## Magnolia Warbler

Dendroica magnolia

Few birds native to Vermont can rival in plumage the colorful Magnolia Warbler. The resplendent males begin appearing on their Vermont breeding grounds during the first week of May, after wintering in Central America. Throughout its broad breeding range, which extends in Canada from British Columbia to Newfoundland and in the eastern U.S. south to West Virginia, it is characteristically associated with boreal forests. The Magnolia can also be found in mixed coniferous-deciduous forests, and is one of the first forest warblers to colonize the young white pine and sapling hardwood associations that typically spring up in abandoned pastures throughout the Vermont hills. This relationship is reflected in the results of 1966-79 U.S. Fish and Wildlife Service Breeding Bird surveys (Robbins 1982b); during that period Magnolia Warbler populations increased more than 6% per year in Vermont. Presumably much of this increase is attributable to the regrowth of abandoned fields into white pine, eastern hemlock, and northern hardwood forests, which were colonized by Magnolia Warblers as soon as the forests reached sufficient age. As a result of reforestation efforts prompted by state foresters during the 1950s, many pine and spruce plantations were planted that are now old enough to support boreal forest species; these plantations may also have contributed to the Magnolia's increase.

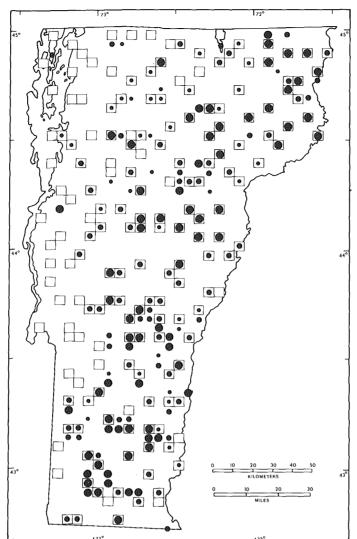
Although distributed throughout the state where suitable habitat is present, the extensive agricultural lands in the Champlain Lowlands precluded this species from much of that region, where it was found in only 22% of the Atlas Project priority blocks. In the remainder of the state suitable habitats are widely distributed and Magnolia Warblers can be readily found. In the Taconic Mountains, however, the species proved to be relatively uncommon (found in 31% of the priority blocks), perhaps because suitable coniferous habitats are more restricted in that region. Even in the southwestern



portion of the state Magnolias can be easily found, provided suitable habitat is present. In northern and central Vermont breeding bird densities of 12 to 46 pairs per 100 ha (247 a) have been recorded in deciduous-coniferous second-growth and mixed forest/old field communities (Nicholson 1973; Carpenter 1978), with greatest densities—up to 76 pairs per 100 ha (247 a)—in coniferous forests near Wolcott (Metcalf 1977).

The Magnolia Warbler's nest is built in late May on a horizontal branch or against the trunk of a conifer, 0.3-10.7 m (1-35 ft)—usually less than 5 m (15 ft)—above the ground. It is loosely constructed of twigs and coarse grasses and lined with black rootlets. In it are laid in late May or June 3 to 5 (usually 4) white eggs, flecked with brown on the large end. Vermont nests with eggs dates extend from June 9 through July 12 (11 records). Incubation requires from II to I3 days, and the young spend an additional 8 to 10 days in the nest before fledging, Magnolia Warblers proved easiest to confirm as breeders while feeding young: 65% of all confirmations were of adults with food. Fledglings have been recorded in Vermont as early as June 26 and as late as July 26 (5 records). Fifteen percent of all confirmations were of fledglings.

Although most Magnolias migrate in September, a few may be found in Vermont as late as the second week of October. These late birds may be stragglers from more north-



## No. of priority blocks in which recorded

TOTAL 129 (72%)

Possible breeding: 29 (22% of total)
Probable breeding: 50 (39% of total)
Confirmed breeding: 50 (39% of total)

## Physiographic regions in which recorded

	no. of priority blocks	% of region's priority blocks	% of species' total priority blocks
Champlain Lowlands	7	2.2	5.4
Green Mountains	43	80	33.3
North Central	19	100	14.7
Northeast Highlands	16	100	12.4
East Central	18	95	14.0
Taconic Mountains	5	31	3.9
Eastern Foothills	2. I	88	16.3

ern breeding areas. During the fall this is one of the most abundant woodland warblers, and can be found in a wide variety of coniferous and deciduous habitat types.

The Magnolia Warbler is currently undergoing a population boom in Vermont. Certainly it is more abundant today than it was in the late 1800s, when Perkins and Howe (1901) termed it "not common." It is likely, however, that its population will level off and stabilize in the future. With three-quarters of the state already forested, further increases in forest cover are unlikely to be appreciable. Timbering operations may initially affect local populations adversely, but may be beneficial in subsequent years,

because Magnolia Warblers appear to reach greatest population densities in seral stage spruce and pine forests rather than in mature northern hardwoods.

DOUGLAS P. KIBBE