



BCT Stewardship Journal: November 2025

Katie's Thoughts from the Trail: Settling in for the Season

As the chilly air settles over Brewster and workdays conclude with a very dark drive home, it is easy to forget about our outdoor companions. The critters from the summer seem to just disappear in the winter and bounce right back in Spring. The majority are undergoing one of nature's most remarkable processes: hibernation. It's easy to think of hibernation as a long winter nap, but the reality is far more intense.

The little brown bat, once common across Cape Cod, is a prime example. When these tiny mammals enter hibernation, their heart rate plummets from roughly 200 beats per minute to as low as 20. Their body temperature drops to match the surrounding air, sometimes only a few degrees above freezing. They can survive on just a fraction of the energy they would normally burn in a day; an adaptation that lets them live off stored fat until insects return in the spring.

On the forest floor, Eastern chipmunks can still be seen scurrying around but are not nearly as common a sight as in the summertime. Unlike true hibernators, they periodically wake from their torpor to refill on piles of food they cached in the fall. Their body temperature can slip from a nice 100°F to nearly 40°F, a crazy physiological shift that would put a human in the hospital, but keeps a chipmunk alive and well.

Even in very cold freshwater ponds, painted turtles perform what only nature can undergo. Sinking into the muddy bottom of the pond, they switch to a low-oxygen survival mode, absorbing what little oxygen is available through specialized tissues in their skin and throat. For months, they will fall into a sedentary state and won't take a single breath of air.

Woolly bear caterpillars, who require up to 14 years until they can pupate, can survive being literally frozen solid. Their bodies produce cryoprotectants, a natural antifreeze, that allow them to thaw and crawl again come spring.

Humans in our own way are winter responders too, although not nearly as dramatic. We don't truly hibernate, but research shows that our circadian rhythms shift as daylight shortens. You may feel a natural pull to sleep more, eat heartier meals, and spend evenings nestled indoors. It's an echo of a survival instinct we share with the wildlife around us. Winter invites deep restorative rest, something society too often forgets to allow time for.



The Hay woods with a blanket of fresh snow, likely with many hibernating critters below! (2-2025)

Unfortunately, the altered seasons resulting from climate change cause significant stress on the already fragile process of hibernation. An out-of-place winter warm spell may wake a bat too early, forcing it to burn precious energy that can't be replenished. Critters that rely on consistent snow cover for insulation may find their burrows unprotected. Turtles and frogs depend on clean, undisturbed pond bottoms however, sedimentation and pollution threaten their delicate refuge. Again, we turn to conservation to provide stable, protected habitats where animals can follow their ancient rhythms that have sustained them for thousands of years.