

Whip-poor-will

Caprimulgus vociferus

The Whip-poor-will is a species shrouded in a certain amount of mystery, even to those who attempt to study it. Most people only know it from its distinctive call, which seems almost endlessly repeated on moonlit summer nights. Vermont is near the northern edge of a range that extends from Arkansas and South Carolina to the southernmost areas of eastern Canada (Cink 2002).

The Whip-poor-will is essentially an edge species, requiring a combination of forest for breeding and open areas for foraging. In Vermont, these needs are met in a wide range of habitats including power-line rights-of-way, pine-oak forests along major rivers, and areas subject to high levels of disturbance such as logging or gravel mining. The species' breeding biology is poorly known, and very few nests have ever been found in Vermont. Two eggs are laid directly on the forest floor; these hatch in 19 to 20 days, with the young fledging 20 days later. Because of its sparse distribution and nocturnal habits, the Whip-poor-will often goes undetected in traditional surveys, and special methods (e.g., Hunt 2007) are often required to document its presence or absence. Even in ideal survey conditions (clear, calm, moonlit nights), detection probability rates are below 50 percent (Wilson and Watts 2006). Of 30 routes surveyed in Vermont from 2005 to 2007, Whip-poor-wills were detected on only 7 (P. Hunt unpubl. data).

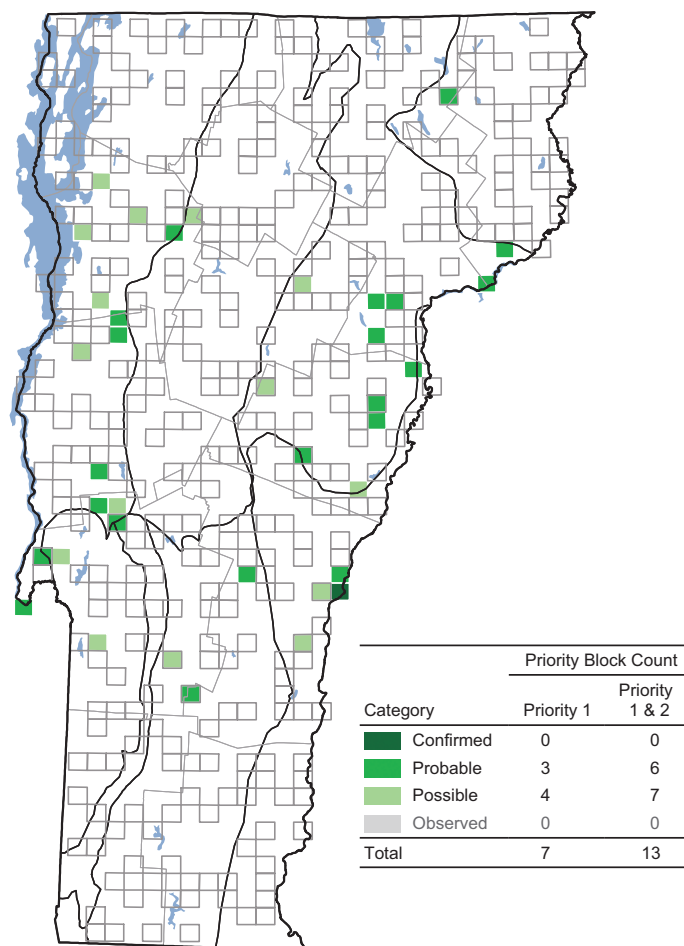
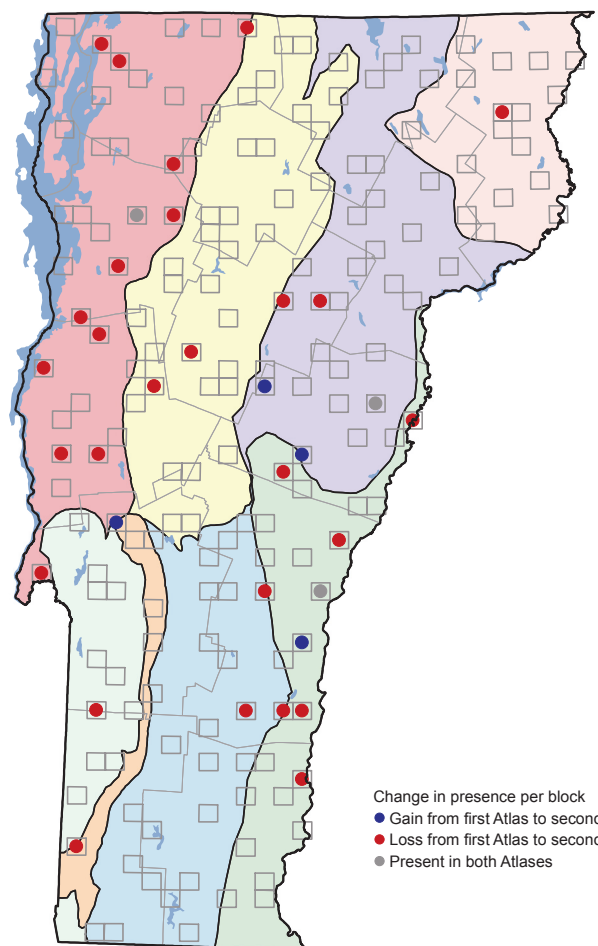
In Vermont the Whip-poor-will is almost exclusively a species of lower elevations. In both the first and second atlases it was recorded primarily in the Champlain and Vermont valleys to the west and the Piedmont to the east. Always very local in distribution, it declined considerably since the first atlas. The species essentially disappeared from the Green Mountains, Taconic Mountains, and Northeastern Highlands, regions where it had apparently declined even by the time of the first atlas (Kibbe 1985). These patterns hold whether one examines only data from Priority 1 blocks or across all blocks.

