Belted Kingfisher

Megaceryle alcyon

The Belted Kingfisher is among the few Vermont birds that forage by diving headfirst into the water, using the bill to catch fish and other aquatic prey. Their extensive range includes most of the lower forty-eight states and the provinces of Canada to Alaska. The species has been found in Vermont since at least the early nineteenth century (Thompson 1842). Kingfishers winter throughout the southeastern United States, Central America, the West Indies, and as far south as northern South America (AOU 1998). Although individuals in southern latitudes and coastal areas will remain on unfrozen water bodies during the winter (Kelly et al. 2009), very few spend the winter in Vermont (Murin and Pfeiffer 2002).

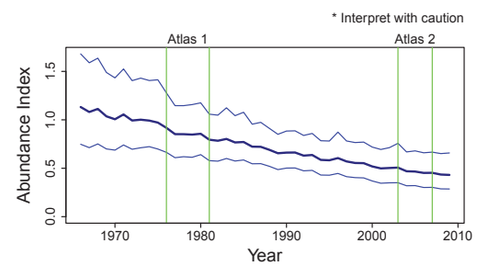
The Belted Kingfisher requires an almost vertical earthen bank for excavation of a nest burrow. The site is typically not too far removed from a river, stream, or lake from which fish or other aquatic animals can be captured (Albano 2000, Sullivan et al. 2006). A nest 3.2 kilometers (2 miles) from a water body was found in Minnesota (Hamas, in Prose 1985), but nests are usually within 1.6 kilometers (1 mile) from a feeding area (Prose 1985). During the second Vermont atlas, nest building was observed at 8 sites from 12 May through 11 July. The sole report of a nest with eggs was on 7 May. Nestlings were detected at 7 nests from 18 June to 10 July, and fledglings from 32 nests were seen from 25 May through 29 July with an average date of 10 July. Where present, kingfishers are likely to be detected during atlas surveys because the adults are noisy and conspicuous when flying or diving. Because they may forage well away from nesting sites, it should be noted that PO records in some blocks may not represent breeding in that block.

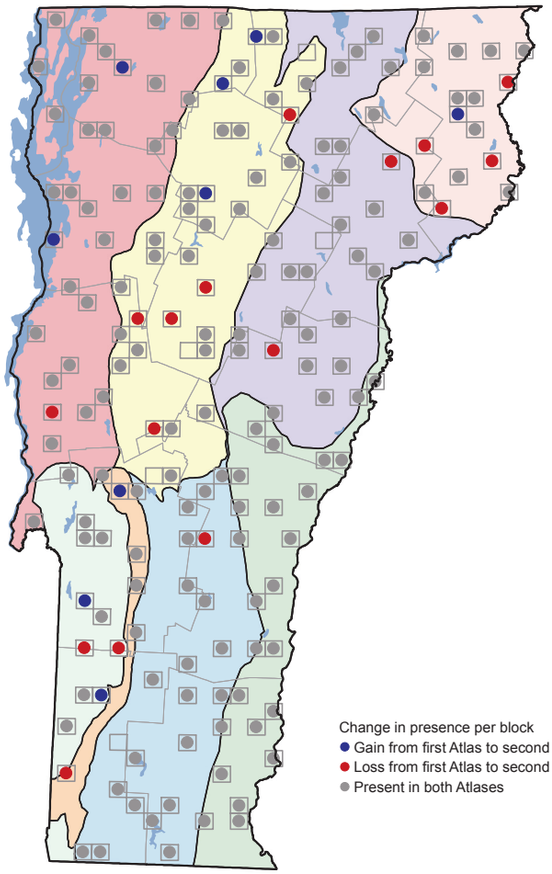
The Belted Kingfisher breeds in all biophysical regions of the state, seemingly wherever the combination of water with suitable prey and an earthen slope for a nest burrow can be found. Few changes in the bird's distribution in the state were revealed during the second atlas. The number of survey blocks with kingfishers was 4 percent less, with the largest decrease occurring in the Northeastern Highlands. Formerly occupied blocks where kingfishers were not reported during the second atlas are in biophysical regions to the north and with higher elevation.

