## ABOUT THE COVER: White-breasted Nuthatch

Of the approximately three hundred species seen annually in Massachusetts on a regular basis, only about a sixth could be termed permanent residents—species in which individuals of the majority of the population remain throughout the year. Of these the most familiar are the widespread residents of deciduous woodlands—the predominant habitat across the state. Included in this category are Black-capped Chickadee, Tufted Titmouse, Downy Woodpecker, and the White-breasted Nuthatch. These birds become most visible in fall and winter when they often band together to form foraging flocks. However, in such assemblages the nuthatch occurs singly or in pairs and is greatly outnumbered by chickadees and titmice. All are regular visitors to winter feeding stations where sunflower seeds comprise the major part of their diet although suet is freely taken if provided. Chickadees and titmice will grasp a seed firmly between the feet, pound it with the bill until the seed coat is cracked, and then extract the kernel. In contrast, the nuthatch will wedge a seed firmly in a crevice of a tree trunk and vigorously pound it. It is from this unique hammering or "hatcheting" that the nuthatch derives its name.

Another distinctive feature of the nuthatch is the manner in which it moves nimbly up and, especially, down tree trunks. From the latter trait is derived the colloquial name of "upside-down bird." This activity was described by Forbush (1929) thus:

They seem to have taken lessons of the squirrel which runs down the tree head first, stretching out his hind feet backward and so clinging to the bark with his claws as he goes down; but the nuthatch having only two feet has to reach forward under its breast with one and back beside its tail with the other, and thus, standing on a wide base and holding safely to the bark with the three fore claws of the upper foot turned backward it hitches nimbly down the tree head first—something that other birds hardly attempt—and it runs around the trunk in the same way with feet wide apart.

The White-breasted Nuthatch performs a curious, even comical, aggressive display. It crouches facing the threat, spreading its wings in the folded position and completely spreading the tail, and rocks deliberately from side to side. During winter the display is used, with surprising success, to intimidate species more than twice its size, and a mated male will adopt this pose to fend off the amorous approaches of a rival nuthatch.

Although outwardly very similar in appearance, the sexes can be distinguished by the color of the top of the head—black in males, somewhat grayer in females. During the breeding season and in summer, nuthatches become retiring and inconspicuous. They will nest in any available cavity including, on occasion, birdhouses.

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