

Species at Risk in Canada

Our natural world is constantly changing. Since the beginning of time, many species have vanished and new ones have evolved. Modern society has led to changes that have hastened the loss of some species, and we have come to realize that we must take action to prevent further losses and to help some populations recover.

Today, “species at risk” is a familiar term. Yet, like many common phrases, it is sometimes hard to know exactly what it means. When is a species considered at risk in Canada? Why is this happening? Is anything being done to help? And why should we care?

This kit answers these questions. It will help teachers and students learn more about the factors that have put the future of too many native Canadian wildlife species at risk, and the actions that are being taken to help them come back. It will pay special attention to our rich, diverse forestlands, the key to survival for so many species in Canada.

Nature is an amazing and intricate puzzle made up of literally millions of species. If our actions lead to the loss of even one, the delicate balance can be disrupted. We all lose in a number of ways when a species vanishes from Earth. We may have lost something with spiritual and traditional significance for First Nations or a species that may hold the potential for future scientific or medical breakthroughs.

We are constantly learning what we must do to conserve healthy ecosystems and make sure our actions do not place species at risk. We are finding ways to not only live in harmony with our natural world, but to help reverse past damage.

Assessing Species at Risk

Created in 1977, COSEWIC (the Committee on the Status of Endangered Wildlife in Canada) is a committee of experts that uses the best and most up-to-date scientific information and Aboriginal traditional knowledge to assess which native wild species are in some danger of disappearing from Canada.

COSEWIC’s work involves mammals, birds, reptiles, amphibians, fishes, molluscs, arthropods, vascular plants, mosses and lichens. The federal government takes COSEWIC’s designations into account when establishing the legal list of species at risk, which is the basis for the wildlife protection and recovery measures in Canada.

Species at risk includes a number of categories:

Extirpated means a wildlife species no longer exists in the wild in Canada, but exists elsewhere in the wild. For example, grizzly bears are no longer found around major rivers on the North American Plains where they were once common, although they exist elsewhere in the wild.

Endangered means a wildlife species is facing imminent extirpation or extinction. Examples are American ginseng, a perennial herb that grows in Ontario and Quebec, the island blue, a butterfly of British Columbia and the beluga whale on the east coast.

Threatened means a wildlife species is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction. Examples include the peregrine falcon, anatum subspecies, and soapweed in Alberta.

Special Concern means a wildlife species may become threatened or endangered because of a combination of biological characteristics and identified threats. Examples include the western population of wolverine, the Northeast Pacific offshore population of killer whales and the black-tailed prairie dog in Saskatchewan.

COSEWIC also includes the category “extinct” for species that no longer exist, such as the Great Auk. And it identifies some species that have been evaluated and are not at risk, and others where there is not enough information to assess the risk.

As of this printing, COSEWIC has designated 441 species at risk in Canada. Of these, 21 are extirpated, 160 endangered, 108 threatened, 140 of special concern, and 12 are extinct. Information about the biology, status and recovery efforts for each species can be found at: www.speciesatrisk.gc.ca

Why Are Species at Risk?

An astounding 80 per cent of the species designated by COSEWIC are at risk due to loss of habitat. And in most cases people are the culprits. We drain wetlands to build schools, housing developments and shopping malls. We turn grasslands and wooded areas into farms. We cut forests for wood or pulp and paper.

Consider what happens if a new housing development is built on the outskirts of your community. Where do the animals, plants, birds and insects that once lived in the forests or fields go? Is there somewhere nearby where they can continue to thrive? Can they adapt to their new surroundings? Or will their population dwindle and eventually disappear?

In southern Canada, people have drained a significant portion of the original wetlands and have adversely affected most that remain. Three-quarters of Ontario's species at risk are in the south where less than 10 per cent of the original forest cover remains.

Along the Pacific Coast, species that depend on old-growth forests are affected by logging activities. Marbled murrelets are small seabirds that nest on large limbs of old-growth trees that are covered with deep moss. The trees they depend on are also commercially valuable.

