

Blackpoll Warbler

Dendroica striata

Few species evoke the essence of Vermont's mountaintop forests like the Blackpoll Warbler. Its thin but emphatic song emanates from the tops of balsam fir and from within dense thickets on peaks above about 850 meters (2800 feet) in elevation. It can be locally common in these montane forests, ranging nearly to the uppermost limits of the tree line. The distribution of Blackpoll Warbler in the northeastern United States is local and patchy, with most birds confined to high-elevation areas of New York and New England, and a few scattered along coastal coniferous forests of easternmost Maine (Hunt and Eliason 1999). The species' main breeding range occupies an extensive swath of boreal and subarctic forest from western Alaska eastward to Labrador and Newfoundland (Hunt and Eliason 1999).

Renowned for its spectacular transoceanic fall migration—from the New England coast to northern South America—Blackpoll Warblers are no less remarkable for their success as breeding inhabitants of severe environments. Whether on a Vermont mountaintop or in the subarctic taiga, this species faces ecological challenges, mostly from harsh weather, that rival those experienced by any other wood-warbler. A habitat specialist throughout its U.S. breeding range, the Blackpoll Warbler occupies montane forests dominated by balsam fir, with lesser amounts of spruce, white birch, and mountain ash (Hunt and Eliason 1999). Although its elevational limits likely vary with latitude, the species generally breeds above 850 meters (2800 feet) in Vermont's Green and Taconic mountains, and on the peaks of the Northeastern Highlands. Breeding phenology in Vermont reflects its relatively late spring arrival. Extreme egg-laying dates for 170 nests monitored from 1994 to 2005 were 29 May and 26 July, with a median date of 12 June, while known fledging dates of 126 nests ranged from 27 June to 5 August (K. McFarland and C. Rimmer unpubl. data).

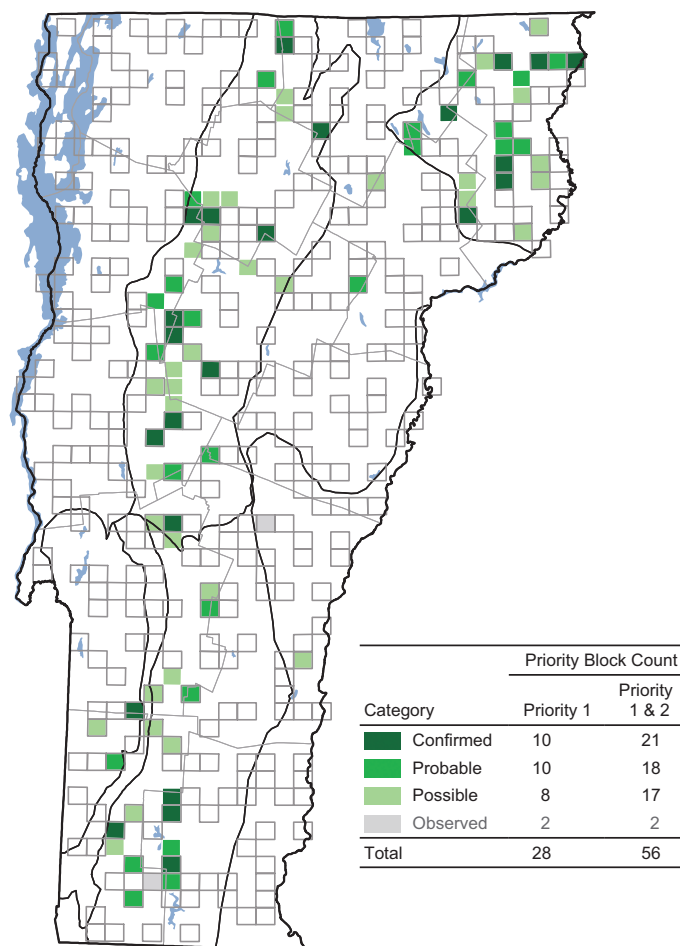
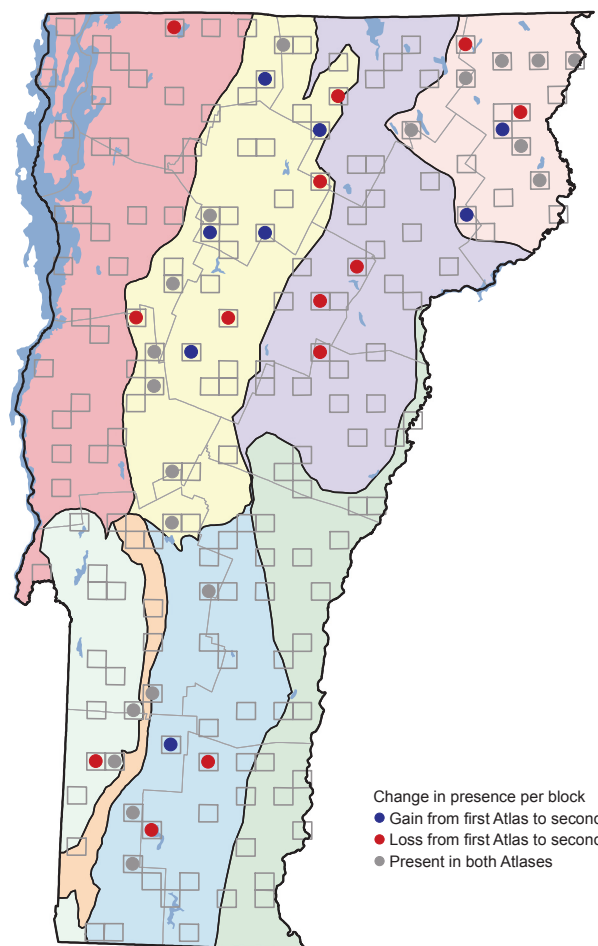
The second atlas indicated little overall change in the Vermont breeding distribution of Blackpoll Warbler, but revealed surprising numbers of Priority 1 block gains (8) and losses (13). The first atlas registered the species on 33



