



We Stand for Wildlife



Now there is an even bigger challenge for western bats

Discovery in Alberta of fungus that leads to deadly white nose syndrome makes conservation action to help bats even more urgent.



Little brown bats huddling together while hibernating in a cave in Alberta. This is one of the species most at risk from white nose syndrome. Photo by Cory Olson/WCS Canada

This fall, bats in Alberta got some very bad news. Thanks to an innovative monitoring program led by WCS Canada, we discovered that the non-native fungus that causes the catastrophic bat-killing disease called white-nose syndrome (WNS) has made its way to the province. Sadly, this wasn't an entirely surprising discovery as the fungus has been steadily working its way west and we detected it in Saskatchewan in 2021.

But what was surprising was the more than 500 km westward leap made by the fungus and where it was discovered: In the Red River Valley, critical hibernation and summer roosting habitat for some bat species in Alberta and a corridor to hibernation sites in the Canadian Rockies.

Fortunately, we haven't just been out searching for signs of the fungus ([which entailed checking under more than 800 bridges](#) and other locations), we have also been actively preparing for its arrival and subsequent disease outbreaks in our western provinces by working hard to engage landowners, farmers, governments and homeowners in taking steps to protect bats and their habitats. WNS has dealt a crushing blow to bats in eastern North America with population of some species plummeting by more than 90% in the wake of this disease. This disease grows on bats when they hibernate, causing more frequent arousals from hibernation, which depletes energy reserves and leads to starvation before the onset of spring.

WCS Canada [has been working on a probiotic treatment](#) that we hope will improve bats' chances of surviving the disease, but it is still being field tested in Washington State (where WNS is present). For now, the best way we have for dealing with the disease is to improve survival and recovery conditions. We know, for example, that fat, healthy bats have a better chance of surviving the disease, so our goal is to ensure we have conditions that make that possible. Reducing disturbance to bats during the summer when they are raising their pups and during winter when they are hibernating are among the most important things we can do. Bats also need healthy, productive ecosystems, with abundant insects (Canadian bats eat only insects) that allows them to grow and fatten up in time for winter. Protecting habitats and avoiding insecticide use are important components of bat conservation and recovery.



*There is a lot still to learn about where western bats hibernate and how WNS may spread in the west.
Photo: Jason Headley*

You can help bats too

Find out more about [how you can help bats wherever you live](#) from our Alberta Bats team and get a little more familiar with our only flying mammal, which has more in common with grizzly bears than mice.

You can [read more in the Globe and Mail](#) and [on CBC](#).

HELP US HELP
BATS

Listen to this: WCS scientists live on air!

In a wide-ranging interview [on the podcast Disruptors](#) (episode: *Biodiversity 3.0: How to Leverage Nature as an Asset*) WCS Canada President and Senior Scientist Dr. Justina Ray talks with RBC Senior VP John Stackhouse about why protecting and restoring biodiversity matters (starting at the 3'30" mark). Justina points to the "hidden and slow-moving crisis" of biodiversity loss to explain why society has focused more on the climate crisis than the equally alarming loss of wild species and systems. It's a fascinating discussion that provides great context for why [hundreds of countries recently agreed to take stronger action on biodiversity protection](#) at the Convention on Biodiversity talks in Montreal.

Justina also recently [discussed the potential impact of the Kunming-Montreal Biodiversity Agreement in a presentation for Climate Action for Lifelong Learners](#), during which she compared notes with Mitchell Beer, publisher of [The Energy Mix](#), who addressed Canada's climate policies.

In the Yukon, Maria Leung [spoke to CBC's Elyn Jones](#) on a new WCS Canada paper on barn swallows, part of a suite of recommendations on [beneficial management practices for species at risk in the agricultural landscape of Yukon](#).



WCS Wild Audio shares reported audio stories covering the latest news and newsmakers from WCS field sites, zoos and aquarium, and conservation partners. Listen [here](#).

Meanwhile, two members of our Arctic team, Dr. Bill Halliday and Dr. Steve Insley [are featured on WCS Wild Audio podcast](#) talking about the challenges facing whales in an increasingly noisy Arctic Ocean. With summer sea ice rapidly disappearing due to climate change, ship traffic is growing while background noise is also increasing thanks to increased wave and wind action. Bill and Steve explain the work WCS Canada has been doing to better understand the impact of this growing noise on whales and to [identify areas where ship-whale](#)

conflicts are most likely to occur. If you've never listened to a bowhead whale or ringed seal, this is [your chance to hear](#) a bit of what life in the dark Arctic Ocean sounds like!

Lake Sturgeon status dives

At-risk populations in Ontario need strong stewardship

The largest freshwater fish species in Canada had its global status changed by the International Union for the Conservation of Nature from “least concern” to “[endangered](#)” just before talks began at the global biodiversity summit in Montreal last December.

For lake sturgeon, the [rivers in the far north in Ontario may hold some of their last best chances for survival](#). Lake sturgeon in other areas of their range have already been extirpated or have populations at a tiny fraction of their historical levels, which triggered the change in global status to “endangered.”

However, lake sturgeon still thrive in many intact rivers flowing into Hudson and James Bay, and are some of the last remaining populations of sturgeon globally that are not considered currently at risk of extinction.