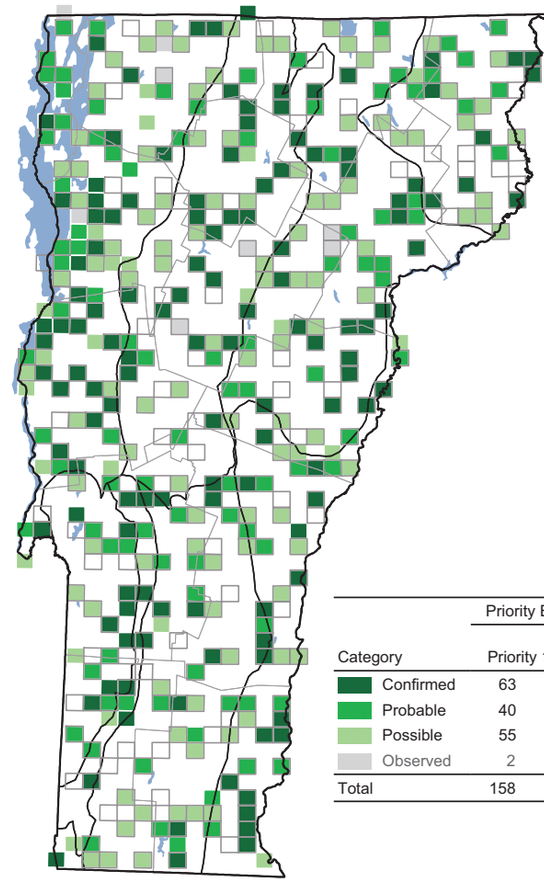
Although Breeding Bird Survey protocol is somewhat problematic for surveying kingfishers, the data show significant negative trends from 1982 to 2007 across many spatial scales: in Vermont (a decline of 2.0 percent per year), and across the eastern portion of the United States and range-wide (both down 1.3 percent per year; Sauer et al. 2011). Slight declines of 3 percent and 6 percent were noted in the second atlases in Maryland (Ellison 2010) and New York (McGowan and Corwin 2008) respectively, whereas in Pennsylvania, the decrease was 7 percent (Wilson et al. 2012). The second atlas for Ontario showed a decline of 10 percent (Cadman et al. 2007).

Unlike populations of other piscivorous birds such as the Osprey and Bald Eagle, Belted Kingfisher populations have not shown declines as a result of contamination with synthetic pesticides such as DDT (Kelly et al. 2009). Kingfishers in the Northeast have moderate levels of mercury contamination (Evers et al. 2005), but a link has not been established between mercury exposure and population numbers. Species that nest in riparian zones may be subject to habitat loss due to channelization, riverbank stabilization, and recreational uses. Kingfishers are hardy and opportunistic, however, and will adapt to human-

RELATIVE ABUNDANCE OVER TIME







Category	Priority Block Count: Priority 1	Priority 1 & 2
Confirmed	63	113
Probable	40	85
Possible	55	105
Observed	2	5
Total	158	303

CHANGE IN DISTRIBUTION BETWEEN ATLASES

Biophysical Region	First Atlas	Second Atlas	Change	% Change
Champlain Valley	31	32	+ 1	+ 3
Northeastern Highlands	16	13	- 3	- 19
Northern Green Mountains	29	27	- 2	- 7
Northern Vermont Piedmont	29	27	- 2	- 7
Southern Green Mountains	26	25	- 1	- 4
Southern Vermont Piedmont	21	21	+ 0	+ 0
Taconic Mountains	9	9	+ 0	+ 0
Vermont Valley	4	4	+ 0	+ 0
Totals	165	158	- 7	- 4

DISTRIBUTION IN CURRENT ATLAS

Biophysical Region	% of region species occupies	% of all records for this species found in region
Champlain Valley	89	21
Northeastern Highlands	78	10
Northern Green Mountains	75	16
Northern Vermont Piedmont	87	19
Southern Green Mountains	80	15
Southern Vermont Piedmont	90	12
Taconic Mountains	71	5
Vermont Valley	87	2

altered landscapes, as illustrated in the common occurrence of nests in sand or gravel piles (Kelly et al. 2009).

The Belted Kingfisher continues to be widespread and fairly common in Vermont. However, region-wide declines and the bird's reliance on vulnerable riparian habitats are causes for concern. Kelly et al. (2009) note the improbability of Belted Kingfisher populations remaining robust, given these challenges. Vermont's third atlas could reveal a much-reduced distribution of this chattering, fish-eating bird.

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