Vancouver Island Marmot

Status: Critically Endangered

The Vancouver Island marmot is one of the ***rarest*** mammals in the world and can be found only in the alpine meadows on Vancouver Island. By 2003, there were just 30 marmots left in the wild. The Government of British Columbia realized that the species was on the brink of extinction and set up a Vancouver Island Marmot Recovery Team.

How is the Zoo Helping?

The Toronto Zoo is one of four institutions involved in the marmot captive breeding and re-introduction program, which has seen over 560 pups have been successfully raised. Since 2003, the Marmot Recovery Team has re-introduced over 300 marmots back to Vancouver Island and the wild population is starting to rebound. Even with the success, this is still a long-term recovery project. The team will continue to focus on captive breeding and re-introduction, as well as protecting the alpine meadows that the marmots call home. Visit **marmots.org** for more information on the marmot recovery efforts.

Black-Footed Ferret

Status: Endangered

The black-footed ferret was once found throughout the prairies, extending from Canada to Mexico. Now, it is one of North America's most endangered mammals. The black-footed ferret is an important member of the prairie ecosystem, with over 130 unique plants and animals dependent on the survival of the species.

In the early 1900s, the black-footed ferret populations declined rapidly due to habitat loss, drought, and the decline of the prairie dog population. Prairie dogs make up a large part of the ferret's diet and their tunnels are used by ferrets for their burrows. By the 1980s, the black-footed ferret was believed to be extinct until a small population was found in Wyoming, US. In a last ditch effort to save the species, the last 18 known ferrets were bought into captivity to start a captive breeding program with the ultimate goal of re-introducing the species to its natural habitat.


Photo © J. Michael Lockhart, USFWS

How is the Zoo Helping?

The Toronto Zoo joined the black-footed ferret conservation recovery program in 1992. Since then, hundreds of ferret kits born at the Toronto Zoo have been released into the prairies of the United States, Mexico, and Grasslands National Park in Saskatchewan. The re-introduction program has seen some successes, with the wild black-footed ferret population now thought to be over 1000; however, disease remains a constant threat. The Toronto Zoo continues to be involved in this recovery program to ensure the wild population becomes self-sustaining.

Blanding's Turtle

Status: Endangered

The Blanding's turtle makes its home in wetland areas, including the Rouge Valley, which is the ecosystem the Toronto Zoo is a part of. Increased development around Ontario wetlands has caused populations of all turtle species to drop due to the destruction of wetland habitats and an increase in predators, including raccoons. While the Rouge Valley provides one of the best natural habitats for Blanding's turtles in the Toronto area, field studies showed that only six adult turtles remained.

How is the Zoo Helping?

Beginning in 2014, the Toronto Zoo, in partnership with Toronto and Region Conservation Authority and Parks Canada, began releasing young Blanding's turtles into the wetlands in the Rouge Valley. This re-introduction is the first of its kind in the Greater Toronto Area and marks a significant step in 15 years of turtle monitoring and research in the Rouge Valley. To increase their chance of survival, the young turtles are raised at the Toronto Zoo for at least last two years in a process known as head-starting, which gives them the opportunity to grow without the threat of predators. Long-term monitoring and on-going habitat restoration are key to the turtles' survival.

Puerto Rican Crested Toad

toronto zoo

Status: Critically Endangered

Originally thought to have gone extinct in the 1970s, the Puerto Rican crested toad is a critically endangered species that lives in small ponds of water in the evergreen forests of southern Puerto Rico. Nicknamed the *'hurricane toad,'* the toads breed only during the October hurricane season. A single female toad can lay up to 4,000 eggs at a time, which hatch 24 hours later. However, habitat loss for urban development and the high tadpole mortality rates are threatening the survival of the Puerto Rican crested toad.

How is the Zoo Helping?

Working with the Association of Zoos and Aquariums and the U.S. Fish and Wildlife Service, the Toronto Zoo is part of the captive breeding and re-introduction program for the Puerto Rican crested toad. Through field studies, the Zoo tracked toads in an effort to determine the best environmental conditions for breeding. These conditions, which include 'rain' and a steep drop in temperatures followed by an increase, are now replicated at zoos participating in this Species Survival Plan. The Toronto Zoo has released over 150,000 tadpoles in Puerto Rico to help the conservation efforts of sustaining and re-building the wild population.

