

Black-throated Blue Warbler

Setophaga caerulescens

The Black-throated Blue Warbler is a common inhabitant of deciduous and mixed forests across New England, the Great Lakes, and the Appalachians. The species' breeding range extends northeastward along the spine of the Appalachian Mountains to New Brunswick, and westward across the northern states and southern Canada to Wisconsin and western Ontario (Holmes et al. 2005). In Vermont, it was listed as a Species of Greatest Conservation Need in the state's Wildlife Action Plan as a responsibility species. Richard Holmes and his colleagues have studied the Black-throated Blue Warbler intensively since 1986 at the Hubbard Brook Experimental Forest (HBEF) in New Hampshire as well as on their wintering grounds in Jamaica (Holmes et al. 2005, Holmes 2007). Their research has provided important insights into this warbler's population ecology, and has served as a model for the demography of other forest songbirds.

In years with high prey abundance, Black-throated Blue Warblers commonly raise two broods per season (Holmes et al. 1992). At HBEF, first clutches are initiated during the last week of May and the first week of June, with second clutches started between late June and late July (Holmes et al. 1996). During the second atlas in Vermont, 4 nests with eggs were documented between 6 June and 21 July, and 10 nests with nestlings were found between 9 June and 7 August, suggesting similar nesting patterns. The species' loud song, extended nesting season, and use of lower forest strata make the Black-throated Blue Warbler an easy species to detect. In the second atlas, nesting was confirmed in nearly 50 percent of the priority blocks in which the species was detected. Consequently, the map shown here is likely an accurate representation of breeding distribution.

The Black-throated Blue Warbler was detected in at least 80 percent of all blocks in all biophysical regions except the Champlain Valley, where they were detected in 60 percent of blocks. Between the first and second atlases, the Black-throated Blue Warbler showed a net increase of 4 blocks, a 3 percent increase over the past 25 years. Of

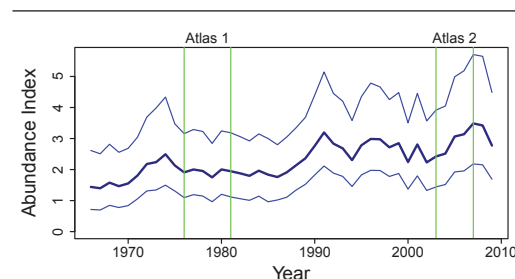


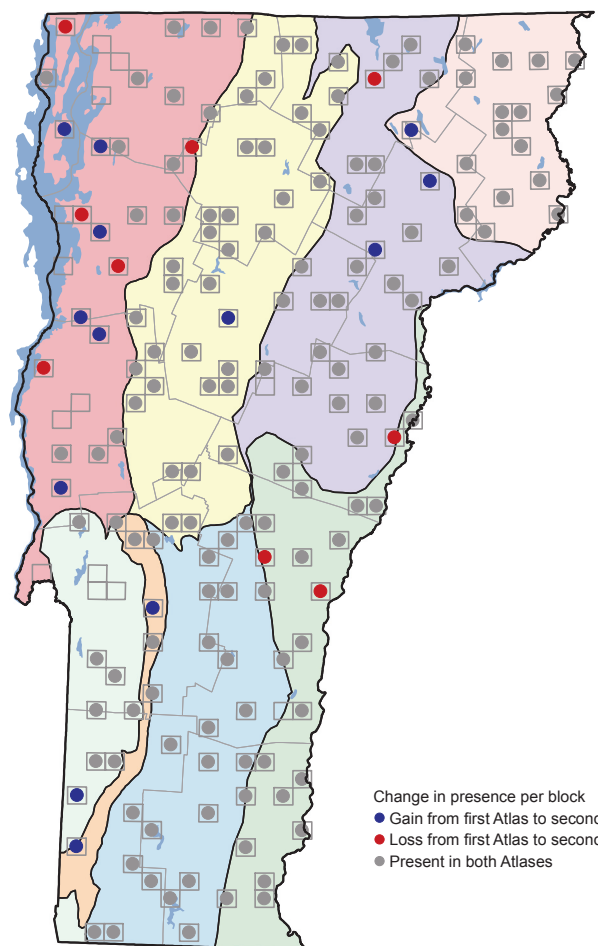
the blocks surveyed in both atlases, Black-throated Blue Warblers were detected in 13 new blocks and lost from 9 blocks. However, there was no discernible spatial pattern to these changes.

