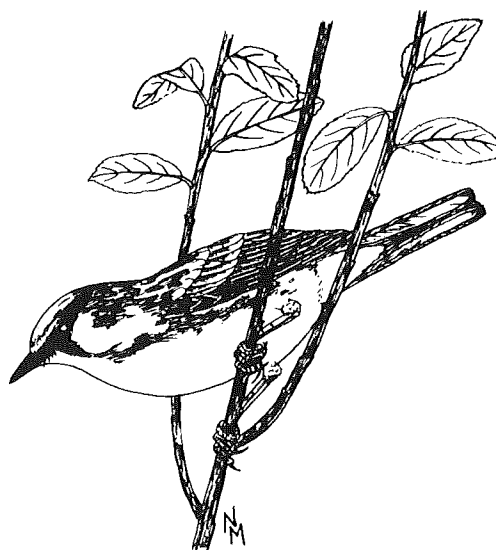


Chestnut-sided Warbler

Dendroica pensylvanica

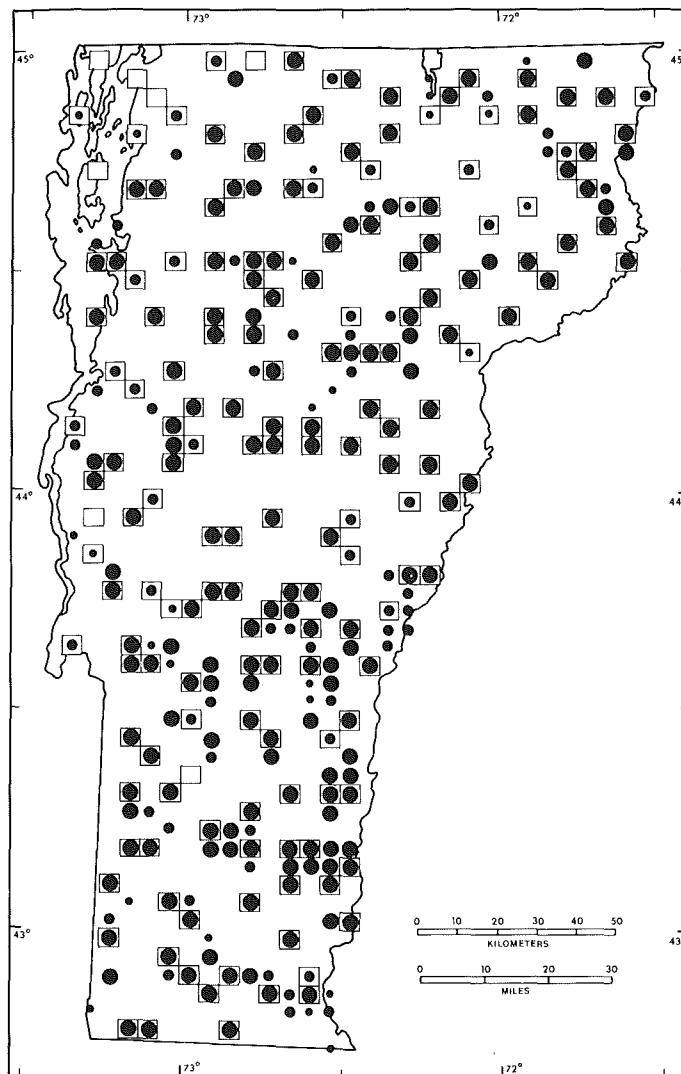
Few species can rival the Chestnut-sided Warbler's distribution and abundance in Vermont. This gaily-colored denizen of brushlands and early seral-stage forests can be found throughout the state. It is surprising to learn, in light of the species' current abundance and apparent versatility, that Audubon and other early nineteenth-century naturalists considered this species to be one of the rarest of North American birds (Bent 1953). The clearing of the forests doubtless had a positive effect on this warbler, since by the mid-1800s Minot (1895) considered it common in New England, a status it still enjoys today. In mixed forest and edge communities in Vermont, densities of 15 to 19 pairs per 40.5 ha (100 a) have been noted (Breault and Farrar 1972; Nicholson 1973, 1975). The species is one of the most conspicuous warblers in U.S. Fish and Wildlife Service Breeding Bird surveys in Vermont, occurring at an average of 10 birds per route—more frequently than any species except the Common Yellowthroat (BBS 1966–79). Since these surveys are essentially restricted to roadside habitats (which are generally disturbed), such a finding is biased and may not reflect abundances in more remote areas. Chestnut-sided Warblers are usually absent from unbroken mature woodlands. Nonetheless, Atlas Project workers had little difficulty finding the species in most (96%) of the priority blocks throughout the state, except for the northwestern corner, where its distribution is apparently quite localized.

