Yellow-throated Vireo

Vireo flavifrons

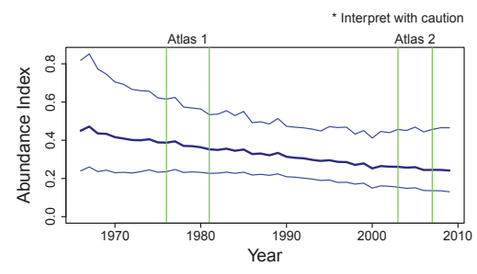
Despite its bright yellow throat, breast, and spectacles, the Yellow-throated Vireo can be challenging to find. It prefers the dense canopy of tall oaks and maples, and its plumage blends in with the growth of fresh foliage. Perhaps more readily detected is its song, which is like a hoarse version of the far more common Red-eyed Vireo, a species with which it is broadly sympatric (Rodewald and James 1996). Breeding from the Gulf Coast north to Quebec and Ontario, and west to the edge of the prairies, the Yellow-throated Vireo's range overlays that of the temperate, deciduous forest. Within this broad ecological zone, the species is typically confined to habitat edges where mature forests meet rivers, wetlands, fields, and roads. The Yellow-throated Vireo prefers relatively open forests and avoids dense, closed canopies (Rodewald and James 1996).

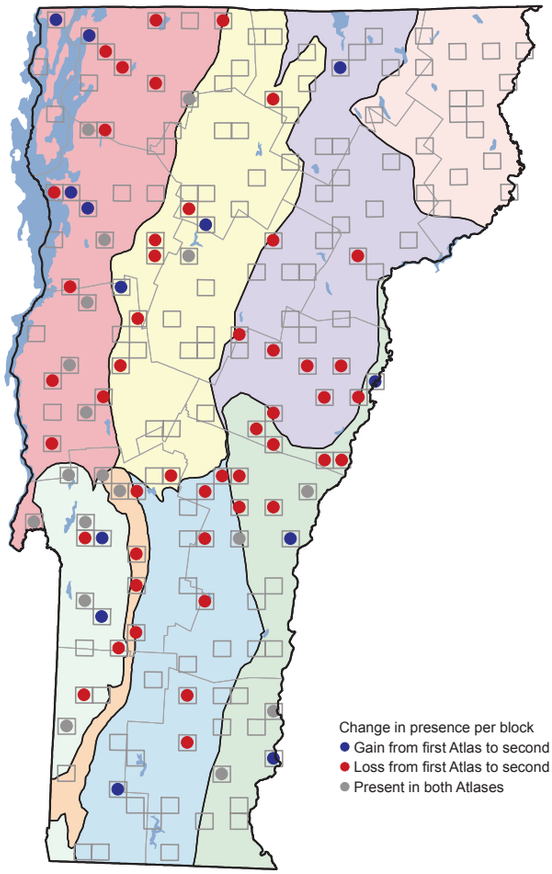
Yellow-throated Vireos winter in the Caribbean and Central and South America, returning to Vermont relatively late in the spring. The first birds appear in the beginning of May, but most do not arrive until mid to late May. Soon thereafter, they begin construction of their cup-shaped nests, suspended high in the canopy. Egg-laying takes place from late May to early June, and incubation takes approximately 13 days. Chicks remain in the nest for two weeks before fledging (Rodewald and James 1996). Fall migration begins in late summer and most birds have left Vermont by the end of August or early September.

