

Black-and-white Warbler

Mniotilta varia

The only North American warbler to forage extensively on tree trunks, the Black-and-white Warbler is widely distributed in Vermont. In the United States its breeding range is restricted to the eastern states, but in Canada it breeds as far west as the Northwest Territories. The winter range includes the southeastern United States, but most of the population flies farther south to Mexico, Central America, the Caribbean islands, and northwestern South America. It may inhabit a wide variety of disturbed habitats during the winter, but nests primarily in the forest interior (Kricher 1995).

The Black-and-white Warbler is one of the earliest warblers to return to Vermont, often arriving in our forests in mid-April. Large patches of mature deciduous woodlands are preferred, but birds can also be found in successional deciduous, mixed, and coniferous boreal forest. Both upland and swampy woodlands may be used, and a dense shrub understory seems to be preferred. Although pairs may renest in the event of a failed first attempt, only one brood is raised per season (Kricher 1995). Nest building was observed between 19 May and 30 June (N = 9); the latest observation probably represented a renesting effort.

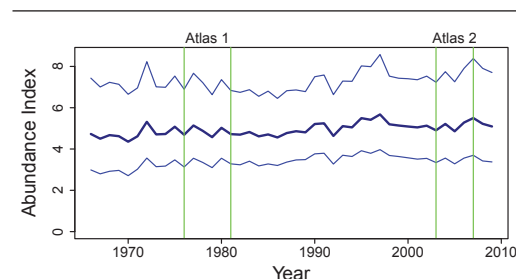
Nests are normally built on the ground, either at the base of a tree or next to a fallen log. Nests are extremely well hidden but, if discovered, the Black-and-white Warbler may perform a vigorous distraction display (Davis 1989). During the second atlas, only four nests were found: one with eggs and three with nestlings. Bull (1974) reported laying activity in New York from 10 May through the end of June, and dates may be similar in Vermont. Both the incubation and nestling stages range from 10 to 12 days. Fledglings were frequently seen from mid-June through late July, and the latest observation was on 1 August. Young may leave the nest before they are capable of sustained flight, and are tended by the adults for several days. Fledglings constituted the largest breeding confirmation code (N = 57). By mid-August males and females have molted into their matching basic plumages and may start migrating south.

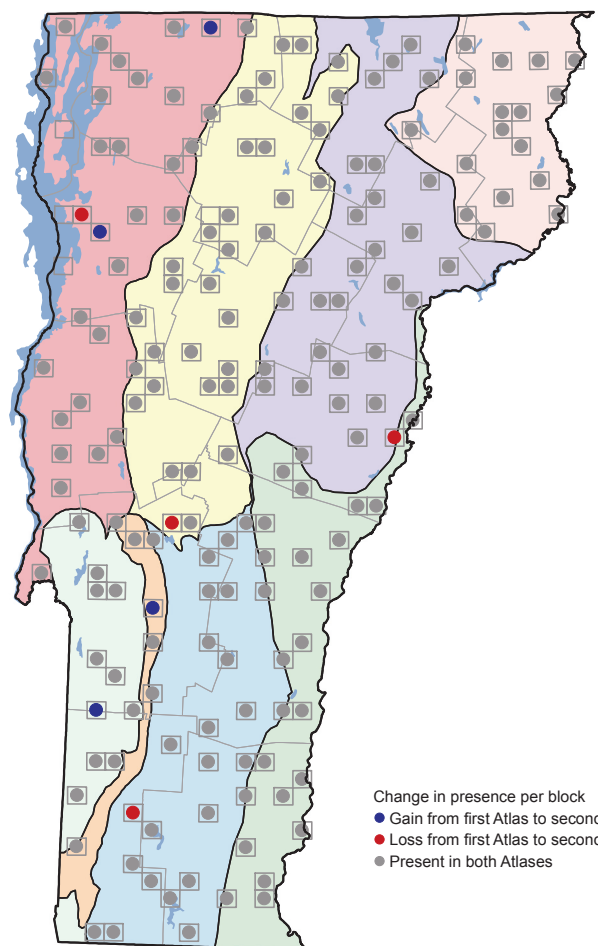


Vermont's second atlas showed that the Black-and-white Warbler has remained common and widespread across the state. In both atlases it was found in all biophysical regions, with the Champlain Valley hosting the lowest proportion of occupied blocks. Range-wide, only New Hampshire and Maine have greater densities of Black-and-white Warblers than Vermont (Price et al. 1995).

