

# Wildlife in Connecticut

## State-Listed Species

### Bats

#### Background

Bats are among the world's most fascinating, beneficial, and likeable animals, yet people often fear and misunderstand them. They are the only mammals capable of true flight. There are over 1,400 species of bats in the world – 9 species of bats may be found in Connecticut, and all but one of them (the Big Brown Bat) are on Connecticut's List of Endangered, Threatened, and Special Concern Species.

Little Brown and Big Brown Bats were the most common bat species found in Connecticut prior to the impacts of white-nose syndrome (WNS), which was first documented in the state in 2008. Several Connecticut bat populations have been devastated by WNS. The affected species, known as “cave bats”, have declined so dramatically that several were added to Connecticut's List of Endangered, Threatened, and Special Concern Species



Little Brown Bats hanging from the ceiling of a cave during hibernation. They are now rare in many parts of their original range and listed as Endangered in Connecticut and across much of the Northeast.

in 2015. All of Connecticut's bat species, including the Big Brown Bat, are considered Species of Greatest Conservation Need (SGCN) in Connecticut's Wildlife Action Plan.

### Bats of Connecticut

Common Name	Scientific Name	CT Status (2015)	Federal Status
Big Brown Bat	<i>Eptesicus fuscus</i>	SGCN	
Little Brown Bat	<i>Myotis lucifugus</i>	E, SGCN	
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	E, SGCN	T
Eastern Small-footed Bat	<i>Myotis leibii</i>	E, SGCN	
Indiana Bat	<i>Myotis sodalis</i>	E, SGCN	E
Tri-colored Bat	<i>Perimyotis subflavus</i>	E, SGCN	
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	SC, SGCN	
Eastern Red Bat	<i>Lasiurus borealis</i>	SC, SGCN	
Hoary Bat	<i>Lasiurus cinereus</i>	SC, SGCN	

SGCN = Species of Greatest Conservation Need; E = Endangered; T = Threatened;  
SC = Special Concern



**Little Brown Bats clustering in a hibernaculum for winter. Bats will often cluster in small groups during hibernation. This helps retain body heat.**

The 3 species of "tree bats" – Silver-haired, Hoary, and Eastern Red Bats – are not adversely affected by WNS, but their populations have declined from historic levels throughout the eastern United States. They occur in relatively low numbers throughout Connecticut. All three have been listed as Special Concern in Connecticut since the first official list was released in 1992.

## **White-nose Syndrome**

White-nose syndrome (WNS) is an epidemic in cave-roosting bat species that continues to cause tragic and extensive mortality in hibernating bats as it spreads in North America. The U.S. Fish and Wildlife Service estimated in 2012 that 5.7 million to 6.7 million bats had perished in the eastern United States and Canada since WNS was discovered in New York in 2006. Since then, WNS has continued to spread west across North America, affecting new populations along the way. For certain species, mortality has reached up to or more than 90 percent. In Connecticut, dramatic losses have been documented for the Northern Long-eared Bat, Little Brown Bat, and Tri-colored Bat. While the Big Brown Bat and Eastern Small-footed

Bat have also experienced significant declines due to WNS, losses are not as severe as those experienced by other species.

Researchers have determined that WNS is caused by a fungus, *Pseudogymnoascus destructans* (Pd), which is visible as a white powdery growth on the muzzle and skin of hibernating bats. This fungus thrives in the cold and humid conditions characteristic of caves and mines that bats use for hibernation. WNS is transmitted primarily from bat to bat, particularly when they cluster together in their underground hibernation sites. Additionally, people who visit caves may transmit Pd by inadvertently carrying fungal spores on their clothing and gear from one cave to another.

The Pd fungus infects the muzzles and wings of bats during hibernation when their metabolism and immune systems are largely shut down. Research indicates that bats infected with Pd awaken more frequently from hibernation and burn their precious fat reserves. Bats with depleted energy reserves often do not make it through winter and are sometimes observed desperately searching for food and water in the winter months, only to perish due to exposure and starvation.

Since 2007, the DEEP Wildlife Division





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Connecticut's three species of migratory "tree" bats, from left to right: Eastern Red Bat, Hoary Bat, and Silver Haired Bat. These bats typically roost solitarily on the outside of trees, underneath shedding bark, in the foliage, or in tree cavities. They are not affected by white-nose syndrome.

has been an active participant in the WNS response. Biologists continue to monitor hibernating bats for signs of WNS and document mortality. They also are tracking summer maternity colonies to investigate the influence of WNS on bat survival and reproduction.

Guided by the White-nose Syndrome National Plan, published in 2010, biologists and researchers across North America are working to curb the spread of WNS and develop ways to safely treat or control the Pd fungus. Many of these efforts have been supported by the State Wildlife Grants program, an important source of funding for addressing urgent wildlife disease issues.

More information on white-nose syndrome and related conservation efforts can be found at [www.whitenosesyndrome.org](http://www.whitenosesyndrome.org).

## What You Can Do

DEEP encourages residents to help monitor Connecticut's bat populations. Bats found outdoors from mid-November through mid-March should be reported to the Wildlife Division. While the characteristic white fuzzy fungal growth may not be readily visible on a bat's nose, bats seen flying during the day or clinging to the outside of a building during

winter are a sign that white-nose syndrome may be at work. Sighting details, including the date, location, what you observed, and digital photos if possible, may be submitted via email to the Wildlife Division at [deep.batprogram@ct.gov](mailto:deep.batprogram@ct.gov) or by calling 860-424-3011.

