

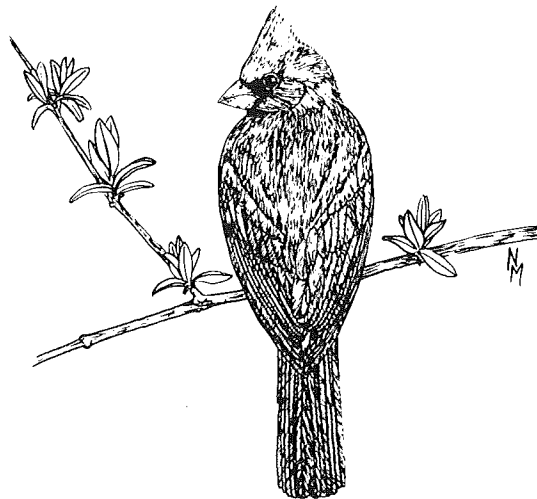
Northern Cardinal

Cardinalis cardinalis

The Northern Cardinal inhabits the thickets, vines, and bushes associated with forest edges, residential gardens, parks, abandoned farms, open woodlands, and swamps. It is less common in deep forests unless thickets are present (DeGraaf et al. 1980).

The Northern Cardinal's range in Vermont has increased dramatically during the past 20 years. The increase is particularly evident in the Taconic Mountains and the Champlain Lowlands, as well as in the Eastern Foothills and the East Central region. The first documented record for a wild Northern Cardinal in Vermont was a male at a feeder in Montpelier during the winter of 1958 (GMAS records, D. H. Allen). Although Perkins and Howe (1901) mentioned specimens taken in Vermont, and Fortner et al. (1933) mentioned a sight record at Wells River, these authors believed the records to be of escaped caged birds. Cardinals were not sighted again until the Christmas Bird Counts of 1960–61, when one cardinal was sighted at Bennington, another at Burlington, and a third at Saxtons River (CBC 1960–61). The first nesting record was in 1962 in Fair Haven (GMAS records, F. H. Allen). By the Christmas Bird Counts of 1970–71, the numbers had grown to 53, 6, and 13 (CBC 1970–71); two decades later, during the winter of 1980–81, 80, 135, and 30 cardinals were counted respectively for the same three towns (CBC 1980–81). The cardinal's winter range seems to have been stabilized and sustained by the presence of birdfeeders (Bent 1968).

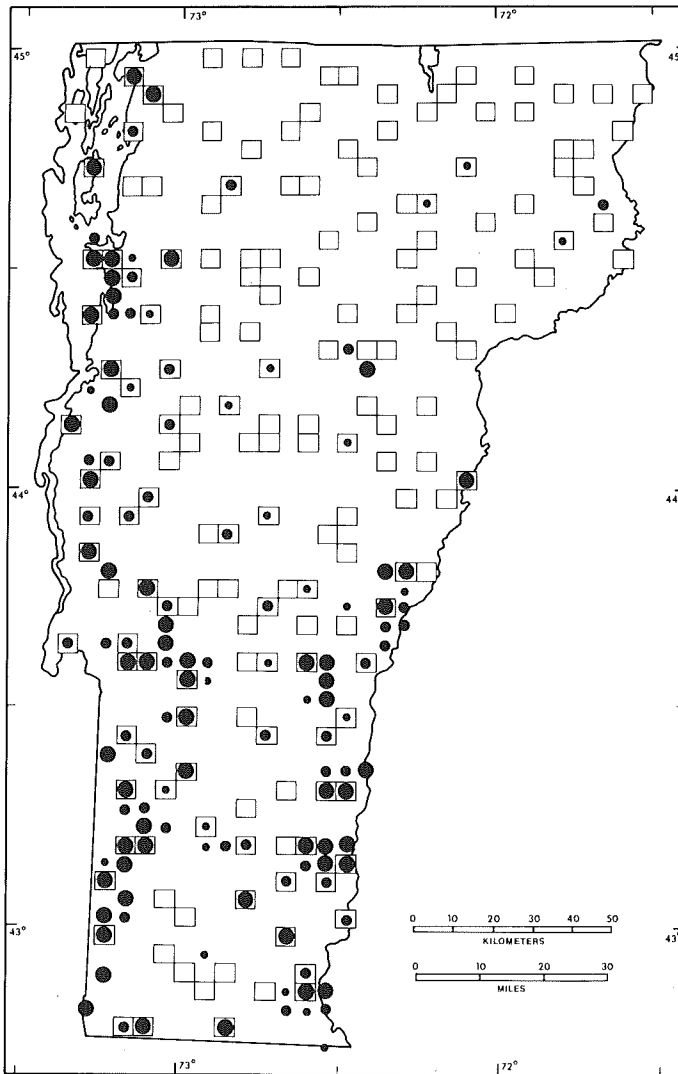
As the map indicates, the northward move of the Northern Cardinal in Vermont has involved expansion along river valleys as the breeding distribution and density has increased (RVB 1973–83). Beddall (1963) noted that such expansion may be more dramatic when population pressure leads to the invasion of a suitable area from which the species has previously been excluded by geographical barriers. Pairs and small groups of cardinals are becoming increasingly com-



