

Scientists hope probiotic can save B.C.'s bats from white-nose syndrome

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Researchers say a deadly fungus that has nearly wiped out a North American bat species hasn't yet spread to British Columbia, giving them valuable time to study whether probiotics prevent the disease.

B.C. scientists have been researching their bacteria-laden powder's effect on white-nose syndrome for the last three years.

White nose kills the bats by

forcing them to wake from hibernation and use their energy to groom the fungus off their bodies.

Little brown myotis bats were once considered the most populous species of bats in North America.

The disease has decimated them, and the species was declared endangered by the federal government in 2012, just six years after the first case of white-nose syndrome was documented on the continent.

The first bat in Washington

state with the syndrome was discovered in 2016.

Cori Lausen, a biologist with the Wildlife Conservation Society Canada, said experts have been expecting the disease to spread quickly across the west as it did further east, but that hasn't happened.

"As far as we know, it is contained to Washington and that is good news for our bats, and for our program, because we're trying to get out in front of the disease and use a preventive or prophylaxis

approach, and that is where the probiotic comes in."

B.C. bats often raise their young in maternity roosts in the summer and that's where researchers have been administering the probiotic since 2019.

Lausen said her team will be out spraying the probiotic at three Vancouver-based research sites this spring.

She said scientists spray a tiny amount of water into a bat box followed by a powdered clay that contains pro-

biotic cells. Once bats enter the box, a layer of the dust is transferred onto their bodies and wings.

"The microbes just start to grow on the wings alongside all of their natural bacteria. This is similar to people taking probiotic pills, except that the microbiomes we are trying to enhance are the ones on the wings because that's where the fungus that causes white-nose syndrome grows," she said.

The probiotic is a combination of four bacterial strains,

and other studies have shown that it's effective in slowing the growth of the fungus on the bat.

The province is home to 14 confirmed hibernating bat species, but big brown, Yuma myotis, and little brown myotis species are being targeted for the Wildlife Conservation Society program because they are most affected by the syndrome, Lausen said.

She said bat hibernation sites are mostly unknown on the west coast, which limits research opportunities.