We build roads, pipelines, seismic lines and power corridors that can isolate wildlife populations so that they are too small to support a viable population with adequate genetic diversity. We flood lands to create hydroelectric reservoirs, use chemical fertilizers, insecticides and herbicides. We increase levels of toxic chemicals and pollutants, introduce non-native invasive species,

overhunt or poach and suppress natural events such as wildfire. The future of some species can be impacted by something as major as climate change or as minor as driving an all-terrain vehicle through a sensitive area.

We sometimes see cases where entire ecosystems are at risk. Very little of the tall grass prairie that once covered a large area of the central United States and Canada remains, primarily because these deep, rich layered soils are perfect for agricultural development. Where have the species gone that once thrived in these open grasslands?

Who's Watching Out for Species at Risk?

While there has been an increase in both interest and action related to species at risk more recently, Canadians have long understood the importance of protecting wild areas and wildlife. Banff National Park, famous around the world for its wildlife, became Canada's first national park way back in 1885. Wood Buffalo National Park, our largest national park, was established in 1922 to protect the last remaining herds of bison in northern Canada.

While COSEWIC is the cornerstone of Canada's work related to species at risk, it depends on its partnerships with governments and organizations across Canada. The committee itself has members from each provincial and territorial government wildlife agency, federal agencies, three non-government members, and the co-chairs of the Species Specialist and Aboriginal Traditional Knowledge Subcommittees.

In 1996, the *Accord for the Protection of Species at Risk* was created to provide protection for species at risk across Canada. Through the *Accord*, federal, provincial and territorial ministers responsible for wildlife agreed to criteria for designating species at risk and guidelines for protecting the habitats of these species. They also committed to developing recovery plans for species identified as at risk.

Many other actions, federal, provincial/territorial and municipal, support wildlife and habitat, from parks creation to laws regulating everything from hunting and fishing to resource and land development. Wildlife and species at risk are an important consideration in land and resource management planning.

Species at Risk Legislation

In June 2003, when the Canadian government proclaimed into law the *Species at Risk Act*, *Bill C-5*, Environment Minister David Anderson called Canada's wildlife species and the ecosystems they live within "an important part of the natural heritage of our country and the world."

The *Act* is a new approach in Canadian legislation, that shows each and every step in the assessment, listing and recovery processes for species at risk. It provides for species and critical habitat conservation while engaging Canadians

through stewardship. The Act sets out how to decide which species are a priority for action, and what to do to protect a species. It identifies ways that governments, organizations and individuals can work together, and establishes penalties for a failure to obey the Act.

Six provinces – Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario and Quebec – have specific legislation designed to protect and conserve species at risk. Ontario's *Endangered Species Act of 1971* was the first legislation of its kind in Canada to prohibit willful harm to regulated endangered species and destruction of, or interference with, their habitats. Ontario became a leader in efforts to protect species at risk as it continued to revamp its non-game program.

Some provinces have amended existing wildlife laws to deal explicitly with species at risk, while others are developing legislation. The *Accord* requires that provinces and territories either develop new legislation or use existing legislative tools to protect species at risk. In addition, First Nations are consulted and involved in programs related to species at risk. This helps to ensure the effective implementation of any policies and legislation in land claims settlement regions, on reserve lands, and where traditional harvesting activities are being carried out.

Provincial/Territorial Links

Alberta: www3.gov.ab.ca/srd/fw/riskspecies/speciesatrisk/

British Columbia: <http://srmwww.gov.bc.ca/atrisk/>

Manitoba: www.gov.mb.ca/conservation/wildlife/managing/species_at_risk.html

New Brunswick: www.gnb.ca/0078/index-e.asp

Newfoundland and Labrador: www.gov.nf.ca/hoa/bills/bill0133.htm

Northwest Territories: www.nwtwildlife.rwed.gov.nt.ca/

Nova Scotia: www.gov.ns.ca/natr/wildlife/

Nunavut: www.nunavutwildlifeact.ca

Ontario: www.rom.on.ca/ontario/index.php
www.ontarioparks.com/english/sar.html

Prince Edward Island: www.gov.pe.ca/roundtable/

Quebec: http://www.fapaq.gouv.ca/fr/etu_rec/esp_mena_vuln/index.htm
(available in English only)

Saskatchewan: www.se.gov.sk.ca/ecosystem/speciesatrisk/

Yukon: www.yfwmb.yk.ca/comanagement/



Is Anything Getting Better?

