

Great Blue Heron

Ardea herodias



Vermont's largest and most familiar heron, the great blue is also the most widely distributed member of its family in North America, breeding from southern Mexico northward to the Maritime Provinces and Alaska (Butler 1992). Little was known about this bird's status in Vermont prior to the first atlas, which documented the state's largest heronry at Missisquoi National Wildlife Refuge, where 160 and 290 active nests produced 360 and 785 young in 1979 and 1983, respectively (Norse and Fichtel 1985). Few other colonies were documented, although the species was considered "not uncommon" at the start of the twentieth century (Perkins and Howe 1901).

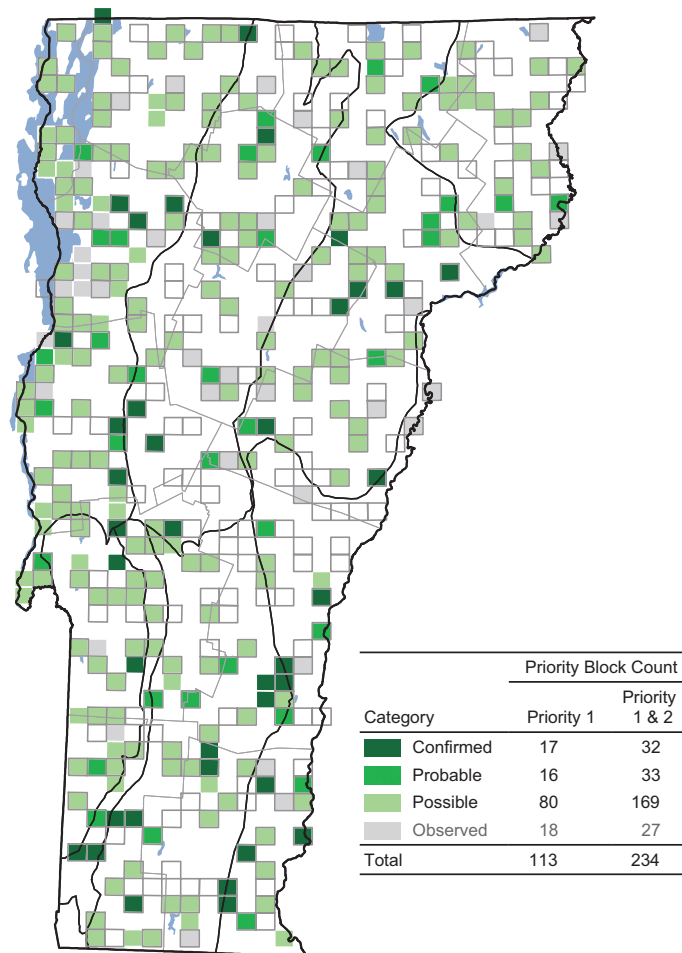
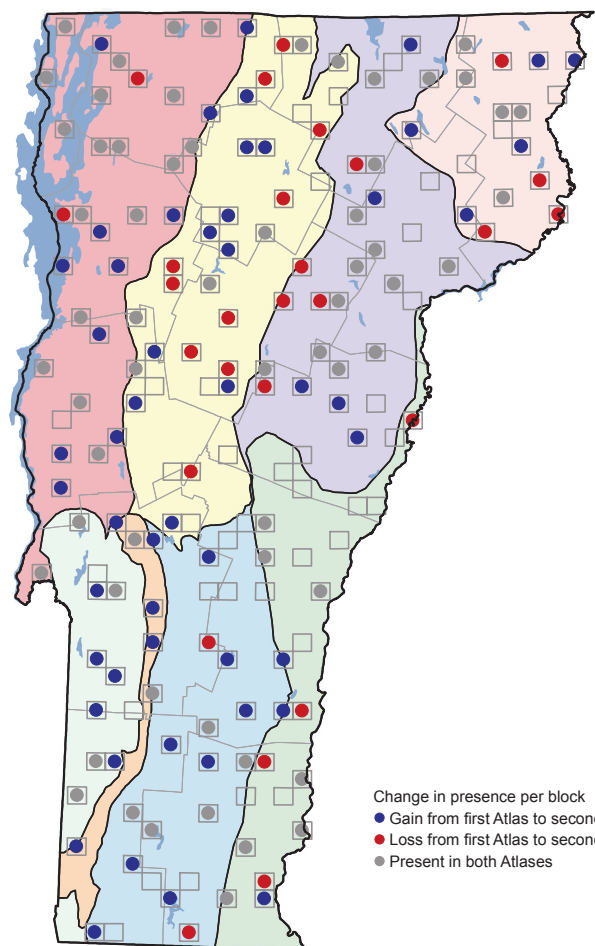
Although a few Great Blue Herons annually attempt to overwinter in Vermont, most return from southern wintering grounds in mid to late March. Nesting may occur in large colonies or solitarily, and nest sites may be miles from water or in the middle of a swamp or beaver pond. Nests are easily seen when placed in standing dead trees, but birds using live deciduous or coniferous trees are more difficult to detect. Nesting was confirmed in 18 blocks during the first atlas, a scant 7 percent of all records. Because adults may travel well away from the nest to forage, uncertainty has always existed about PO records. Courtship and nest construction take place in April, and by May most pairs are incubating. During the second atlas, nestlings ($N = 26$) were reported from 21 May through 12 July.

