

Ring-necked Duck

Aythya collaris

A bird of the boreal forest, the taiga, Arctic deltas, aspen parklands and, to a lesser degree, the prairie potholes, the Ring-necked Duck has been expanding its range eastward beyond the Great Lakes at least since the 1930s (Mendall 1938) and westward into Alaska and the Yukon during the 1980s (Hohman and Eberhardt 1998). Currently, the species breeds from Newfoundland to Alaska and southward across the Northern Tier. Vermont is situated at the southern edge of the breeding range.

Ring-necked Ducks breed at low densities in nutrient-poor bogs and other shallow, freshwater wetlands with stable water levels and abundant emergent and submersed or floating aquatic plants (Hohman and Eberhardt 1998). Nests are constructed over water in dense herbaceous vegetation, similar to the nests of Canvasbacks and Redheads.

Nesting by Ring-necked Ducks in Vermont was suggested as early as 1949, but was not confirmed in Vermont until 1965 (Fitchel 1985). During the first atlas, the Ring-necked Duck was reported as PR in a single block in the Northeastern Highlands, but breeding was not confirmed. Breeding was confirmed in five priority blocks during the second atlas; in total, breeding season detections came from 14 blocks, 12 of which were priority blocks. The species showed a 700 percent increase in the number of blocks occupied between the first and second atlases. The bulk of the population expansion was in the Northern Vermont Piedmont and Northeastern Highlands; the species was also confirmed breeding in the Southern Green Mountains (although not in a priority block), and a pair was recorded as PR in the Champlain Valley. During the atlas, females with young were observed between 16 June and 23 July (N = 6).

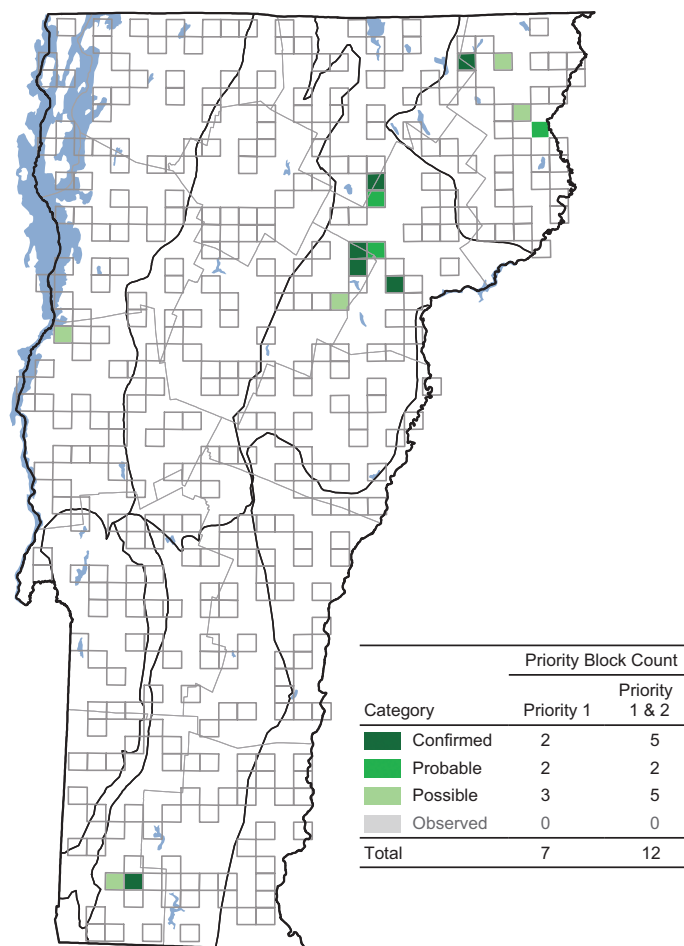
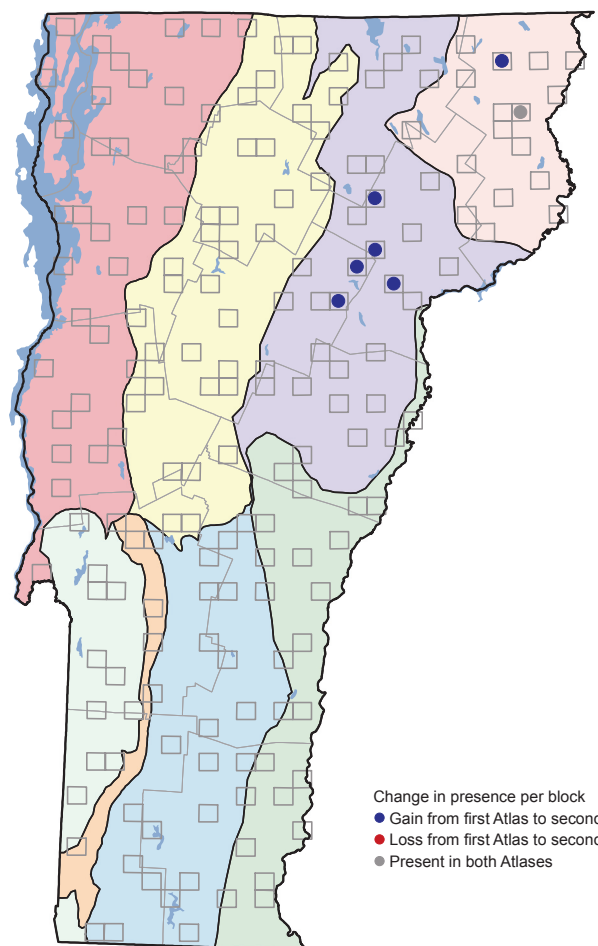
The species' range expansion in Vermont since the first atlas paralleled a continental population increase. Because the Ring-necked Duck winters in small, scattered flocks, and nests most abundantly in the boreal forest north of the USFWS traditional waterfowl survey area, population estimates for the species are imprecise. Nevertheless, breeding population indices for the tradi-



