

## SURVIVING THE WINTER

The same applies to the other birds that overwinter in Massachusetts. On a brisk winter morning, you are likely to spot American Robin, Black-capped Chickadee (Massachusetts's state bird), Dark-eyed Junco, and the always impressive Northern Cardinal. What coping mechanisms have birds developed to sustain themselves in a New England winter? Is there sufficient food for nourishment as the days grow shorter and the growing season ends?

**How do birds stay warm?** Strategies vary. Some birds grow additional feathers in late fall. They can then "fluff their feathers" to create air pockets as insulation to trap heat. Birds also huddle together supporting one another by sharing their precious body heat. Some birds use tree cavities or small crevices as protection against the cold and wind. Still others tuck themselves into the boughs of evergreen trees for shelter.

**Why don't birds' feet freeze?** Some species of birds have an adaptation that prevents their feet from freezing. Geese, ducks, and gulls can stand on the ice for long periods, because the arteries and veins that supply their legs and feet are intertwined. This close connection allows the blood in the veins returning to the heart to be warmed, thus minimizing the shock to the heart. Birds can also reduce blood flow to and from the feet to conserve heat. Further, one often sees birds standing on one foot with the other foot tucked up into its body feathers. This is another energy-saving strategy.



**The gray Tufted Titmouse with its large black eyes is constantly and eagerly on the move as it hangs effortlessly from small branches searching for food. As winter approaches, I wondered how these little birds overwinter in Massachusetts given our harsh weather. Wouldn't these warm-blooded creatures that weight only three quarters of an ounce literally freeze to death or be blown out of the trees during a major nor'easter?**





### **What do birds eat in the winter?**

The simple answer is almost anything they can find! Places like the Parker River National Refuge provided a wide range of options from berries, seeds, pinecones, and dormant insects. Nutritional support is also provided by generous people in the area who maintain well-stocked bird feeders. These feeding stations becomes an important source of food for many little creatures, especially during the worst winter weather. Besides food, water is important for hydration and feather maintenance. Water can be a significant challenge in sub-freezing conditions. Often bird baths freeze which means birds must find water dripping from structures or melting snow on leaves or in small puddles.

### **Do some birds hibernate?**

Birds do not hibernate. However, many birds (e.g., Black-capped Chickadee) become torpid. Torpor is a period of deep sleep during which the bird's metabolic rate (e.g., breathing rate, heart rate) slows significantly. By slowing its metabolic rate, a bird conserves energy to make it through the night or periods of severe weather.

### **Our winter gift**

After a snowstorm, when everything is white and silent, nothing is more delightful than to see a little Tufted Titmouse or bright red Northern Cardinal on the lawn. It reminds us that the seasons change, but backyards are always full of surprises!

### **Credits**

Peg Gould, Author

References:

Mass Audubon

Cornell Alb: All About Birds

Appalachian Mountain Club