Wood Bison

Status: Threatened

At over 900 kg, wood bison are the largest land animal in North America. Wood bison were once found throughout the grasslands and boreal forests of the northern parts of Saskatchewan, Alberta, British Columbia, as well as western Northwest Territories, Yukon, and Alaska. However, over-hunting nearly wiped out the entire population in the early 1900s.

How is the Zoo Helping?

Toronto Zoo has been involved in wood bison conservation since 1977 through a captive breeding program, which includes the use of reproductive technologies (e.g. artificial insemination using frozen sperm) to increase genetic diversity. Beginning in 1985, the Zoo has been releasing captive bred wood bison back into the wild. The Canadian wood bison population is now over 3,500 individuals. Once classified as critically endangered, the continued efforts of several Canadian organizations have resulted in the wood bison being 'down-listed' to threatened – a true sign of a conservation success story!

Polar Bear

Status: Vulnerable

With only 20,000 to 25,000 polar bears left in the wild (60% are found in Canada!), they are currently classified as vulnerable. However, if climate change continues at its current rate, they could quickly become critically endangered, as the Arctic sea ice they rely on for hunting seals disappears. The loss of polar bears would have a significant impact on other Arctic species, as they are an essential part of the tundra ecosystem. Now is the time to act and make changes to reduce our carbon dioxide (CO_2) emissions and help slow the melting of the sea ice.

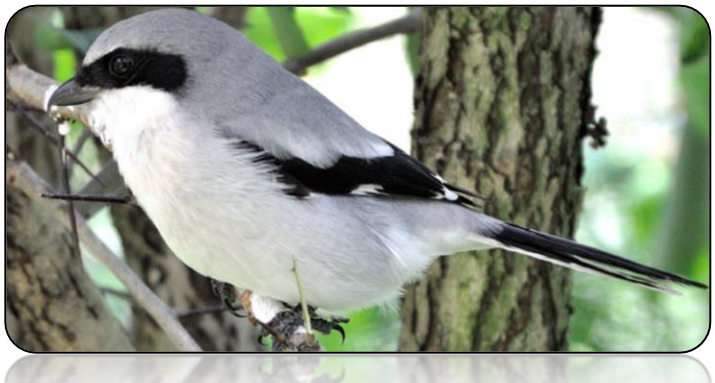
How is the Zoo Helping?

The Toronto Zoo collaborates with Polar Bears International (PBI), Acres for the Atmosphere, and leading scientists for polar bear research to educate and raise awareness of issues that affect polar bears in the wild. Along with other zoological and conservation institutions, the Toronto Zoo is a member of the Polar Bear Species Survival Plan, which is working to develop a self-sustaining population of captive polar bears through breeding. Since 2011, three polar bear cubs have been born at the Toronto Zoo. Zoo biologists also work closely with biologists studying wild polar bears in the Arctic to better understand how climate change will affect polar bears. Research studies have included reproductive monitoring, behavioural assessments, olfactory (smell) communication, polar bear growth, and the changing diet and prey species of wild polar bears. Additionally, in partnership with Acres for the Atmosphere, over 2,500 trees and plants have been planted at the Toronto Zoo in recent years to reduce the reduce CO2 levels in the atmosphere.

Eastern Loggerhead Shrike

Status: Endangered

Making its home in the grasslands, the eastern loggerhead shrike has a sharp hooked beak and hunts using similar methods as birds of prey, although it lacks strong, grasping talons. Once found readily from southwestern Manitoba through to the Maritime provinces, the eastern loggerhead shrike is now found only in a few isolated pockets in Ontario, Quebec, and Manitoba. In 1991, the eastern loggerhead shrike was listed as endangered because of a rapidly declining population, likely due to habitat loss of their breeding and wintering grounds. Other threats to their survival include motor vehicles, pesticides, and changing conditions of their migration routes.



How is the Zoo Helping?

Toronto Zoo has been involved in the captive breeding of eastern loggerhead shrikes since the program's inception in the 1990's. The Eastern Loggerhead Shrike Recovery Program has released over 600 shrikes back into the wild. Released shrikes have demonstrated the ability to migrate and breeding behaviour in subsequent years, successfully contributing to the wild population.

