

Blackburnian Warbler

Dendroica fusca

The Blackburnian Warbler is closely associated with mature coniferous trees. The species prefers old-growth stands that contain either exclusively coniferous growth or mixed conifer-deciduous stands, but will occupy territories within northern deciduous forests that contain only a single tall red spruce or hemlock. Habitat studies indicate that the species prefers to forage and nest in conifers. MacArthur (1958) indicated that because of this warbler's preference for foraging in the topmost branches, it places a premium on tall, mature forests for habitat. He also hypothesized that because of overlap in foraging behavior, this species may compete with the Black-throated Green Warbler (*D. virens*).

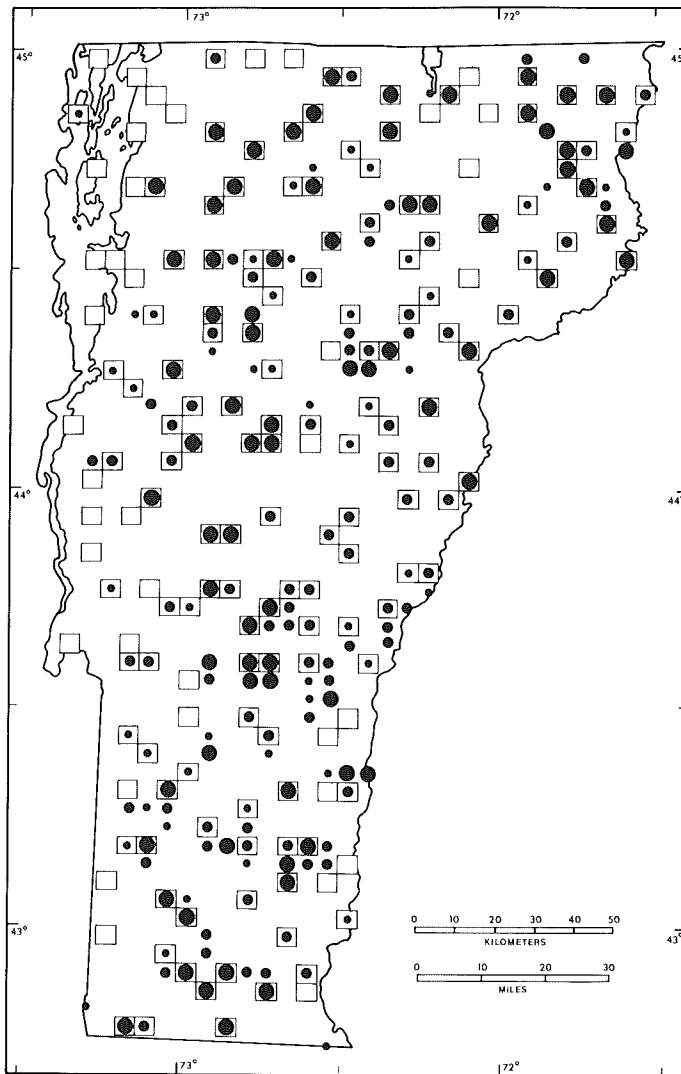
A treetop bird that possesses a sibilant song, the Blackburnian Warbler is difficult to detect. The most reliable way to locate this bird is by its voice. Its song consists of a rapid series of high, "stitching" notes, followed by a normally upward-inflected note that trails off beyond the range of human hearing. Variations on this theme are many, including unadorned sibilant, slurred high notes, and a version that ends in a downward-inflected note. The nest is exceedingly difficult to find because it is placed high among coniferous greenery, which camouflages it. Nests may be sometimes located by watching parents fly back to them. The most frequent confirmation code used by Atlas Project workers for this species was FY (parents with food for young), which accounted for more than 72% of all confirmations.

Blackburnian Warblers typically arrive from central and northern South America in the first weeks of May; the earliest record is for April 30. The species begins nesting in late May, and is single-brooded. The nest is usually saddled on a side branch well out from the trunk of a conifer; sometimes it is placed in a trunk fork near the top. It is constructed of twigs and plant fibers, at-



tached to the supporting limb with spider webbing, and lined with black rootlets, hair, or fine grass. Nest heights of five Vermont nests averaged 7.9 m (26 ft) above ground; this is probably low, as most accounts indicate that nest heights are generally more than 10 m (33 ft) up. Egg dates for Vermont (three nests) extend from June 9 to June 22. Clutch sizes range from 3 to 5 eggs, with 4 being most frequent by far. Young have been detected in the nest as late as July 13. Fledglings have been reported only as late as July 14; in New York, fledged young have been noted into early August (Bull 1974). Blackburnian Warblers depart from Vermont in late August and early September; occasional individuals may remain into early October.

This species is common in Vermont, though often highly localized. In much of Vermont's northern hardwood forest the species is represented by scattered pairs whose territories center on one or more tall hemlocks or red spruces. The coniferous species with which the Blackburnian Warbler is found vary with the physiographic regions it occupies. It inhabits stands of balsam fir and black spruce in the Northeast Highlands, red spruce in the Green Mountains, hemlock and spruce in the Eastern Foothills and Taconic Mountains, and even tall, open stands of white pine on occasion in the Connecticut River valley and Champlain Lowlands. The historical status of the



No. of priority blocks in which recorded

TOTAL 140 (78%)
 Possible breeding: 30 (22% of total)
 Probable breeding: 48 (34% of total)
 Confirmed breeding: 62 (44% of total)

Physiographic regions in which recorded

	no. of priority blocks	% of region's priority blocks	% of species' total priority blocks
Champlain Lowlands	13	42	9.3
Green Mountains	53	98	37.9
North Central	15	79	10.7
Northeast Highlands	16	100	11.4
East Central	16	84	11.4
Taconic Mountains	9	56	6.4
Eastern Foothills	18	75	12.9

species, as indicated by such authors as Perkins and Howe (1901) and Davenport (1907), has changed little; the species was considered common, if local, before the extensive reforestation of much of the state during the past 100 years. If anything, the species has probably increased with reforestation.

The distribution of the Blackburnian Warbler presents a familiar pattern found in most of the state's boreal warblers. It is noticeably widespread in eastern Vermont and along the spine of the Green Mountains, is absent from more than half of the Champlain Lowlands, and is local in the Taconic

Mountains. In western Vermont the region of absence is roughly bounded by the 20° C (68° F) isotherm (the mean temperature for July), indicating this species' need for coniferous trees that are scarcer in this warm region. Because eastern Vermont offers a wider selection of microclimates as a result of its high land relief, the species does not become sporadic until below the 2.1° C (70° F) isotherm in the southern Connecticut River valley.

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