tional survey area appear to have increased several-fold over the past forty years (Hohman and Eberhardt 1998). The Ring-necked Duck population in the USFWS eastern survey averaged 530,000 (from 539,000 to 664,000) during the second atlas survey period (USFWS 2008). On average, the species has undergone a 9 percent population increase in the eastern survey region (eastern Ontario, southern Quebec, New Brunswick, Labrador, Newfoundland, Nova Scotia, and Maine) since 1990. It is increasing in other states and provinces as well. Ontario showed a 57 percent increase between its first and second atlases; observers noted infilling of the species' distribution across the province (Leckie 2007). The New York atlas showed a 106 percent increase (McGowan and Corwin 2008), and Pennsylvania, a 400 percent increase, from 4 to 20 occupied blocks (Wilson et al. 2012).

Although Mendall (1938) offered no hypothesis for the Ring-necked Duck's eastern range expansion, presumably the species' preference for forested and riverine wetlands, originally unoccupied in the northeastern United States, contributed to the trend. Additionally, the species has a more generalized diet than other *Aythya*, which may allow greater flexibility in habitat use (Hohman and Eberhardt 1998). Given its recent expansion into the Champlain Valley and the Southern Green Mountains, the Ring-necked Duck will likely continue to expand its distribution in Vermont.

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CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	0	0	+ 0	+ 0
Northeastern Highlands	1	2	+ 1	+ 100
Northern Green Mountains	0	0	+ 0	+ 0
Northern Vermont Piedmont	0	5	+ 5	+ 500
Southern Green Mountains	0	0	+ 0	+ 0
Southern Vermont Piedmont	0	0	+ 0	+ 0
Taconic Mountains	0	0	+ 0	+ 0
Vermont Valley	0	0	+ 0	+ 0
Totals	1	7	+ 6	+ 600

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	1	8
Northeastern Highlands	8	25
Northern Green Mountains	0	0
Northern Vermont Piedmont	10	58
Southern Green Mountains	1	8
Southern Vermont Piedmont	0	0
Taconic Mountains	0	0
Vermont Valley	0	0