

Tufted Titmouse

Baeolophus bicolor



Breeding from Ontario south to Florida, and as far west as Kansas and Oklahoma, the Tufted Titmouse has a wide geographical distribution. Before the early twentieth century, however, the northern limit of the species' breeding range was northern New Jersey and southern New York (Grubb and Pravosudov 1994). The first half of that century witnessed a remarkable northward extension of their range. The species first bred in Massachusetts in the late 1950s (Veit and Petersen 1993), in New Hampshire in 1973 (Foss 1994), in southern Ontario in 1974 (Grubb and Pravosudov 1994), and in Vermont in 1976 (Laughlin and Kibbe 1985). Over the course of about seventy years, they extended their breeding range northward by more than 480 kilometers (300 miles).

Except for the extreme northeastern part of the state, the Tufted Titmouse is now a common breeding bird in Vermont, wherever there is mature deciduous woodland. In late winter and early spring, when they are staking out territories, their loud *peter-peter-peter* song rings out through the canopy. They are cavity nesters and occupy old woodpecker holes, though they will also use nest boxes. Nest construction was documented as early as 26 April and into mid-July ($N = 23$). The first eggs are laid in early May (Grubb and Pravosudov 1994). The typical clutch is 5 to 6 eggs (Laughlin and Kibbe 1985), which are incubated for 12 to 14 days before hatching. The young remain in the nest for another 16 days while they are fed by both parents (Grubb and Pravosudov 1994). Atlas observers noted fledged young between 25 May and 13 August ($N = 72$). This hardy bird now remains in Vermont during the winter months, even during the most severe weather, and is a frequent visitor to feeders.

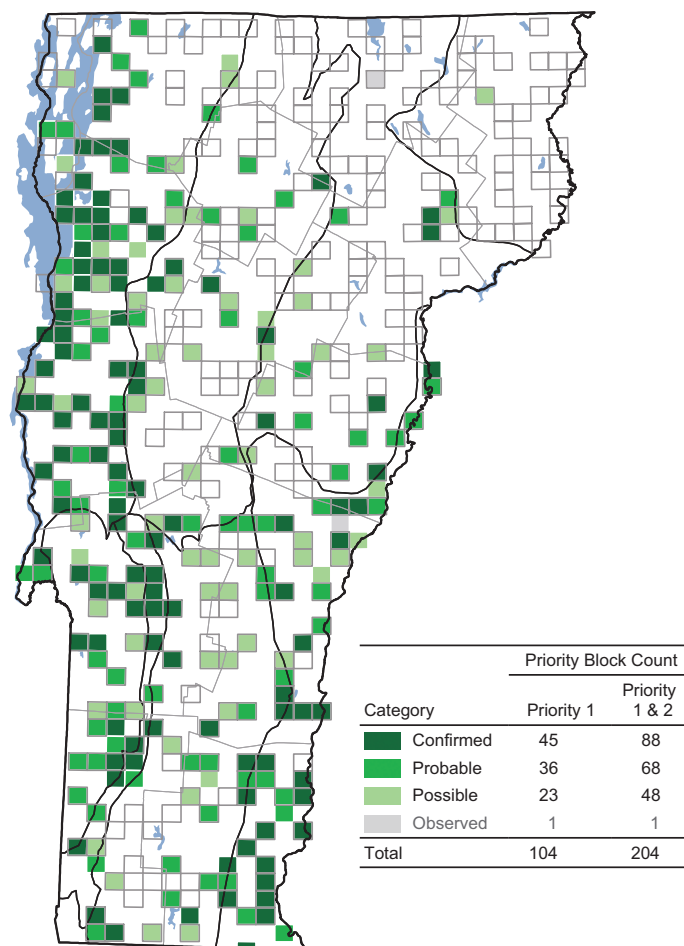
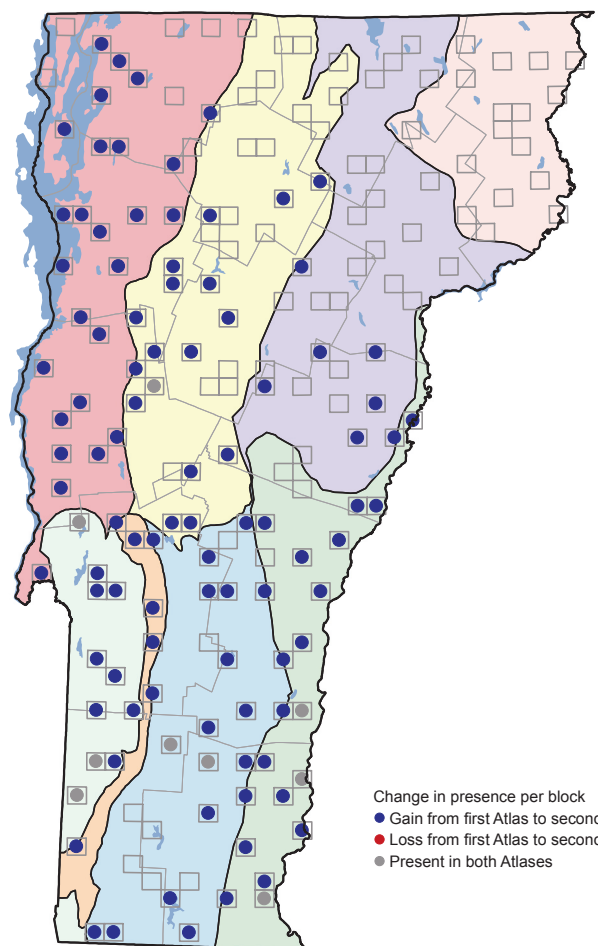
During the first Vermont atlas, only 9 blocks had Tufted Titmouse records. These were in the southern tier of the state, mainly in Windham and Bennington counties (Laughlin and Kibbe 1985). By the second atlas, however, 104 Priority 1 blocks were occupied, demonstrating an extremely rapid rate of colonization. The extension of the breeding range occurred in most parts of Vermont, but did not reach the Northeastern Highlands. It is likely

