

## Northern Goshawk

*Accipiter gentilis*

The Northern Goshawk, the largest of the accipiters, has traditionally been considered an inhabitant of the boreal forest in North America. Within the last three decades (1950–1980) the species has increased in numbers and apparently expanded its breeding range in northeastern North America.

Goshawks inhabit extensive mature woodlands, either deciduous or coniferous. In the East, the species seems to prefer hardwoods for nest trees; only 17% of 102 nests cited in Bull (1974) and Bent (1937) were located in conifers. The Northern Goshawk is primarily a resident species in Vermont, but periodic invasions occur during the winter.

Adult goshawks may appear on breeding territories as early as late February, but most arrive in their territories from mid to late March. The nest is a substantial, rather untidy structure of sticks lined with bark chips and often decorated with evergreen sprigs. Nests are usually placed on large limbs next to the trunk or, occasionally, in a side fork (Reynolds et al. 1982). Nest heights vary; they averaged 16.2 m (53 ft) above ground in Oregon (Reynolds et al. 1982). The average height of four Vermont nests was 12.8 m (42 ft). Dates for six Vermont nests containing eggs range from April 16 to May 21. Clutch size, as summarized by Reynolds and Wight (1978), ranges from 2 to 4 eggs; the eggs are plain dull white, often with a bluish cast. Estimates of the incubation period range from 29 days (McGowan 1975) to 36 to 38 days (Brown and Amadon 1968). Six nestling dates for Vermont range from May 18 to June 18, and two dates for young out of the nest are June 27 and July 5. Young leave the nest at 34 to 37 days (Reynolds and Wight 1978), and are generally flying at about 45 days (Brown and Amadon 1968). Fledged young in Oregon remained with their parents for at least 42 days (Reynolds and Wight 1978).

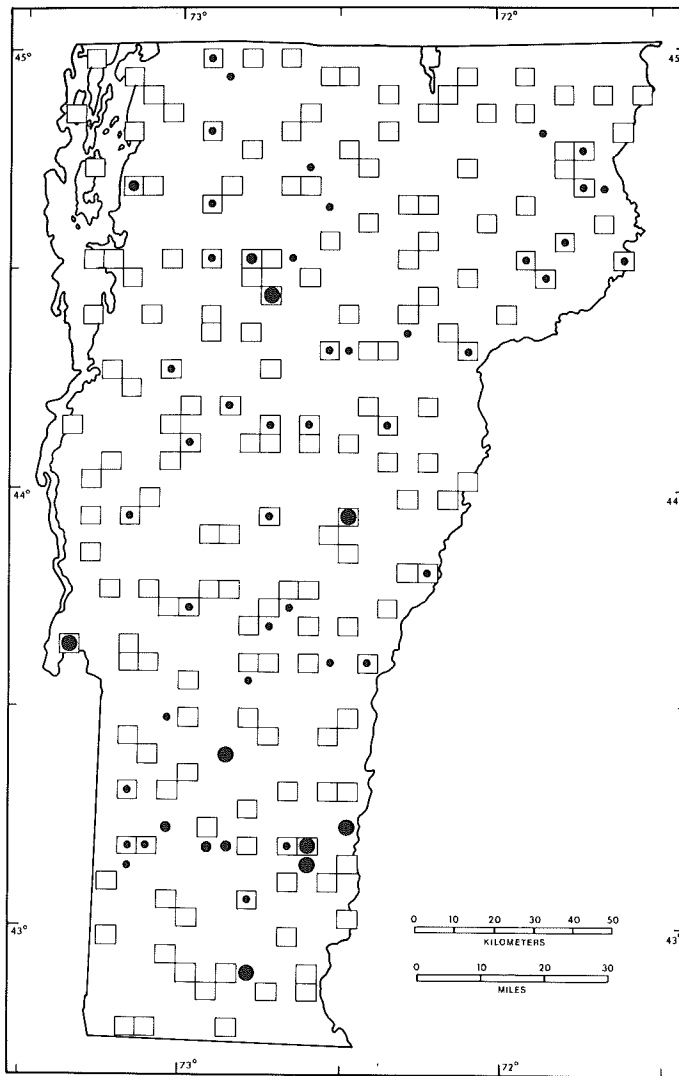
At the turn of the century, the Northern Goshawk was rare as a nesting species in



the Northeast (Forbush 1925). There were only three records of breeding for Vermont before 1933, all in Rutland County (Fortner et al. 1933). During the five years of the Atlas Project alone there were 8 confirmations of breeding, indicating how remarkably the population has grown since the 1930s. The expansion of Vermont's forest cover from 25% to 75% since 1900 has been a factor in this impressive increase.

Northern Goshawks eat a higher proportion (between 31% and 39%) of mammals than do other accipiters. Birds eaten are often largely granivorous or herbivorous (e.g., American Crow and Ruffed Grouse); thus goshawks do not accumulate the amount of toxic pesticide residues that their congeners do. Snyder et al. (1973) found that in Arizona goshawk eggs possessed half as much DDE as those of Cooper's Hawks. For these reasons the goshawk has maintained at least a stable population.

Presently the Northern Goshawk is distributed almost statewide in Vermont. Because most priority blocks were not covered in early spring, the species is probably underrepresented on the map, especially with regard to probable and confirmed breeding records. In general, however, the Atlas Project records probably give a reasonable outline of the goshawk's Vermont distribution. The distribution of records is largely confined to areas with medium to high land



**No. of priority blocks in which recorded**

TOTAL 34 (19%)  
 Possible breeding: 28 (82% of total)  
 Probable breeding: 2 (6% of total)  
 Confirmed breeding: 4 (12% of total)

**Physiographic regions in which recorded**

	no. of priority blocks	% of region's priority blocks	% of species' total priority blocks
Champlain Lowlands	8	26	23
Green Mountains	8	15	23
North Central	0	0	0
Northeast Highlands	6	38	18
East Central	6	32	18
Taconic Mountains	3	19	9
Eastern Foothills	3	13	9

relief. Significantly, all but one of the records from the Champlain Lowlands are from the hilly eastern and southern peripheries of that region. There is a dearth of records from the North Central region, possibly because of poor coverage in the early spring.

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