

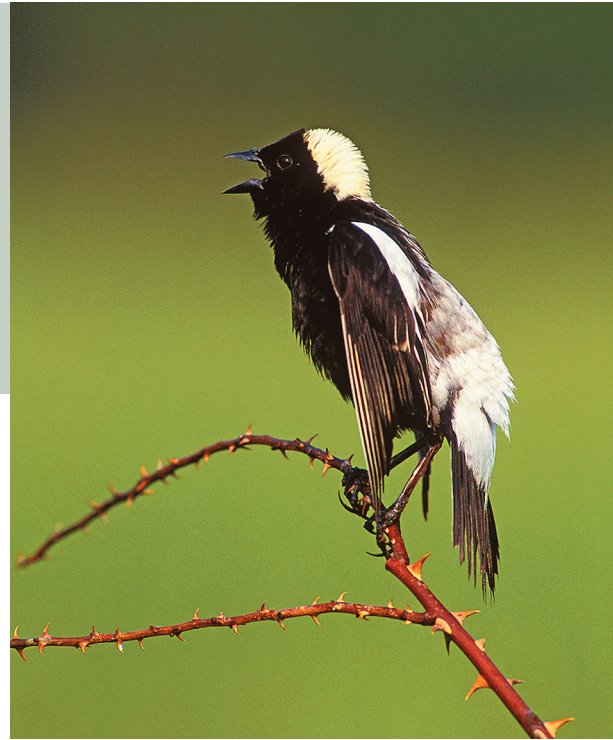
Bobolink

Dolichonyx oryzivorus

The flamboyant Bobolink often sounds confused; it soars and parachutes above Vermont hayfields, frantically trying to put too many notes into one song. Historically, the Bobolink, like the Eastern Meadowlark and the Upland Sandpiper, was a native of the central and northern prairies. After land clearing in the eighteenth century, however, a vast network of meadows, pastures, and hayfields replaced much of the original northeastern forests. Bobolinks quickly adopted these artificial grasslands for breeding. Today, Bobolinks are up to three times more abundant in northeastern grasslands than they are in remnant native prairies (Bollinger and Gavin 1992).

The Bobolink arrives in Vermont after a 9656-kilometer (6000-mile) migration from central South America. Bachelor groups appear in mid-May, roughly a week before females. One male may mate with up to three females on his territory (N. Perlut unpubl. data). Bobolinks nest on the ground in grasslands of moderate to tall vegetation. The nest is an open cup lined with dried grass. In the Champlain Valley, eggs were documented as early as 18 May, with a mean clutch size of 4.74 ± 0.98 ($N = 342$). Incubation lasts 10 days, and nestlings remain in the nest for another 10 to 11 days. The latest nest fledging occurred on 30 July. Neither egg-dumping nor brood parasitism by Brown-headed Cowbirds was observed.

The state's population is largely concentrated in the Champlain Valley, which includes about 146,000 hectares (361,000 acres) of managed grassland. Although the Bobolink was widespread across the state, block occupancy declined by 6 percent since the first atlas. In the Northeastern Highlands, Bobolinks were detected in 2 fewer blocks. Breeding Bird Survey data show a significant annual decline of 2.1 percent for Vermont from 1982 to 2007. BBS data from neighboring states also show modest but significant declines: 0.9 percent per year in New York and 1.7 percent in New Hampshire (Sauer et al. 2011). Pennsylvania's second atlas, however, documented a 14 percent increase in the number of occupied blocks (Wilson et al. 2012). Partners in Flight classified the Bob-

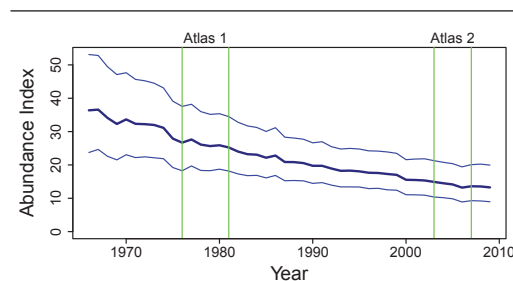


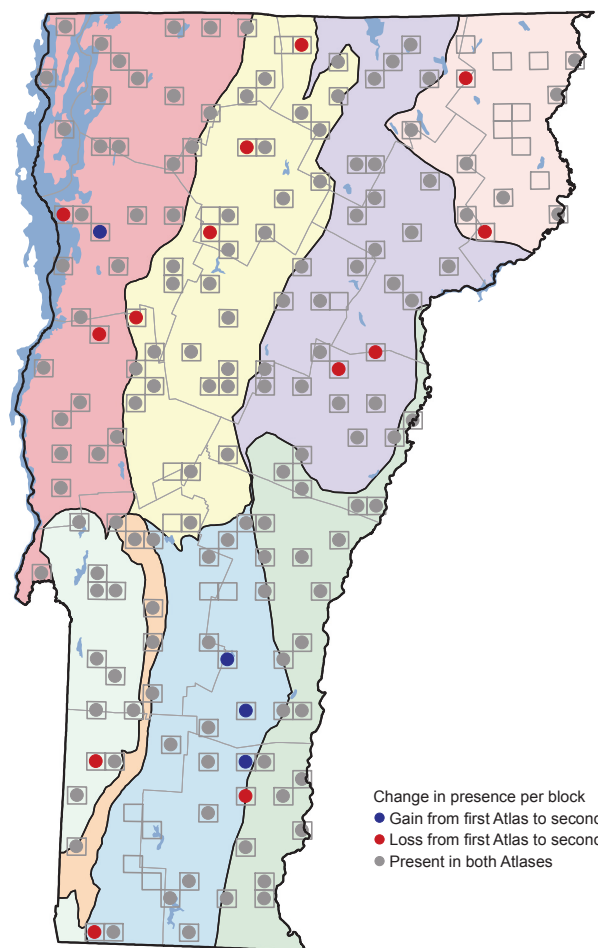
olink as a species of regional concern; both Vermont and Connecticut list it as a Species of Special Concern.

