Red-shouldered Hawk

Buteo lineatus

The courtship of the Red-shouldered Hawk, in which the calling male performs a looping sky dance high above his forested territory, is a sure indication that spring is imminent. This crow-sized raptor is among the first *Buteo* species to return to the Northeast to breed, often when snow is still on the ground in mid-March. The Red-shouldered Hawk breeds across the eastern half of the United States. A disjunct population occurs on the West Coast from southern Oregon to Baja, California (Dykstra et al. 2008). Vermont is near the northern edge of this bird's breeding range, which extends just beyond the Canadian border.

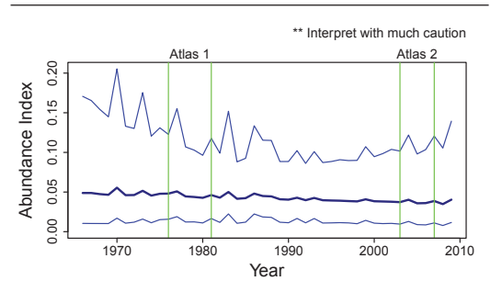
The Red-shouldered Hawk is a bird of mature woodlands and is frequently associated with water. Riparian forests, bottomland forests, and even intact woodlands near suburbs are used (Dykstra et al. 2008). Scattered wetlands and ponds, as well as other openings, are essential components of the habitat to provide feeding opportunities (Bednarz and Dinsmore 1982). Extensive forest tracts are favorable; breeding territories average at least 90 hectares (222 acres; Dykstra et al. 2001). A platform of sticks is placed high in a large tree, always below the canopy. Red-shouldered Hawks may use the same territory each year, sometimes choosing a different nest tree in the season following a nest failure. Three nests with young were reported during the atlas; dates ranged from 29 June to 15 July.

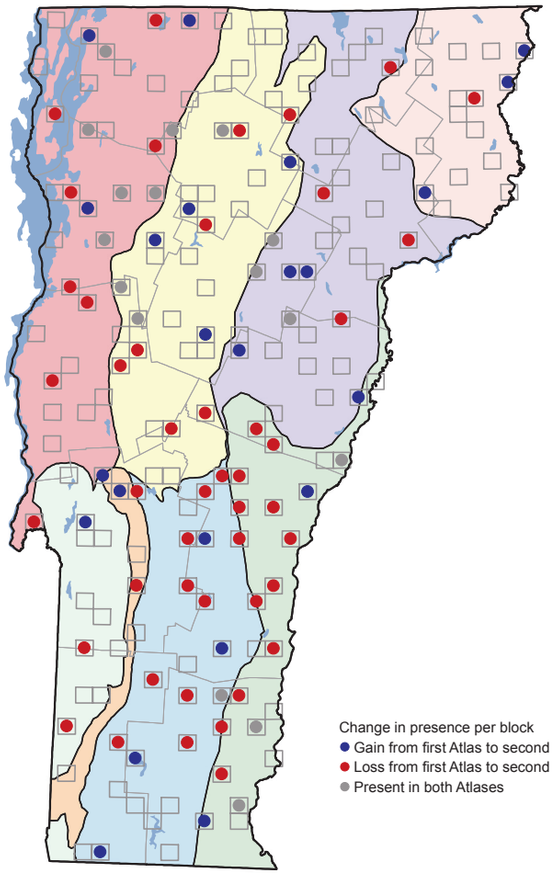
The Red-shouldered Hawk was considered an uncommon breeder during the first atlas, when it was found in 35 percent of Priority 1 blocks. Most records were clustered in the southern part of the state. Norse and Fichtel (1985) suggested that the scarcity of records was due to the position of Vermont near the northern edge of the bird's range and to the lack of bottomland deciduous forest in northern areas of the state. During the second atlas, Red-shouldered Hawks were found in 37 percent fewer Priority 1 blocks. Losses were greatest in the Southern Piedmont and the Southern Green Mountains where declines exceeded 60 percent.