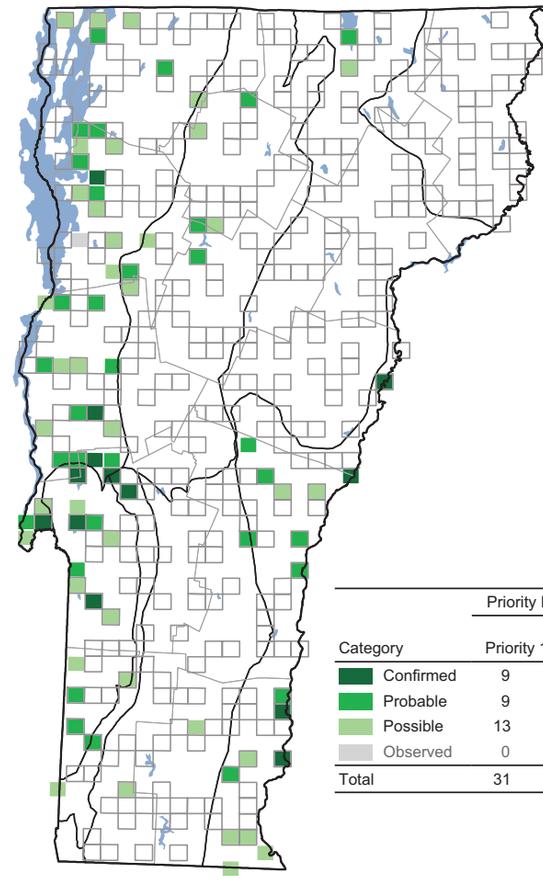
The distribution of the Yellow-throated Vireo in Vermont was not clearly defined until the first atlas, when it was shown to be fairly widespread, occupying about 36 percent of survey blocks. Since that time, this bird has undergone a major range contraction in the state. During the second atlas, it was reported in 52 percent fewer Priority 1 blocks and was largely restricted to lower-lying areas of the Champlain Valley and the Southern Vermont Piedmont (mainly along the Connecticut River). The breeding distribution has contracted in every biophysical region in the state, with the greatest losses occurring in the Northern and Southern Green Mountains and the Northern Vermont Piedmont. Breeding Bird Survey data from 1982 to 2007 indicate that the species has been declining in Vermont, but not significantly. New Hampshire, New York, Maine, and Ontario all have shown stable trends during the same period (Sauer et al. 2011). New York's second atlas indicated a relatively stable population (McGowan and Corwin 2008), and the second Pennsylvania atlas showed a 45 percent increase in occupied blocks. The second Ontario atlas showed no overall change, but a high degree of turnover as some areas were abandoned and others occupied, probably due to localized changes in forest cover and fragmentation (James 2007).

It has been suggested that insecticide spraying of shade trees in the first half of the twentieth century (Bagg and Elliot 1937) may have contributed to the decline of the Yellow-throated Vireo in Vermont, but it seems unlikely that any such effects could have persisted until the present. Given that Vermont has experienced no net loss in percent forest cover in recent decades (a period when forests and perhaps former agricultural lands have matured), it is conceivable that there has been a decline in the particular edge type the species prefers, where mature, tall trees abut more open areas. The uncertainty surround-

RELATIVE ABUNDANCE OVER TIME







Category	Priority Block Count: Priority 1	Priority 1 & 2
Confirmed	9	10
Probable	9	26
Possible	13	26
Observed	0	0
Total	31	62

CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	18	11	- 7	- 39
Northeastern Highlands	0	0	+ 0	+ 0
Northern Green Mountains	8	3	- 5	- 63
Northern Vermont Piedmont	9	1	- 8	- 89
Southern Green Mountains	9	2	- 7	- 78
Southern Vermont Piedmont	10	6	- 4	- 40
Taconic Mountains	7	6	- 1	- 14
Vermont Valley	4	2	- 2	- 50
Totals	65	31	- 34	- 52

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	34	40
Northeastern Highlands	0	0
Northern Green Mountains	10	11
Northern Vermont Piedmont	3	3
Southern Green Mountains	3	3
Southern Vermont Piedmont	32	21
Taconic Mountains	47	16
Vermont Valley	37	5

ing these potential explanations and the different results from other atlases point to the fact that we may not adequately understand the breeding habitat preferences of this species or that we have underestimated its numbers. Future research should focus on the relationship of habitat patch size and distribution to the density and demographics of Yellow-throated Vireo in mosaic landscapes.

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