

Brown-headed Cowbird

Molothrus ater

Once a bird of the Great Plains, the Brown-headed Cowbird colonized the eastern United States in the late 1700s and early 1800s. This species was associated historically with nomadic herds of bison. As northeastern forests were cleared for agricultural crops and livestock, domestic cattle became a suitable substitute (Lowther 1993). By the late 1800s, the species was widespread in the eastern United States, although it did not become common in the region until the mid-1900s (Brittingham and Temple 1983). The Brown-headed Cowbird's range now extends well north and east of Vermont into southeastern Canada, though the Great Plains remains the species' center of abundance.

The Brown-headed Cowbird is an obligate brood parasite. Its increased numbers have exacerbated the effects of forest fragmentation on songbird populations, as cowbirds have greater access to hosts in fragmented landscapes (Donovan et al. 2000). They are commonly found in a mix of agricultural lands, residential areas, and open habitats with hedgerows, windbreaks, and tree lines. Data from Vermont also show that cowbirds readily use disturbed sites, especially along roads, within the Green Mountain National Forest (Coker and Capen 2000). Brown-headed Cowbirds sometimes commute between breeding and foraging areas, with the distances between the two ranging from as little as 1 to 3 kilometers (0.5 to 1.8 miles) in Illinois (Raim 2000) to as much as 20 kilometers (12.4 miles) in New Mexico (Curson et al. 2000).

In Vermont, Brown-headed Cowbirds are early migrants, returning to the state during the first two weeks of March. Small numbers winter across the state, with most of these birds associated with farm structures and bird feeders. The earliest egg date was 4 May and the latest 8 July, thus showing a protracted nesting season. Fledglings are noisy and conspicuous: 77 percent of confirmations were of host parents feeding fledglings.

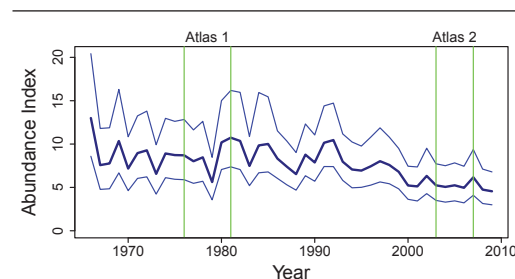
Although widely distributed, the core of the Brown-headed Cowbird's Vermont range is in the Champlain Valley. It also occupied more than 90 percent of priority blocks in the Vermont Valley, Taconic Mountains,

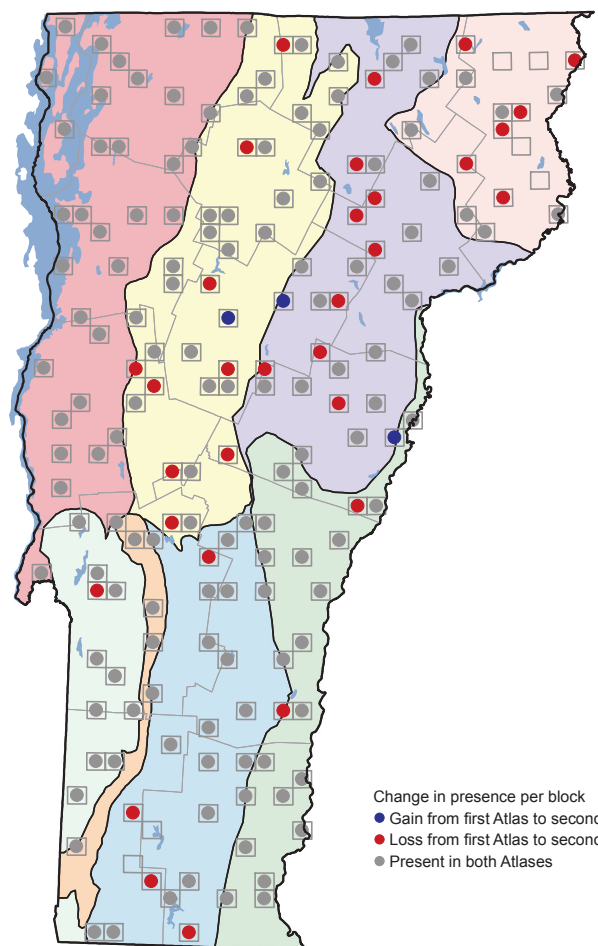


and Southern Vermont Piedmont. Statewide, the species showed a 16 percent decline in the number of occupied blocks between the first and second atlases, with the greatest declines in the northern and eastern parts of the state, presumably in response to abandonment of agricultural lands. There was no change in the distribution of Brown-headed Cowbirds in the Champlain Valley, the stronghold of the state's dairy industry.