that the Tufted Titmouse will eventually colonize the lower wooded valleys of this area as well. The most dramatic expansions occurred in the Champlain Valley and the Northern Green Mountains.

Similar range extensions were found in the second atlas of Pennsylvania, where the number of occupied blocks increased by almost 15 percent (Wilson et al. 2012), and in New York, where this species extended its range northward and westward (McGowan 2008). Breeding Bird Survey data also showed a dramatic range extension and population abundance increases (14.1 percent per year) for this species in the Atlantic Northern Forest (Bird Conservation Region 14) between 1982 and 2007 (Sauer et al. 2011).

Three main reasons have been advanced to explain the Tufted Titmouse's rapid northward range expansion: a warming climate, the maturation of forests, and the spread of winter feeding stations, which ensure that food is readily accessible even during periods when snow cover is deep (Grubb and Pravosudov 1994). Given that all three factors continue to operate in the state, it is likely that we will see a continued range extension of the Tufted Titmouse in Vermont.

HECTOR GALBRAITH



CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	0	26	+ 26	+2600
Northeastern Highlands	0	0	+ 0	+ 0
Northern Green Mountains	1	17	+ 16	+1600
Northern Vermont Piedmont	0	7	+ 7	+ 700
Southern Green Mountains	2	20	+ 18	+ 900
Southern Vermont Piedmont	3	18	+ 15	+ 500
Taconic Mountains	3	11	+ 8	+ 267
Vermont Valley	0	5	+ 5	+ 500
Totals	9	104	+ 95	+1056

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	76	27
Northeastern Highlands	2	0
Northern Green Mountains	38	12
Northern Vermont Piedmont	27	9
Southern Green Mountains	71	20
Southern Vermont Piedmont	87	17
Taconic Mountains	100	10
Vermont Valley	100	4