Trumpeter Swan

Status: Least Concern

The trumpeter swan, which is the largest of all waterfowl, is known for its distinctive all white plumage and black beak. Trumpeter swans historically occupied areas across North America, but were thought to be near extinction early in the 20th century, with none remaining in Ontario by the 1980's, due to heavy hunting for both their feathers and meat. Competition for wetland habitat and food from the more aggressive (and invasive) mute swan continues to threaten the breeding success of the trumpeter swan.

How is the Zoo Helping?

The Trumpeter Swan restoration program began in 1982 with eggs collected from wild colonies in Grande Prairie, Alberta and brought to Ontario where they were released after several years of growing and developing in a protected environment. Wild trumpeter swans have nested at the Toronto Zoo since 1996, with breeding pairs often raising cygnets in Weston Pond. In total, over 60 trumpeter swans have hatched at the Toronto Zoo and the Zoo is one of several release sites for immature swans. The wild population in Ontario is now estimated to be over 900 individuals.

Wood Turtle

Status: Endangered

As Ontario's most terrestrial turtle, the wood turtle is usually found basking in the sun by rivers & streams, along roadsides, and in wooded areas near water. Highly prized by poachers, wood turtle populations are also threatened by road mortality and habitat loss. Wood turtles now exist only in very small numbers across Ontario.

How is the Zoo Helping?

The Toronto Zoo has been assisting the Ministry of Natural Resources and Forestry with the conservation of the wood turtle in Ontario for several years. Ministry staff monitor wild wood turtles and collect eggs from at-risk nesting sites. Toronto Zoo staff are involved in head-starting the hatchlings, which involves raising the turtles for two years at the Zoo before releasing the stronger and faster turtles back into the wild. Once released, the turtles are monitored through the use of radio telemetry equipment to learn more about their behaviour and to assess the overall success of head-starting programs.

Axolotl

Status: Critically Endangered

The axolotl is a unique amphibian, living in water for entire life cycle, as it does not undergo metamorphosis. Axolotl are found only in the shallow lagoons and canals of Lake Xochimilco in Mexico City, Mexico. The axolotl population has declined significantly due to decreased water quality, as the lake is heavily polluted by industry and waste water from Mexico City. The introduction of carp and tilapia have also contributed to the reduced population.

How is the Zoo Helping?

Toronto Zoo collaborates with partners in Mexico, including government agencies, universities, biologists, sociologists, educators, farmers, fishers, boat operators, and accredited Zoos, to develop and implement *in situ* and *ex situ* conservation projects to protect the Lake Xochimilco ecosystem. Projects include long-term biological monitoring and research on both wild and captive populations, disease screening, community and zoo outreach programs to encourage active participation, training for local boat operators to provide ecotourism income, and restoring traditional agricultural practices.

Massasauga Rattlesnake

Status: Least Concern

The endangered massasauga rattlesnake is a unique reptile that can be found in southern Ontario around Georgian Bay, Lake Huron, and Lake Erie. Although it is venomous, the massasauga is actually very shy, preferring to avoid detection by hiding under shrubs, brush, or rocks. Even though the population of rattlesnakes is decreasing, the reported encounters with this elusive snake are increasing due to shrinking natural spaces and expanding developed areas. In addition to habitat loss, road deaths, and pollution, massasauga rattlesnakes are also unnecessarily killed by people who fear its venomous bite.

How is the Zoo Helping?

The Toronto Zoo has been working to save and protect the massasauga rattlesnake since 1989 by hosting workshops that dispel the myths surrounding these snakes, educate on how to live safely with them, and encourages all citizens to make responsible choices that protect natural places. Additionally, Toronto Zoo staff support monitoring of snakes in the field, scientific research, and the development of shelter areas and ecosystem restoration.

The Zoo's massasauga rattlesnakes are part of a Species Survival Plan (SSP) conservation and breeding program that began in 2006 following concerns of the declining populations in Ontario and 10 states in the United States. By carefully adjusting environmental conditions to simulate the wild, three of the Zoo's female rattlesnakes have given birth to a total of 16 babies in the last two years, which is an exciting development in the recovery efforts of the massasauga rattlesnake population.