Practicing Environmental Stewardship

The best way to protect wildlife species is to practice good environmental stewardship so that we can conserve and maintain, and even bring back, high-quality habitat. There are lots of examples of stewardship activities – large and small – in cities, farms and forests across Canada.

Leadership in Energy and Environmental Design (LEED) is a rating system that certifies green building projects if they achieve a specified number of points in categories such as building location, water conservation, energy, materials and indoor environmental quality. LEED Canada awards a point if a project's building site is selected to reduce its environmental impact, such as avoiding lands that are ecologically sensitive or provide habitat for rare or endangered species.

Ducks Unlimited began its habitat conservation work way back in 1938 when conservation-minded sportsmen noticed that wetlands and waterfowl were disappearing in North America due to drought and agricultural and urban expansion. Today, Ducks Unlimited Canada manages and restores wetlands and associated habitats that benefit waterfowl, other species and people.

Forest professionals across Canada plan logging so that the forest that remains continues to shelter wildlife, safeguard watersheds, provide soil stability and protect countless other values.

Provincial laws make sure forestry activities avoid affecting wildlife species and plant communities that are at risk.

Forest companies leave behind wildlife, trees, stumps, branches and fallen trees to maintain biodiversity and provide habitat for plants, animals and insects.

Organizations are in place to protect two of Canada's most unique forest ecosystems – Garry oak meadows on southeast Vancouver Island and Carolinian forests in southern Ontario. In British Columbia, local citizens created the Garry Oak Meadow Preservation Society in 1992 to preserve, protect and restore Garry oak stands and their natural habitats. In Ontario, Carolinian Canada, a non-profit coalition of conservation groups and individuals, is working to conserve the ecological diversity of a region that makes up just one per cent of Canada's total land area and has an estimated 2200 species of herbaceous plants, including 70 species of trees alone.

Habitat Stewardship Program

While stewardship can be carried out on a large scale, perhaps the most visible and valuable activities are done on a small scale by landowners and interested individuals. There are hundreds of stewardship projects underway across Canada, many of them funded by the Habitat Stewardship Program.

The Government of Canada established the Habitat Stewardship Program to encourage Canadians to protect habitats, help in the recovery of species at risk, and conserve Canada's natural heritage. It is one of the key components of the National Strategy for the Protection of Species at Risk. There are activities in every part of Canada:

In southern Ontario, the Six Nations of the Grand River is continuing an outreach program so that the public can learn about the importance of forested areas and the need to protect existing Carolinian stands.

Bird Studies Canada, in keeping with approved recovery plans and working in concert with local landowners and land managers, is directing stewardship activities to conserve the habitat of Carolinian forest birds at risk in the Lake Erie Lowland ecoregion of Ontario.

In the Yukon, First Nations game guardians were trained in the management of species and populations at risk so they can better understand conservation biology principles and also share their traditional knowledge with the specialists leading the training.

In southern British Columbia, the Nature Conservancy of Canada continues to help individuals and agencies practice proper stewardship and support habitat restoration at a range of Garry oak sites.

In northern Alberta, the Alberta Conservation Association helps speed up vegetative regrowth on seismic lines and roads to increase the availability of habitat for woodland caribou and other species, such as grizzly bears and wolverines, that require large undisturbed areas.

In Quebec, the Club Optimiste Montréal Colombo is bringing together many stakeholders to promote the stewardship of riparian environments and raise awareness of species at risk in Montreal.

The Kativik regional government is raising awareness in Inuit communities on the precariousness of the beluga populations in northern Quebec and encouraging them to help develop recovery plans.

In Atlantic Canada, Bird Studies Canada is working with private forestry companies to monitor and manage habitat of Bicknell's Thrushes on lands leased by these companies.

