

# The Importance of Bats

All bats in Canada are insectivores, with Canadian populations estimated to be several million. They are an important part of the ecosystem, directly benefiting us by controlling agricultural pests and insect-borne disease, including biting insects that can have a negative impact on people and wildlife. One million bats eat about 700 tons of insects annually. A recent study estimated that to match the level of insect control that bats provide, the U.S. agricultural industry would annually have to spend more than \$3.7 billion on pesticides. By the start of 2012, about 5.7 million bats in North America had died from WNS.

**Bat myths** Bats have been thought of as vicious bloodsuckers, rampant with diseases such as rabies. In truth bats are adept fliers and avoid contact with people, though they feed on the biting insects often attracted to people. No species in North America drinks blood. While bats are capable of carrying rabies, less than 0.5% harbor the disease and bats do not become aggressive when infected.

## Bat distribution in NL

Two species of bats breed in Newfoundland and Labrador: the Little Brown Bat (*Myotis lucifugus*) and the Northern Long-eared Bat (*Myotis septentrionalis*). Differentiating between the two can be difficult. There is still much to be learned about these species in the province, including the extent of their distribution and winter hibernation sites.

Little Brown Bats are commonly seen roosting around cabins and sheds during the summer. These are maternal colonies composed of females and their newborn offspring. Little Brown Bats occur throughout the Island of Newfoundland and the southern half of Labrador. Northern Long-eared Bats roost alone or in small groups during the breeding season, typically under loose bark in larger trees. Found throughout Newfoundland, the species has only recently been confirmed in Labrador.

## Contact

**Wildlife Division:** 709-637-2026

**For more information:**

Bat Conservation International ([www.bat-con.org](http://www.bat-con.org)), Canadian Cooperative Wildlife Health Centre ([www.ccwhc.ca/wns\\_background.php](http://www.ccwhc.ca/wns_background.php))



# Bats & White-nose Syndrome in NL



Environment and Conservation



**White-nose Syndrome (WNS), caused by the fungus *Geomyces destructans*, was first detected in a New York cave in 2006. The disease was named for the white fungus that grows on an infected bat's wings, nose and ears. The fungus, likely of European origin, has spread rapidly, and has impacted an unprecedented number of bat species in North America. Mortality rates often exceed 90% in infected hibernating sites (*hibernacula*). By spring 2012, WNS had spread through Ontario, Quebec, New Brunswick and Nova Scotia, but has not yet been detected in Newfoundland and Labrador.**

## How does WNS affect bats?

The WNS fungus grows best in humid, cold environments typical of bat hibernacula. Bats make excellent hosts for the fungus. Their exposed skin provides a growing medium, and their habit of clustering together helps spread the fungus. Because bats have a suppressed immune response in winter, they offer no resistance to the fungus.

WNS likely causes bats to wake from hibernation, using up limited energy reserves. Infected bats may be seen flying around in the winter in a desperate search for food. Bats that survive the winter may die later due to wing damage and an over-stimulated immune response.

*Photos by Joe Brazil*



Bat infected with White-nose Syndrome  
Photo by Al Hicks

## Barriers to recovery

There is no known cure for WNS and, to date, it is unclear if surviving bats and offspring have developed resistance to WNS, or if the presence of surviving bats in infected hibernacula is the result of new bats moving into these sites.

Bat recovery is limited by a low reproductive rate; females produce only one offspring per year. Bats are vulnerable to other pressures: habitat loss, wind turbines, and colony destruction by humans. Limiting spread of the disease and supporting current populations is our only known defense against WNS. No human illness has been attributed to WNS.

## Research and monitoring

The Wildlife Division conducts and supports monitoring and research on bats. Hibernacula and maternal colonies are being monitored for signs of WNS. Other ongoing projects will improve our understanding of the distribution of bats, as well as various aspects of bat ecology in the province.



**You CAN HELP** • Seek non-destructive methods to deal with bats in houses and cabins, such as erecting bat houses or blocking entrances once bats have left for hibernation sites.

• **Avoid entering suspected hibernacula, but report such sites to the Wildlife Division.** • Report any unusual discoveries of bat die-offs or bats flying outdoors in winter/early spring.