Priority 1 blocks, while the second atlas recorded Blackpoll Warbler on 56 blocks (28 Priority 1, 28 Priority 2). These were distributed as expected among the four biophysical regions that include Vermont's highest mountains, although the species' disappearance from 3 Priority 1 blocks in the Northern Vermont Piedmont is difficult to explain.

The range-wide breeding distribution of Blackpoll Warbler similarly appears to have changed little during the past quarter-century. The second New York atlas showed a 46 percent increase in the block occupancy, but an overall stable distribution (McFarland and Rimmer 2008). Ontario's second atlas reported a significant overall increase of 44 percent in the probability of observation for Blackpoll Warbler, but no substantive distributional shifts (Sutherland 2007). Population-trend data, however, offer a mixed picture of the species' status. Regional Mountain Birdwatch results from 2001 to 2009 indicate that Blackpoll Warbler populations declined at a statistically non-significant rate of 1.1 percent annually (Hart 2010). On 27 Vermont survey routes, the species exhibited a significant annual decline of 3.1 percent. Elsewhere in the United States, Blackpoll Warblers significantly increased in the White Mountains, declined significantly in the Adirondacks, and showed no statistical trend in the Catskills or Maine (Hart 2010). In many regions Breeding Bird Survey data are too limited to infer trends, but in Maritime Canada Blackpoll Warbler occurs at the lower elevations that are surveyed. Populations there are plummeting, with significant annual declines of 9.6 percent in Nova Scotia and 8.8 percent in New Brunswick from 1982 to 2007 (Sauer et al. 2011).

Although Blackpoll Warbler populations appear to be



CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	1	0	-1	-100
Northeastern Highlands	9	9	+0	+0
Northern Green Mountains	11	12	+1	+9
Northern Vermont Piedmont	3	0	-3	-100
Southern Green Mountains	6	5	-1	-17
Southern Vermont Piedmont	0	0	+0	+0
Taconic Mountains	3	2	-1	-33
Vermont Valley	0	0	+0	+0
Totals	33	28	-5	-15

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	0	0
Northeastern Highlands	40	27
Northern Green Mountains	35	41
Northern Vermont Piedmont	3	4
Southern Green Mountains	21	21
Southern Vermont Piedmont	2	2
Taconic Mountains	14	5
Vermont Valley	0	0

secure in Vermont at present, an array of anthropogenic threats exists. These include climatic warming (Rodenhous et al. 2008), acidic precipitation and mercury bioaccumulation (Rimmer et al. 2005), and development of montane forest habitat (Strong et al. 2009). The species' vast and remote breeding and wintering ranges impose limits on tangible conservation measures, but the persistence of Blackpoll Warbler as a signature mountaintop breeding bird in Vermont may ultimately hinge on efforts to combat climate change.

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