For further information, visit www.cws-scf.ec.gc.ca/hsp-pih

Bringing Back Habitat and Species

There are also examples across Canada of government and non-government organizations bringing back species from the brink of extinction or extirpation. The Recovery of Nationally Endangered Wildlife Program supports commitments made under the *Accord for the Protection of Species at Risk*, as well as the recovery requirements of the new *Species at Risk Act*.

Organizations involved in recovery programs try to respond quickly so that they can avoid having to use more intensive efforts such as reintroduction, captive breeding and relocation. They work with the co-operation of landowners, local governments, First Nations and other stakeholders who own or manage land, and watch for opportunities to raise public awareness on conservation issues close to home.

For example, the recovery/conservation team that aims to maintain self-sustaining populations of coastal plain flora in Nova Scotia is focusing on both shoreline protection and landowner education. A recovery plan for the Sydenham River, found in the Carolinian zone of southern Ontario, is improving habitat as well as strengthening knowledge and community awareness. The Sydenham River is home to many aquatic species, including at least 34 species of freshwater mussels and 80 species of fish, many of them rare.

There are numerous examples of success stories related to recovery efforts. In 1978, COSEWIC designated the swift fox as extirpated from Canada due to habitat destruction, poisoning and trapping in the early 1900s. In 1998, it was able to reclassify the species to endangered thanks to the success of captive breeding programs. The wood bison was designated as endangered by COSEWIC in 1978, and has since been reclassified to the improved threatened status in 1988.

The Peregrine Falcon *anatum* subspecies was practically eliminated from most of its range in North America because of the persistent use of pesticides such as DDT. However, due to successful captive breeding activities, and the ban on DDT, the Peregrine Falcon *anatum* subspecies is becoming more plentiful and less at risk.

To view other examples of recovery efforts in Canada, visit:
www.recovery.gc.ca

The Economics of Protection

People around the world have come to understand how important it is to consider the impact human activities might have on other species. In 1987, the World Commission on Environment and Development (commonly known as the Brundtland Commission) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Five years later, the first global agreement on conservation and sustainable use of biological diversity was signed in Rio de Janeiro by 150 governments, including Canada, and another 175 have signed since. It was the first time world leaders acknowledged that there was direct economic value in protecting biological diversity.

The Convention on Biological Diversity signed in Rio de Janeiro has three main goals:

- the conservation of biodiversity;
- sustainable use of the components of biodiversity; and
- sharing the benefits arising from the commercial and other utilization of genetic resources in a fair and equitable way.

The *Convention* is a legally binding document that linked traditional conservation efforts to economic goals and established principles for sharing the benefits from the use of resources. Put simply, it requires that participants, such as Canada, must acknowledge species at risk with any activities that occur within their boundaries.

Bringing the Message Home

While there is a lot going on, it is important to remember that we all need to pitch in, and we all can. It may seem like a daunting task, but there is a lot that can be done in any Canadian community. If every person does a little bit, we stand to gain a lot.

It may be as simple as taking an interest in what is happening around you. Take part in planning open houses so that you can find out how developers or forest companies are considering the needs of wildlife species in their activities. Let them know if you don't think they are doing enough.

If you are concerned about the impact of industrial or commercial activities, write a letter to the developer and outline why. You can also write a letter to the editor.

A few more ideas are listed here, to help you and your students get involved in helping species at risk.

- Whenever possible, take your classes outside and help your students become observers of wildlife.
- Invite foresters and biologists into your classroom to talk about their work in protecting species at risk.
- Contact your provincial forestry association for more information about species at risk stewardship activities.
- Select an individual forest company and find out what they are doing to conserve species at risk.
- Encourage your students to keep domestic pets under control. Don't let dogs run loose and chase wildlife, and keep a bell around the neck of cats.
- Participate in land use planning processes in your community to ensure that wildlife habitat is protected.
- Find out if there is an ongoing species at risk recovery effort in your community and ask how you can support and learn more about those activities.
- Grow native plants in your garden, while making sure to buy them from producers that do not harvest them directly from the wild.
- Avoid using herbicides and pesticides in your garden or yard.
- Install bird feeders, nest boxes and bird baths in your yard, and in the school yard.
- Help others learn about species at risk.
- Use this teaching kit to learn even more.

