

### Local Bats in Trouble

Bats are nocturnal, and other than during their annual emergence en masse from caves where they hibernate, they tend to be largely invisible to most humans. And yet, like most species of bats, the Little Brown myotis bats that are common in our area can consume their weight in insects each night, insects that would otherwise ravage crops or could spread infectious diseases. Many species serve as pollinators and seed dispersers, particularly in tropical and desert areas, including some of the bats of New England. Bats play a vital role in the complex web of life. See Bat Conservation International's website, [batcon.org](http://batcon.org),

It turns out, however, that the bats of the Northeast, and especially the Little Brown myotis, are disappearing rapidly. They are suffering from a fungus called White-nose Syndrome, which is likely a result, not a cause, of their declining health. Because of factors that appear to be related to global warming, bats are emerging prematurely from hibernation, while it is still winter; unable to find food, they die of starvation and dehydration, with mortality figures as high as 90% at some sites. Because bats migrate long distances, and arrive at their winter caves in weakened condition, they have little energy to search for scarce food when hibernation is disrupted. And female bats typically have only one "pup" per year, so threatened bat populations can decline very rapidly. The demise of local bat populations has more serious implications than the losses of honeybees due to "colony collapse disorder" or the well-documented disappearance of amphibians worldwide.

An intensive collaborative scientific effort is underway to get at the bottom of this bat die-off, which has affected 5 species locally. One of those scientists is Thomas Kunz, a biologist at Boston University, who studies the physiology and behavioral ecology of bats. Researchers suspect that there are multiple factors contributing to the die-off. But all that is known for sure is that bats in are being attacked by a pathogen they are unable to resist while they are in deep hibernation, particularly in caves that have extremely high humidity.

Bats are vulnerable for many reasons, including their tendency to invoke fear and prejudice in humans, who tend not appreciate their ecosystem services and are inclined to exterminate rather than coexist with them. Few of us get to see bats often, and only some of us find them endearing, but we will all have very good reasons to miss them when they are gone.

### Move over, cars!

Google Maps is now providing "walking directions". Pedestrians can easily access the most direct and flat routes for trips of 6.2 miles or less, disregarding one-way streets, of course. The service is still in a trial format, and will only improve over time, adding information about sidewalk conditions, for example. Don't hold your breath, but it can't be long before Google starts providing "bicycling directions" as well.

### Renewable electricity is now

NSTAR provides electricity to all of Newton's residents. Now the company has made an agreement with the MA Dept of Energy to allow customers to designate that their payments will be used to purchase power from a wind farm in upstate NY. The surcharge for wind energy is 1.396 cents/kWh. If you prefer, you can designate that only half of your electricity will be supplied by wind, for a surcharge of .837 cents/kWh. To estimate my future bills, I multiplied the surcharge (1.396) by the Total Electricity Use (kWh) for the current month; it looks like I will be paying about 7% more for green energy starting this month. Sign up at [www.nstar.com](http://www.nstar.com).