Chestnut-sided Warblers begin returning to Vermont from their Central American wintering grounds by the second week of May. Males return first (Ficken and Ficken 1965) and immediately establish territories in a variety of seral deciduous and mixed coniferous habitats. The small—0.5–1 ha (1.2–2.5 a)—territories (Kendeigh 1945b) are defended both by vigorous song and agonistic encounters. Territorial displays in the Chestnut-sided Warbler are relatively un-



ritualized (Ficken and Ficken 1965); territorial defense consists primarily of direct pursuits and fighting.

Preferred nest sites have dense cover within 1 m (3.3 ft) of the ground. The nest, constructed by the female, is placed 0.3–1.2 m (1–4 ft) above the ground immediately beneath the dense canopy of a low sapling or shrub, frequently spiraea, blackberry, maple, cherry, or viburnum. A nest in Michigan composed of a foundation, sides, and lining, and built of interwoven grass and spider web, bark, and rootlets, took 5 days to complete (Tate 1970). Nest building has been observed as early as May 15 in Vermont. During nest building, courtship activities (gliding, fluffed displays, extended quivering wings) by the male increase (Kendeigh 1945b; Ficken and Ficken 1967). The interval between completion of the nest and commencement of egg laying varies from 1 to 6 days (Tate 1970). Three to 5 (usually 4) off-white eggs, blotched with brown and purple, constitute the clutch, which is incubated by the female for 10 to 12 days (Burns 1921; Sawyer 1947; Lawrence 1948). Vermont egg dates extend from June 5 to July 12 (29 nests). Chestnut-sideds are reportedly frequent hosts to Brown-headed Cowbird eggs (Friedmann 1963), although only 2 of 28 Vermont nests were parasitized. While Chestnut-sided Warblers, like Ameri-



No. of priority blocks in which recorded
 TOTAL 172 (96%)
 Possible breeding: 8 (4.6% of total)
 Probable breeding: 27 (15.7% of total)
 Confirmed breeding: 137 (79.6% of total)

Physiographic regions in which recorded

	no. of priority blocks	% of region's priority blocks	% of species' total priority blocks
Champlain Lowlands	25	81	14.5
Green Mountains	53	98	30.8
North Central	19	100	11.1
Northeast Highlands	16	100	9.3
East Central	19	100	11.1
Taconic Mountains	16	100	9.3
Eastern Foothills	24	100	13.9

can Redstarts, may occasionally bury cowbird eggs in their nest (Tate 1970), this behavior is weakly evolved in contrast to that shown by Yellow Warblers. The incubating female, who may beg and be fed by the male, is very attentive, averaging only 8 minutes away from the nest per foray (Tate 1970). Lawrence (1948) believed the hatchlings are fed by the female by regurgitation for the first several days, but most authors indicate that both parents attend the young. Because of their attentiveness and abundance, Chestnut-sided Warblers are easy to confirm; 66% of all Atlas Project confirmations were of adults carrying food for young.

The young may prematurely desert the nest as early as the seventh day if disturbed (Tate 1970) and may fly short distances at 9 days, but 10 to 12 days is apparently the usual nestling period. Fledglings continue to beg and be fed for up to 4 weeks after leaving the nest (Lawrence 1948). Fledglings in Vermont have been noted from June 22 to as late as August 7 (L. H. Ross, Field notes). By mid August, migration is under way; the last stragglers usually leave by the third week in September. The record late departure, however, is October 16.

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