## Helping Bats

Undertaking some or all of the actions listed below is one of the best ways you can help Connecticut's bat populations! What is even better is that many of these actions will also benefit other wildlife in our state.

- **Protect habitats that bats depend on.** Bats rely on forests, meadows, wetlands, and subterranean habitats for space to live, hibernate, and find food. Getting involved with town conservation commissions, land trusts, and other groups is a great way to protect, enhance, and expand critical habitats for bats.
- **Support the growth of native plants.** Native plant species support more insects (bat food) than non-native plants. Providing habitat for insects in your yard or elsewhere helps supply food for bats. You can remove non-native plants, mow less often, and leave leaf litter in parts of your yard.

- **Avoid pesticides.**

Use of pesticides kills insects that bats might otherwise eat. Contaminated insects can also lead to poisoning of bats. You can avoid using pesticides at home and also support organic agriculture when you shop for food.

- **Turn off outside lights at night.**

Research in Connecticut and elsewhere has demonstrated that some bat species avoid hunting insects in areas with artificial nighttime lighting.

- **Put up a bat house.** Bat houses can provide critical shelter and support entire maternity colonies. Find construction plans for building your own bat house, as well as tips on the best placement of houses to attract bats, on the DEEP website at <https://portal.ct.gov/deep/wildlife/fact-sheets/bat-houses>.

- **Learn about bats and share your knowledge.** Bats are important to ecosystem health, but are often feared and misunderstood. Encourage appreciation and tolerance of bats over fear by taking time to learn and share with others.

## Natural History of Bats

Bats are mammals. They are furred and warm-blooded. Bat species in Connecticut have body lengths of 3 to 6 inches on average and wingspans ranging from 8 to 16 inches. The bones in a bat's wing are similar to those in human arms and hands. The fingers are extended and connected by leathery, elastic skin that grows from the sides of a bat's body.



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The Northern Long-eared Bat has experienced dramatic declines due to white-nose syndrome and is now extremely rare in Connecticut and across most of its range. This bat is listed as Threatened at the federal level.

The thumbs are free from the wing membrane and have claws for grasping.

Bats have good eyesight and rely on vision for long-distance orientation. For short-distance navigation and catching food at night, they use echolocation. This sonar system helps bats, like dolphins, locate targets and background objects from the echoes of ultrasonic pulses. The tempo of these pulses are slow when a bat is foraging and it quickens as the bat pursues and captures an insect. Detection, pursuit, and capture of an insect can all occur within one second.

Connecticut's bats are insect eaters. Bats are mostly nocturnal and almost always feed "on the wing". They use their wings, the skin around their tails, and their mouths to catch insects in flight. Bats are the primary predators of night-flying insects, making them beneficial in several ways. They consume many agricultural pests, such as cutworm and corn borer moths, potato beetles, and grasshoppers. Mosquitoes and similar human pests are eliminated much more efficiently by bats than by birds or expensive bug zappers.

## Interesting Facts

- In general, bats are not dangerous. Like any other mammal, they can carry rabies, although most likely less than one percent of all bats are infected with the virus. More people die annually from dog attacks, bee stings, lightning, and household accidents than from bat-transmitted rabies.
- Bats are not flying mice. They are the only mammal capable of true flight. Additionally, they are not closely related to rodents. In fact, humans and other primates are more closely to rodents than bats are.
- Bats do not get caught in people's hair. They are adept fliers and rely on sensitive sonar (echolocation) to navigate night skies. Bats that swoop near people are after insects or just exploring their environment. They are naturally curious and move in three dimensions, so the occasional swoop should not cause alarm.
- Bats are not blind. They have good eyesight but rely on echolocation to navigate at night.
- Bats are not filthy or covered with parasites. Clean wings are essential for executing intricate flight patterns, so bats spend great amounts of time grooming themselves.
- Over 1,400 species of bats are found worldwide and they occur on every continent except Antarctica. Connecticut has only 9 native bat species.
- Only 3 species of bats feed on blood. These are vampire bats and they prefer to drink cattle or bird blood. They are only found in Latin America and do not occur in Connecticut.
- The smallest bat in the world is the size of a small mouse; the largest, a fruit eater, has a 6-foot wingspan.



Little Brown Bats exhibiting signs of infection by white-nose syndrome. The conspicuous white growth around the muzzle is due to the pathogen *Psuedogymnoascus destructans* and gives the disease its name.

- A single Little Brown Bat can eat 1,200 mosquitoes and other night-flying insects in an hour.
- Bats of the world have varied diets: 70 percent eat insects; many tropical species eat fruit or drink flower nectar; and some bats even catch frogs and fish. All bats in Connecticut are insectivores.

## Human/Bat Conflicts

The two most common bats involved in human/bat conflicts are the Big Brown and Little Brown Bats. They often roost in man-made structures such as barns, attics, and in the eaves of houses. Most colonies of bats are small and can remain unnoticed for years without causing any issues for a homeowner. Large colonies residing in an attic or a wall may result in a conflict because of noise or undesired guano accumulations. Eviction and exclusion of roosting bats is the only safe, permanent solution. More information on dealing with human/bat conflicts is on the DEEP website at <https://portal.ct.gov/deep/wildlife/nuisance-wildlife/living-with-bats>.



State of Connecticut  
Department of Energy & Environmental Protection  
Bureau of Natural Resources  
Wildlife Division  
<https://portal.ct.gov/deep/Wildlife>



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