Because much Whip-poor-will biology remains poorly known, the causes of the observed decline are still largely



speculative. It is likely that a combination of forest maturation and outright habitat loss due to development has reduced the amount of edge habitat available to the species, but several other factors have been proposed. For example, there is anecdotal evidence that populations of large moths such as sphinx and silkworm moths—an important prey source for Whip-poor-will—have declined, possibly a result of pesticides or biological control aimed at gypsy moths. Even in areas where habitat has not been lost, increased populations of cats, raccoons, and other predators associated with human habitation may have reduced reproductive success for this ground-nesting bird. Where Whip-poor-will habitat use has been studied, territories were characterized by an even mix of forested and cut areas (Wilson and Watts 2008) or understories with relatively low shrub cover (Garlapo 2007). Anecdotal accounts suggest that numbers have increased after burning or other physical disturbance.

The dramatic decline of the Whip-poor-will in Vermont is symptomatic of a more widespread phenomenon. Atlas data from Ontario, New York, Pennsylvania, and Maryland all showed a marked range contraction, with block occupancy declining an average of 54 percent between atlases (Cadman et al. 2007, McGowan and Corwin 2008, Wilson et al. 2012, Ellison 2010). Despite poor detection rates, the Breeding Bird Survey shows populations declining 2.5 percent per year across eastern North America from 1982 to 2007 (Sauer et al. 2011). As a result of these widespread declines, the species is considered a Species of Special Concern in Vermont, New Hampshire, New York, and Connecticut. The need for more robust data on population trends led to creation of a regional monitoring program in 2005 (Hunt 2007), and ef-



CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	13	1	- 12	- 92
Northeastern Highlands	1	0	- 1	- 100
Northern Green Mountains	2	0	- 2	- 100
Northern Vermont Piedmont	3	3	+ 0	+ 0
Southern Green Mountains	3	0	- 3	- 100
Southern Vermont Piedmont	6	2	- 4	- 67
Taconic Mountains	1	0	- 1	- 100
Vermont Valley	1	1	+ 0	+ 0
Totals	30	7	- 23	- 77

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	4	23
Northeastern Highlands	2	8
Northern Green Mountains	1	8
Northern Vermont Piedmont	4	23
Southern Green Mountains	3	15
Southern Vermont Piedmont	5	15
Taconic Mountains	0	0
Vermont Valley	12	8

forts continue toward a better understanding of habitat needs and the effects of management on Whip-poor-will populations.

PAMELA HUNT