Bobolink population dynamics in the Champlain Valley have been directly affected by changing agricultural practices (Perlut et al. 2008a). To understand the effects of the timing of haying, N. Perlut and A. Strong banded 490 adult birds and monitored 378 nests in Chittenden County between 2003 and 2007. Fields cut on 11 June had near zero reproductive success and low adult survival rates (male: 0.43; female: 0.27). Nest success and adult survival increased with each two-week delay in the hay harvest. An average female produced 0.05 fledglings per year when hay was first cut on or before 11 June, 2.2 fledglings when hay was first cut between 21 June and July 11, and 2.8 fledglings when cutting was delayed until 1 August (Perlut et al. 2006, 2008a).

As with other species of grassland birds, the Bobolink's population decline in Vermont can be traced to two causes: habitat loss through development or reforestation, and the early and more frequent harvest of hay

RELATIVE ABUNDANCE OVER TIME

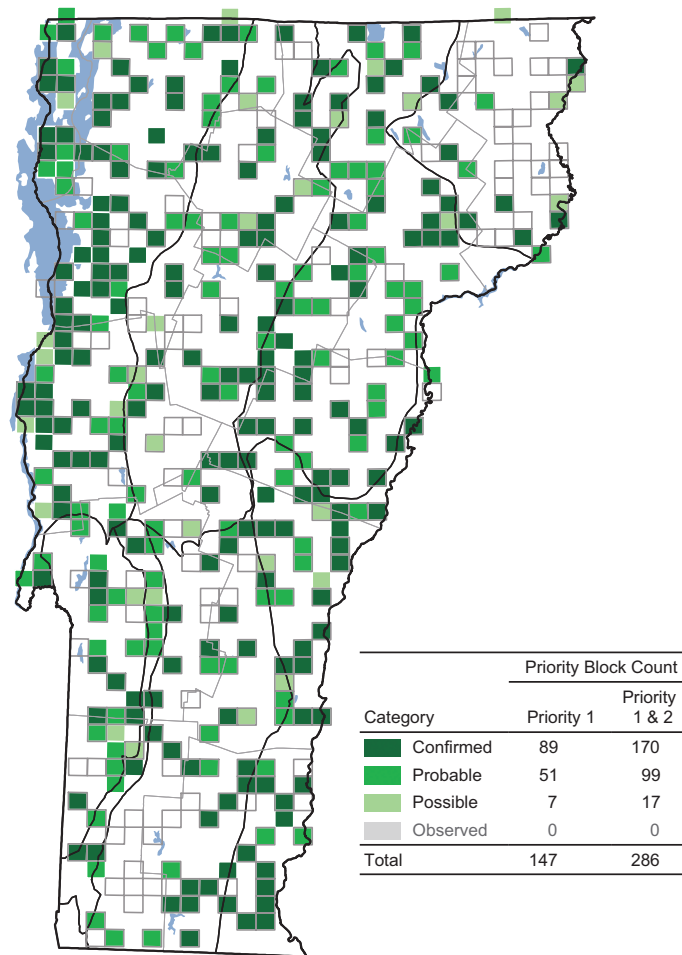




CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	32	31	- 1	- 3
Northeastern Highlands	9	7	- 2	- 22
Northern Green Mountains	31	27	- 4	- 13
Northern Vermont Piedmont	29	27	- 2	- 7
Southern Green Mountains	18	19	+ 1	+ 6
Southern Vermont Piedmont	21	21	+ 0	+ 0
Taconic Mountains	11	10	- 1	- 9
Vermont Valley	5	5	+ 0	+ 0
Totals	156	147	- 9	- 6

during the breeding season. To slow population declines, management strategies should be designed to increase adult survival (an issue on non-breeding grounds) and increase habitat quality on hayfields. Management of dairy farm hayfields, for example, can be adjusted to balance both the farmer's and the Bobolink's needs by cutting hay no later than 1 June and delaying the second cut to no earlier than 65 days after the first cut. This shift in management increased the Bobolink's reproductive rates from 0.05 to 3.0 successfully fledged offspring per nest (N. Perlut unpubl. data). Although ideal management for the



DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	91	23
Northeastern Highlands	37	5
Northern Green Mountains	75	17
Northern Vermont Piedmont	90	21
Southern Green Mountains	67	13
Southern Vermont Piedmont	90	13
Taconic Mountains	71	5
Vermont Valley	100	3

Bobolink would include delaying the cutting and removing hay until after 1 August, fields that are cut in early or mid-July remain important breeding habitat.

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