

The Cowichan Estuary Restoration and Conservation Association (CERCA) has been carrying out acoustic monitoring to determine which species of bats are present in the Cowichan Valley since 2021. A number of members of the SBS have participated in these surveys. Officially there are 15 species of bats residing in British Columbia and another three species considered to be occasional visitors. The following nine species are considered to be present on Vancouver and the Gulf Islands: Townsend's Big-eared bat, Hoary bat, Silver-haired bat, Big Brown bat, Yuma myotis, California myotis, Long-legged myotis, Little brown bat, Long-eared myotis and the occasional visitor, Mexican Free-tailed bat. The acoustic monitoring by CERCA also suggests that the Eastern Red bat is present on Vancouver Island.

BC bats all use echolocation to visualize their environment and prey in the dark. Fossil records show that this ability to use sound to 'see' was already present in bats 50 million years ago. All BC bats are insectivores. Bats, which have an undeservedly bad reputation, carry out a number of environmentally important roles and are considered beneficial to humans because they eat many insects harmful to trees and to agricultural crops as well as eat mosquitos and gnats. In summer, many of our bats roost in snags, under bark or on branches of trees while others roost in caves, mines, rock crevices or under bridges. In the winter, the Eastern Red bat, the Hoary bat and the Mexican Free-tailed bat are thought to migrate south while others seek buildings, caves, mines and rock crevices as their hibernaculae.

BC bats are small, ranging in size from 5 grams (Little Brown bat) to 17 grams (Big Brown bat). They have an extremely long potential lifespan for their size, with some individuals living for 30 to 40 years, depending upon species; however, because of predation and other factors, most live for 10 to 20 years. Bats have a low reproductive rate with most mature female bats only having one offspring per year. Pups mature in about 80 days but experience a high mortality (up to 50%) during their first winter, likely because they have not stored enough fat to last the winter. Once they survive their first winter, mortality rates are low.

There are a number dangers facing bats. Cats appear to be major predators of bats. In a recent study of killed and injured bats brought to Animal Health Centre in Abbotsford, BC, 24% were due to cat predation. Wind turbines can be significant killers of bats; however, with the use of acoustic monitoring to detect bats, there are a number of ways to decrease bat mortality due to turbines. A major concern is the white nose disease, caused by a fungus introduced into eastern North America around 2006 from Europe or Asia. This fungus causes ulceration of the skin and increases the bat's metabolism resulting in depletion of fat stores before hibernation is over. This fungus has now been detected in BC, although, to date, no white nose disease has been observed in our bats. There is some preliminary evidence that bacteria associated with bat hibernaculae in BC may have anti-white nose fungus activity.

But bats should be appreciated for being such wonderful forms of life, forming 20% of all mammalian species. They are the only mammals that have true flight. Did you know that baby bats babble and their mothers respond with the bat equivalent of baby talk?

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