole surface. Numerous spots and blotches of reddish brown and subdued shades of lavender are concentrated at the larger end, sometimes forming a wreath. Eggs are laid daily until the set is complete. Incubation is at least 11 days. The young open their eyes at 5 days and are fed by both parents until they fledge, 11-12 days after hatching. A single brood is raised per year.

The Blackpoll Warbler feeds on insects. Their diet consists of aphids, scale insects, cankerworms, sawflies and other insects that infest trees, spiders and their eggs, wasps, ants, and termites. In the fall, the Blackpoll eats a few seeds and berries such as pokeberry (*Phytolacca americana*). They glean insects from leaves and twigs and frequently dart from the concealment of the foliage to capture some passing flying insect much like a flycatcher.

In the fall, the Blackpoll Warbler begins its migration to South America in August and September, flying at night and foraging during the day. In Massachusetts, their fall passage peaks during September and continues into October.

POPULATION STATUS: The Blackpoll Warbler is currently considered a Species of Special Concern in Massachusetts due to its rarity as a breeding species. It is known to breed in only two locations in Massachusetts - the summit of Mt. Greylock and Savoy Mountain State Forest, both of which are in the Berkshires in the extreme northwestern part of the state. For some time,

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Mt. Greylock was believed to be the sole breeding site for the Blackpolls but in 1980, one breeding pair was recorded at the Savoy Mountain State Forest. In 1990, 22 singing males were recorded in four areas along the summit of Mt. Greylock, indicative of breeding/nesting activity (Quinlan, 1990). It is believed that the present population is currently stable, as supported by a 1950 census recording 20 to 30 nesting pairs on the summit of Mt. Greylock.

MANAGEMENT RECOMMENDATIONS: The Blackpoll Warbler is known as the longest distance migrant of the warbler species. Though its survivorship is impacted by migration problems such as weather, the greatest potential impact on its future as a breeding species in Massachusetts is a change in its present breeding habitat, stunted balsam fir (*Abies balsamea*). Any manipulation of the breeding grounds is certain to bring about a decline in the number of nesting Blackpolls and possibly result in extirpation of the species from the state. It should also be noted that recent studies have shown that this habitat is sensitive to the effects of acid rain. Though the state must make every effort to insure the continued existence of suitable breeding habitat, ultimately, the future of the Blackpoll Warbler in Massachusetts may depend upon political decisions made at the national and international level regarding both the protection of its wintering grounds as well as the effects of acid rain within its breeding territories.

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