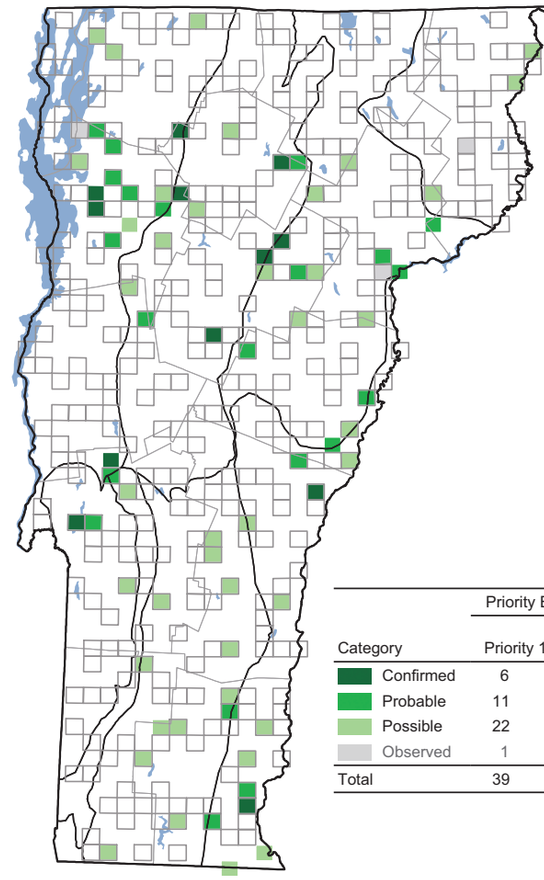
The recent trend of reforestation should benefit this raptor and, indeed, populations appear to be stable and increasing in most of its range during the past two decades (Dykstra et al. 2008). Breeding Bird Survey data in eastern North America showed a significant population increase of 2.9 percent annually from 1982 to 2007 (Sauer et al. 2011). Second atlases in New York, Maryland, and Pennsylvania revealed increases of 23 percent (McGowan and Corwin 2008), 26 percent (Ellison 2010), and 58 percent (Wilson et al. 2012), respectively. Increases were also documented in Ontario's second atlas (Cadman et al. 2007), and in preliminary data from the second atlas in Massachusetts (J. Walsh pers. comm.).

The decline in Red-shouldered Hawk block occupancy in Vermont is difficult to explain. Given increases in the Maine and Ontario populations, declines in Vermont are not likely part of a contraction along the edge of the species' range. Though quantitative data documenting an historical decline of Red-shouldered Hawk seem to be lacking, this hawk's habitat has undeniably been altered by logging, development, and wetland draining (Dykstra et al. 2008). Historically considered more com-

RELATIVE ABUNDANCE OVER TIME







Category	Priority Block Count: Priority 1	Priority 1 & 2
Confirmed	6	10
Probable	11	17
Possible	22	37
Observed	1	3
Total	39	64

CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	14	9	- 5	- 36
Northeastern Highlands	1	3	+ 2	+ 200
Northern Green Mountains	10	7	- 3	- 30
Northern Vermont Piedmont	7	7	+ 0	+ 0
Southern Green Mountains	13	5	- 8	- 62
Southern Vermont Piedmont	14	5	- 9	- 64
Taconic Mountains	2	1	- 1	- 50
Vermont Valley	1	2	+ 1	+ 100
Totals	62	39	- 23	- 37

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	16	19
Northeastern Highlands	8	5
Northern Green Mountains	15	16
Northern Vermont Piedmont	18	19
Southern Green Mountains	23	20
Southern Vermont Piedmont	22	14
Taconic Mountains	14	5
Vermont Valley	25	3

mon than the Red-tailed Hawk in several northeastern states (Merriam 1877, Knight 1908, Eaton 1914), the Red-shouldered Hawk has responded less favorably to forest modification and habitat reduction. In these situations, Red-shouldered Hawks can be outcompeted by more aggressive competitors, including Red-tailed Hawk and Great Horned Owl (Bednarz and Dinsmore 1981, 1982, Bryant 1986). Although atlas data for Vermont indicate a slight decline (8 percent) for Red-tailed Hawk, Breeding Bird Survey data show regional populations are stable or increasing (Sauer et al. 2011).

Conservation recommendations in the Vermont Wildlife Action Plan include the preservation of large tracts of contiguous mature forest and the protection of associated wetlands. A monitoring protocol specific to secretive woodland raptors is also recommended (Peterson and Crocoll 1992), as is the establishment of a buffer zone around nesting areas (Dykstra et al. 2008).

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