Breeding Bird Survey data have indicated a significant population decline of 1.7 percent per year in the Atlantic Northern Forest (Bird Conservation Region 14) from 1982 to 2007. Simultaneously, there was a significant increase (2.1 percent annually) in the Lower Great Lakes and St. Lawrence Plain (Bird Conservation Region 13; Sauer et al. 2011). Second atlases in New York (McGowan and Corwin 2008) and Pennsylvania (Wilson et al. 2012) found essentially no change in this warbler's distribution or proportion of occupied blocks. In Maryland, however, where development pressures are likely more intense and fragmentation more widespread, there was a 16 percent

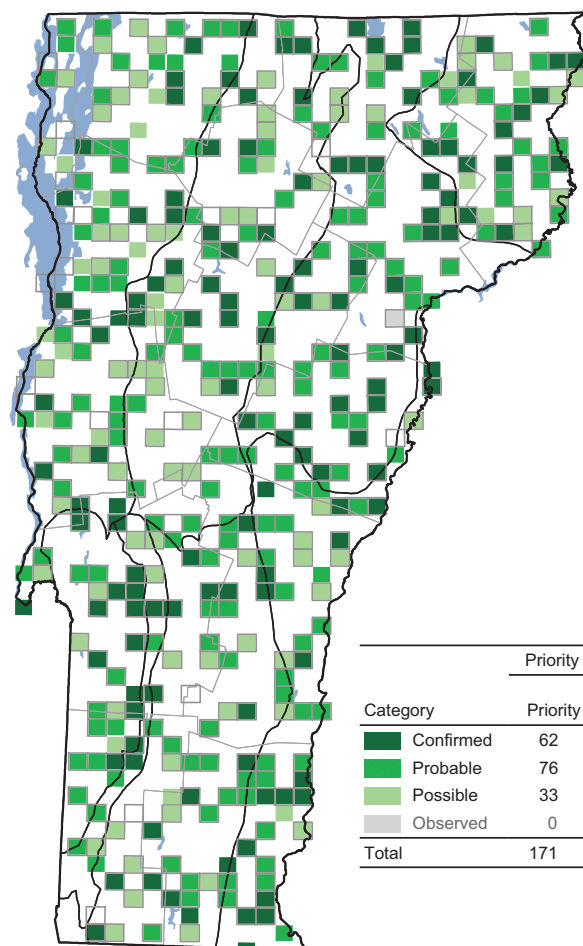
RELATIVE ABUNDANCE OVER TIME





CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	28	29	+ 1	+ 4
Northeastern Highlands	17	17	+ 0	+ 0
Northern Green Mountains	34	33	- 1	- 3
Northern Vermont Piedmont	30	29	- 1	- 3
Southern Green Mountains	27	26	- 1	- 4
Southern Vermont Piedmont	21	21	+ 0	+ 0
Taconic Mountains	10	11	+ 1	+ 10
Vermont Valley	4	5	+ 1	+ 25
Totals	171	171	+ 0	+ 0



Category	Priority Block Count	
	Priority 1	Priority 1 & 2
Confirmed	62	122
Probable	76	146
Possible	33	77
Observed	0	1
Total	171	345

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	86	18
Northeastern Highlands	100	11
Northern Green Mountains	92	17
Northern Vermont Piedmont	96	18
Southern Green Mountains	94	15
Southern Vermont Piedmont	100	12
Taconic Mountains	100	6
Vermont Valley	100	2

decrease in block occupancy (Ellison 2010). The second Ontario atlas found a greater than 20 percent increase in the probability of observation of Black-and-white Warbler, primarily due to succession of abandoned farmland and better coverage in the north (McLaren 2007).

Forest fragmentation in the eastern United States—from roads, suburban sprawl, and cleared rights-of-way—has been implicated in the declines of many species, and is a concern for the Black-and-white Warbler (Whitcomb et al. 1977). Robbins (1979) estimated that nearly 300 hectares (741 acres) of suitable habitat would

be necessary to maintain a local population. To its benefit, the species is a habitat generalist with few specific requirements and occurs in a wide variety of forest types subject to diverse management practices. Reed (1992) categorized it as one of the Nearctic-Neotropical migrant bird species that is “least vulnerable.” Vermont’s population appears secure for the foreseeable future.

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