But these same rivers may be [impacted](#) by new mines, roads or hydropower developments, and without care and planning, we could see a similar slide toward extinction for lake sturgeon in northern Ontario. The communities of the area have critical cultural ties to this remarkable fish, and WCS Canada has been undertaking field-based research on lake sturgeon in Ontario for a number of years [in partnership with Moose Cree First Nation](#).

As potential new mines, roads, or hydro developments are planned, it's also important to understand what the impacts might be on fish that are relied on as food for Indigenous communities and others, and especially to understand if fish are safe to eat or contain contaminants such as heavy metals. Graduate student Taylor Nicholls, a member of the Wahnapiatae First Nation north of Sudbury, [is undertaking research to try to answer that question](#) under the direction of WCS Canada



WCS Canada field technician Jacob Seguin releases a sturgeon while doing field work in the Moose Cree territory in the far north of Ontario.



WCS scientist Gretchen Lescord with Taylor Nicholls, a member of the Wahnapiatae First Nation who was recently recognized for her work studying contaminants in fish in northern Ontario.

scientist Dr. Gretchen Lescord and collaborators.

Taylor was recently [awarded](#) the first ever scholarship from the Kurt Grinnell Aquaculture Scholarship Foundation, which supports Indigenous students pursuing fisheries studies.

BC "deep snow" caribou in deep trouble

Herds declining in southern half of province



Loss of habitat and disturbance by roads and recreation has led to a crisis for mountain caribou in southern BC. Photo: David Moskovitz in the Narwhal

The steady decline of “deep snow” caribou is explained [in an in-depth piece in the Narwhal](#) that tells the story of how population been steadily eroded as human activity has infringed on the previously remote mountain areas the caribou once occupied. It is a revealing story that speaks volumes about the unwillingness of government to change track even in the face of undeniable evidence that carrying on with business as usual is not sustainable. WCS Canada President and Senior Scientist Dr. Justina Ray weighs in on how the crisis for caribou has developed and what it is going to take to prevent the loss of mountain caribou in the province.

Thinking about ecosystems and not just species

The places wildlife live are also in danger



Southern Ontario has lost more than 70% of its original wetlands. Above: Duffins Creek wetland. Photo: TRCA

The steady decline of wild species is well documented. But it is more than monarch butterflies and Blanding’s turtles that we are at risk of losing. There are hundreds of endangered ecosystems at risk of being lost from Canada as well. [In a piece for the National Observer](#), WCS Canada Director of National Conservation Dan Kraus looks at why our endangered species laws need to be expanded to also cover ecosystems. As Dan notes “by protecting endangered ecosystems, we can also protect the endangered species and the genetic diversity they hold.”

Dan is also featured [in a National Observer news story](#) that examines the false idea that we can “trade off” one natural area for another or somehow recreate things like wetlands or forests lost to development. This issue has grown in importance with the Ontario government’s decision to remove areas from the province’s Greenbelt while claiming it is “replacing” the removed areas with lands elsewhere.

A special place near you

Thanks to stories popping up in local media across the country, Canadians are learning about some very special places in their own backyards. Coverage of some of the first areas identified as [Key Biodiversity Areas](#) (KBAs) in Canada has helped people in every region see that we have unique and fascinating natural areas that support vulnerable biodiversity in every corner of the country.

Whether it’s [a forest in Southwestern Ontario](#), [islands in British Columbia](#), or [many special places in NWT, Alberta or Manitoba](#),

every province and territory has places that are key to protecting biodiversity.

A particularly interesting new KBA is being highlighted by [CTV Calgary](#) and the [Daily Hive](#). The Castleguard Cave in Banff National Park is the only place in the world you can find the tiny Castleguard Cave Amphiphod, a blind shrimp-like creature that somehow thrives in the cave's cold nutrient-poor environment — and nowhere else.



Inside the Castleguard Cave. Photo: KBA Canada

Donor profile

A helping hand for wildlife

Arthur Law and Emily Chiu are passionate about wildlife. As a retired couple, Arthur and Emily, enjoy exploring nature by taking long walks or practicing Tai Chi in parks. “My favourite routine from spring to fall is enjoying the crisp, fresh air on our walks early in the morning, before the city’s hustle and bustle begins,” Arthur says.

Arthur, a retired banker and teacher, has always been interested in wildlife, especially large animals like whales and bears. But his drive to protect wildlife has grown over the past decade.



“Nature nurtures us and that’s why we need to be good to mother nature in return. But our behaviour, especially over the past few decades, has harmed nature,” he says.

Arthur and Emily are [loyal donors to WCS Canada](#) and hope more individuals will be inspired to support wildlife and vulnerable ecosystems. Arthur is also a member of our [legacy giving circle, the Northern Lights Circle](#), and has made provisions in his will for a gift to WCS Canada. “WCS Canada checks all the boxes for things we care about, wildlife, climate action, and ecosystems”, says Arthur. Emily adds, “I have been an admirer of WCS Canada since I first learned about it from a friend. I read about the impact of your work, and I was impressed. I wanted to be a part of this organization’s conservation efforts because wildlife deserves

every bit of support our human hands can give them.”

You can [read more about these great friends of wildlife on our website.](#)

We would love to hear your stories about why wildlife and wild places are important to you. If you'd like to share your story and inspire others, please contact Forough Shafiei at fshafiei@wcs.org.

MORE WCS CANADA NEWSLETTERS



Top banner image: Caribou (Canva Images)