

Bats are Essential to Healthy Ecosystems



A surprising truth that most of us don't realize is that one out of every four mammals on this earth is a bat. Often maligned, these gentle nighttime flyers have long been the subject of Halloween horror stories. Yet their critical role in pollination, pest control, reforestation, and conservation of species must not be overlooked. Considering that 70 percent of all bats survive solely on a diet of insects, we ought to appreciate them more fully.

While most of the 1,200 species of bats worldwide are insectivores, some species living in southern or tropical regions act as pollinators when they nectar on night-blooming flowers, feed on fruit, and disperse seeds. By doing so, they aid in the regeneration of rainforest plants and preservation of genetic diversity among wild-growing tree fruits such as bananas, mangos, dates, figs, and

avocados.

In contrast to these southern-dwelling pollinators, the 50 bat species in North America function primarily as insectivores, being active in the night sky from April to October. They possess an amazing ability known as echolocation to find and catch insects on the wing by sending out high frequency sound waves to instantly locate and consume their prey. A single bat might trap and eat 5,000 insects in one night while lactating females must consume twice that amount.

Connecticut Bat Species

Among the nine species of bats found in Connecticut, the two most common are big brown bats (*Eptesicus fuscus*) and little brown bats (*Myotis lucifugus*). True to their names, size matters and each species prefers a slightly different insect diet. Big brown bats consume beetles, wasps, ants, and major agricultural pests like cucumber beetles, stink bugs, and even spotted lanternflies. Little brown bats seek smaller prey like gnats, wasps, beetles, moths, midges and mosquitoes. Both species are colony roosters that sleep by day during warm summer months in sheltered places like attics, barns, behind shutters, in hollow trees, or under bridges.

In October, when temperatures drop to near freezing, the bat colony migrates to favored winter refuges in caves, tunnels, or underground caverns where they go into hibernation until early April. They don't exit to feed but can survive for months in a torpor, waking only occasionally to shift position within the colony. Female bats usually bear one youngster every spring after emerging from hibernation and returning to their warm weather hunting grounds.

Unfortunately, many bat populations in New England are threatened by environmental factors including habitat loss, the widespread use of pesticides and insecticides, and disease. In 2008 several cave-dwelling populations of big brown and small brown bats in Connecticut were devastated by a fungal virus of unknown origin called "white-nose syndrome" (WNS). Tree-dwelling species such as silver-haired, hoary, and red bats were not affected by WNS but their numbers in our northeastern woodlands are also in decline.

How to Help Bats

Bats need insects to survive and insects need healthy local ecosystems to complete their life cycles. Therefore, the very best way backyard gardeners can help bats and the insects they prey on is to refrain from spraying toxic chemicals and to plant native species. By providing a healthy, local habitat, all wildlife will benefit including the greatest variety possible of birds, bees, moths, butterflies and insects.

Another way to help bats is to install a specially designed bat house in an open field or near a body of water where flying insects often forage. This will provide bat families with a secure daytime shelter and a regular source of food while they are raising their young. Plans for constructing and locating a bat house can be obtained online or by contacting wildlife rehabilitation groups that protect endangered bats worldwide. One such group is *Bat Conservation International, P.O. Box 140434, Austin, Texas 78714-0434*.