Great Blue Herons nest throughout Vermont. The second atlas documented more than twice as many CO records and an increase of 28 percent in block occupancy since the first atlas. The greatest increase occurred in the southeastern portion of the state. There were additional increases outside of priority blocks. Nesting was confirmed in 40 blocks in the second atlas; fewer than 10 percent of these hosted breeding Great Blue Herons in the first atlas. Most colonies are small and apparently ephemeral (Collier et al. 1992). Shad Island at Missisquoi NWR continued to support Vermont's largest known colony, which fluctuates from 250 to 600 nests each year (USFWS 2010).

Results of New York's second atlas were similar to Vermont's, with a 20 percent increase in overall occurrence rate and a doubling of the number of confirmed breeding colonies (McCrimmon 2008). New York's largest colony of about 550 nests was located on Lake Champlain's Valcour Island, and could have been the source of many PO sightings on South Hero and other nearby sites in the northern end of Lake Champlain. Pennsylvania's second atlas recorded a 28 percent increase in Great Blue Heron block occupancy (Wilson et al. 2012). The Ontario atlas documented a 22 percent decrease in probability of observation in a given block, perhaps in part due to differences in effort between atlases, or a decline in amphibian prey (Naylor 2007).

Great Blue Herons were persecuted for plumes in the 1800s and became one of the first species to fall under the watchful eye of conservationists. Hunting continued into the early 1900s, and the species has been included on conservation watch-lists for decades (e.g., Tate and Kibbe 1974, Arbib 1979, Thompson 1979). More recent evaluations in the Northeast (e.g., Dettmers 2003a) have generally concluded that Great Blue Herons are stable, although New Jersey still maintains the species on its threatened list. Despite a doubling of the number of colonies in Vermont during the past twenty-five years, Great Blue Herons have been placed on the state's medium priority list of Species of Greatest Conservation Need, due to the sensitivity of colony nest sites to disturbance. Food availability is a limiting factor in winter when weather conditions are harsh and may also limit colony size during breeding (Butler 1992). In Vermont, the Missisquoi colony is large, but elsewhere in the state food could be limiting colonies. Protection of colonies from disturbance during the breeding period is a continuing need.

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CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	21	30	+ 9	+ 43
Northeastern Highlands	9	10	+ 1	+ 11
Northern Green Mountains	16	16	+ 0	+ 0
Northern Vermont Piedmont	18	18	+ 0	+ 0
Southern Green Mountains	8	16	+ 8	+ 100
Southern Vermont Piedmont	11	9	- 2	- 18
Taconic Mountains	4	9	+ 5	+ 125
Vermont Valley	1	5	+ 4	+ 400
Totals	88	113	+ 25	+ 28

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	86	27
Northeastern Highlands	54	9
Northern Green Mountains	52	15
Northern Vermont Piedmont	66	18
Southern Green Mountains	58	14
Southern Vermont Piedmont	42	7
Taconic Mountains	76	7
Vermont Valley	100	3