Breeding Bird Survey data from 1982 to 2007 showed a significant 2.3 annual percent increase for Black-throated Blue Warbler populations in Vermont (Sauer et al. 2011). Range-wide, the BBS results showed a significant 3.2 percent per year increase. Data from other second atlas projects show generally increasing trends: an 8 percent increase in Ontario (Cadman et al. 2007), a 10 percent increase in New York (McGowan and Corwin 2008), and a 17 percent increase in Maryland (Ellison 2010). Pennsylvania, however, recorded a more substantial 73 percent increase in block occupancy (Wilson et al. 2012).

Given an estimated global population of 2 million birds and stable or increasing trends, the Black-throated Blue Warbler is ranked by Partners in Flight as "secure" (Rich et al. 2004). Though maturation of forests may be benefiting the species on the breeding grounds, the species has a limited wintering distribution in the Caribbean islands, primarily the Greater Antilles, where it faces po-

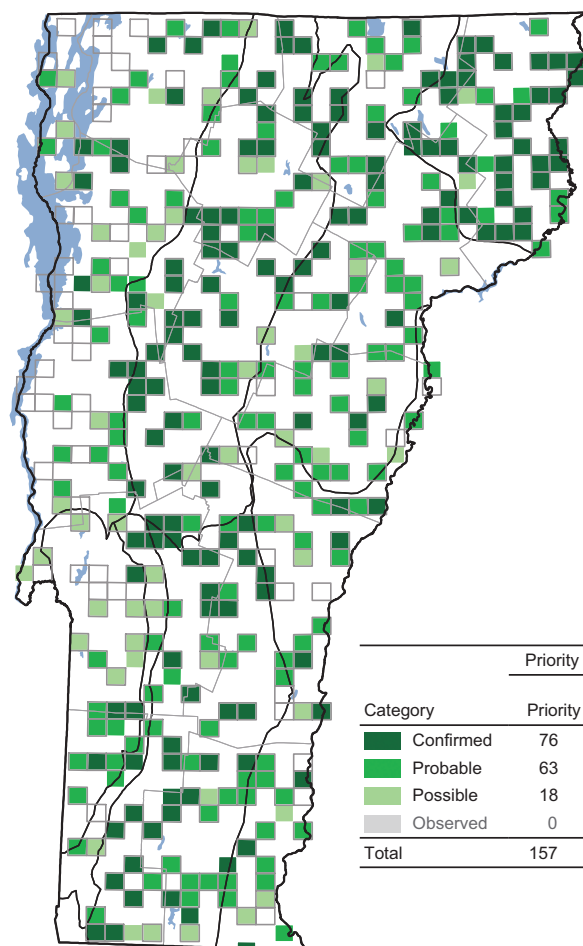
RELATIVE ABUNDANCE OVER TIME





CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	19	20	+ 1	+ 5
Northeastern Highlands	16	17	+ 1	+ 6
Northern Green Mountains	34	35	+ 1	+ 3
Northern Vermont Piedmont	27	27	+ 0	+ 0
Southern Green Mountains	26	26	+ 0	+ 0
Southern Vermont Piedmont	21	19	- 2	- 10
Taconic Mountains	7	8	+ 1	+ 14
Vermont Valley	3	5	+ 2	+ 67
Totals	153	157	+ 4	+ 3



Category	Priority Block Count	
	Priority 1	Priority 1 & 2
Confirmed	76	150
Probable	63	125
Possible	18	42
Observed	0	0
Total	157	317

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	60	14
Northeastern Highlands	100	12
Northern Green Mountains	100	21
Northern Vermont Piedmont	93	19
Southern Green Mountains	96	17
Southern Vermont Piedmont	80	10
Taconic Mountains	80	5
Vermont Valley	87	2

tential threats. All of these islands have lost more than 50 percent of their forested area (Lugo et al. 1981), and continued tropical deforestation likely represents the greatest potential threat to this species. Additionally, there is concern over the effects of climate change on prey availability and habitat structure on the species' breeding grounds (Rodenhouse et al. 2008). Because this warbler's demography is closely tied to a well-developed shrub layer (Holmes et al. 1996), heavy browsing by overabundant white-tailed deer populations may be a threat in parts of the species' range (Waller and Alverson 1997). In

Vermont, however, the Black-throated Blue Warbler appears secure at least in the near future.

ALLAN STRONG