mon at Vermont birdfeeders during the winter months. The breeding range of the Northern Cardinal in Vermont correlates with its winter range, which supports the observation that the cardinal is a nonmigratory species (Beddall 1963).

Both male and female sing, an unusual situation among songbirds, among which song is usually performed only by the male (Terres 1980). With the advent of spring, the male is heard singing his arrestingly loud song a week or two before the female begins singing.

The nest is normally built by the female. Usually well hidden, it may be located in evergreen or deciduous shrubs, vines, bushes, hedges, or saplings; it is seldom more than 6.1 m (20 ft) from the ground, most often in the 1.2–1.5 m (4–5 ft) range. The nest, a loose, sometimes untidy basket of weed stems, pliable twigs, and strips of bark, is occasionally lined with fine grasses and hair. Although the nest itself may take from 3 to 9 days to build, it is not until 5 or 6 days later that the first egg is laid. Three eggs constitute a normal clutch, though as many as 5 and as few as 2 are possible—fewer if the season is well advanced (Laskey 1944). Vermont has few nesting dates for cardinals: 4 egg dates range from May 15 to June 28; 3 nestling dates range from May 25 to July 7; and 2 fledgling dates are for June 18 and July 14. Eggs hatch 12 to 13 days after the last egg is laid; the female is



No. of priority blocks in which recorded

TOTAL 74 (41%)

Possible breeding: 14 (19% of total)

Probable breeding: 25 (34% of total)

Confirmed breeding: 35 (47% of total)

Physiographic regions in which recorded

	no. of priority blocks	% of region's priority blocks	% of species' total priority blocks
Champlain Lowlands	21	68	28.4
Green Mountains	14	26	18.9
North Central	2	10	2.7
Northeast Highlands	1	6	1.3
East Central	3	16	4.1
Taconic Mountains	15	94	20.3
Eastern Foothills	18	75	24.3

responsible for both incubation and brooding. The nestling period is from 7 to 11 days, but usually lasts 9 to 10 days, with the male assisting in the feeding and nest cleaning (Laskey 1944). The cardinal nest is parasitized by the Brown-headed Cowbird (Bent 1968).

If multiple broods are attempted by cardinals, the male cares for the fledglings while the female prepares a new nest. In Tennessee, Laskey (1944) noted that four nestings are not uncommon, while Bull (1974) reported that in New York State triple-broodedness is undoubtedly a factor in the cardinal's range expansion and success. The cardinal's range expansion into

and within Vermont seems to presuppose double-broodedness, but data are presently lacking.

ROY W. PILCHER