After their numbers peaked in Vermont in the late 1970s, Brown-headed Cowbirds showed a significant 2.1 percent per year decline from 1982 to 2007. New Hampshire, Maine, and New York populations all declined more dramatically during this period (Sauer et al. 2011). Block losses in Vermont were proportionately larger compared to other regions that have completed second atlases. Declines of 7 percent were documented in New York (McGowan and Corwin 2008) and in Ontario (Cadman et al. 2007), while Pennsylvania (Wilson et al. 2012) and Maryland (Ellison 2010) showed changes of 4 percent and less

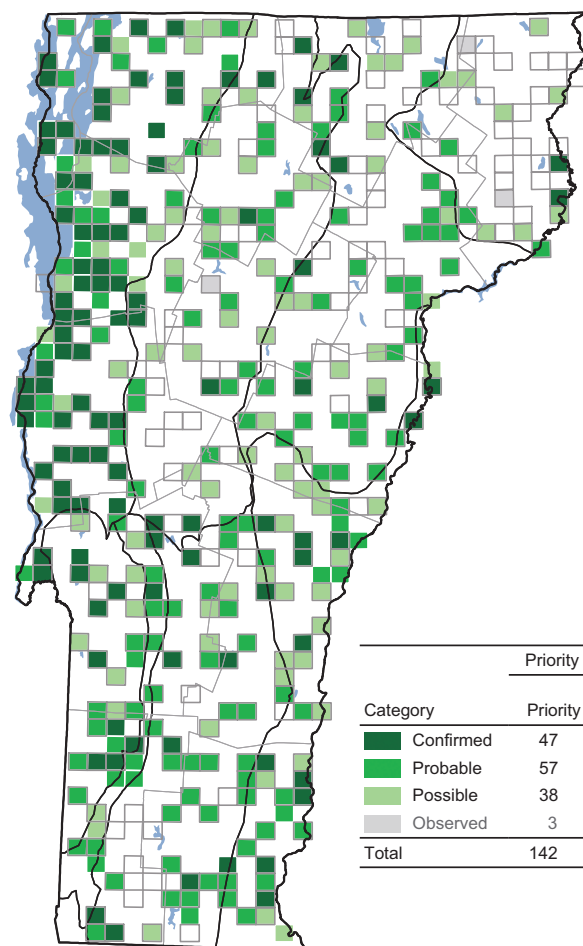
RELATIVE ABUNDANCE OVER TIME





CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	33	33	+ 0	+ 0
Northeastern Highlands	13	7	- 6	- 46
Northern Green Mountains	34	26	- 8	- 24
Northern Vermont Piedmont	28	21	- 7	- 25
Southern Green Mountains	25	20	- 5	- 20
Southern Vermont Piedmont	21	20	- 1	- 5
Taconic Mountains	11	10	- 1	- 9
Vermont Valley	5	5	+ 0	+ 0
Totals	170	142	- 28	- 16



Category	Priority Block Count	
	Priority 1	Priority 1 & 2
Confirmed	47	93
Probable	57	117
Possible	38	78
Observed	3	3
Total	142	288

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	100	25
Northeastern Highlands	35	5
Northern Green Mountains	70	16
Northern Vermont Piedmont	69	16
Southern Green Mountains	78	15
Southern Vermont Piedmont	97	14
Taconic Mountains	95	7
Vermont Valley	100	3

than 1 percent, respectively. A continued decline in agricultural activities, coupled with the regrowth of state forestlands, are likely factors in the population changes observed in Vermont.

Brown-headed Cowbirds are known to lay eggs in the nests of more than 247 species, with 176 species documented as rearing cowbird young to fledging. Common host species in the eastern United States include Yellow Warbler, Song Sparrow, Red-eyed Vireo, Chipping Sparrow, and Northern Cardinal (Lowther 1993). In areas occupied by certain federally endangered or threatened host

species (such as Kirtland's Warbler in central Michigan and Golden-cheeked Warbler and Black-capped Vireo in Texas), intensive cowbird trapping programs have been implemented to reduce the effects of brood parasitism on host populations (Lowther 1993). Monitoring populations of common host species in Vermont could help determine if there are indirect positive effects from the Brown-headed Cowbird's decline in the state.

ALLAN STRONG