

Species Conservation

The varied geography of British Columbia, ranging from coastal islands to rain forests, mountains and the grasslands of the interior, makes the province one of the most biologically diverse areas in Canada.

B.C. occupies 10% of Canada's land area but contains more than half of Canada's species of vertebrates and vascular plants and three-quarters of the country's bird and mammal species.

Many species are unique to B.C.; 24 mammals are found nowhere else in Canada and at least 162 species of birds breed only in the province.

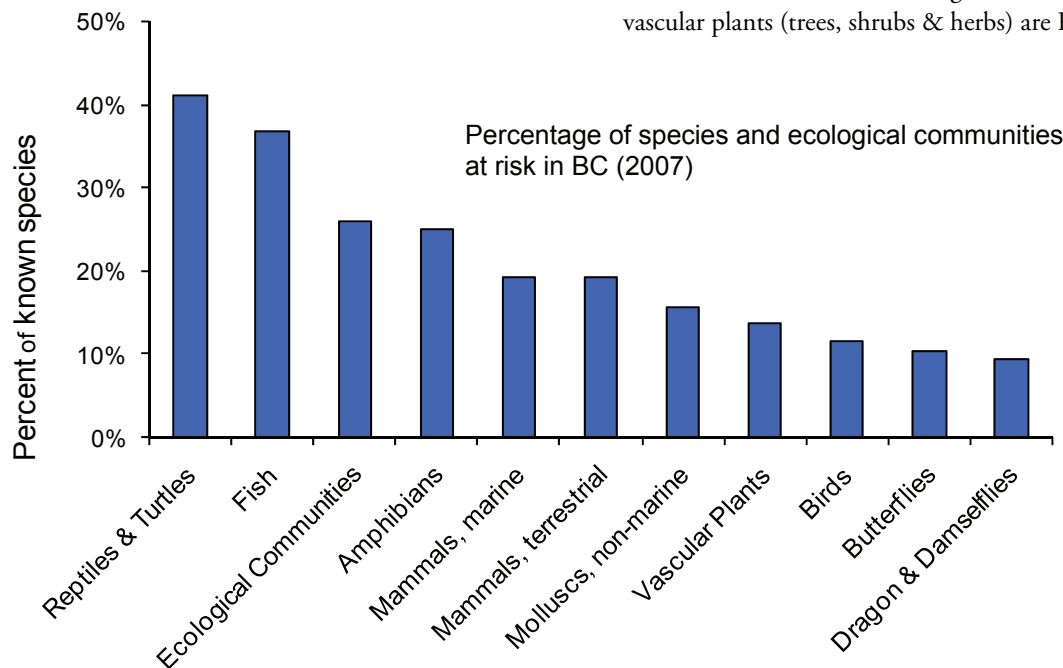
Unfortunately, many B.C. species are designated as endangered, threatened, or of special concern because there is a risk they may become extinct, at least locally.

The following indicators focus on species conservation status, threats and recovery efforts.

Species at risk in British Columbia

In B.C., provincial biologists categorize species according to their conservation risk. "Red-listed" species include those that are most at risk of extinction and those that have gone locally extinct.

- Reptiles & turtles (41%), freshwater fish (37%), and amphibians (25%) have the highest number of Red-listed species. These species are all associated with freshwater habitats.
- Although the percent of vascular plants that are Red-listed is lower compared to some groups of animals, the absolute number is much higher. In B.C., 2,346 vascular plants (trees, shrubs & herbs) are Red-listed.



Environmental Trends in British Columbia: 2007

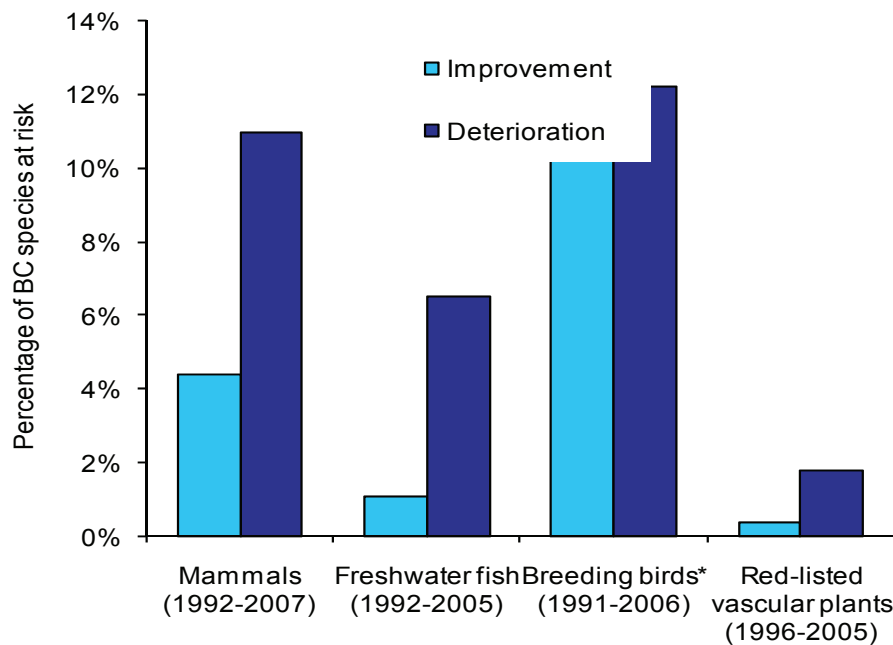
Changes in the conservation status of species at risk

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is an independent body of experts who use scientific, aboriginal and community knowledge to categorize species according to conservation risk.

An analysis of the changes in conservation risk allows us to assess if species populations are improving or deteriorating within the province.

- Since 1992, the conservation status of 11% of mammal species and 6% of freshwater fish has deteriorated. Over this same period, however, the conservation status of some mammals and freshwater fish improved.
- The number of breeding bird species with 'improving' status roughly equaled those deemed to be 'deteriorating'. About a third of the 'improving' bird species are recent immigrants extending their range into B.C. from outside the provincial borders.
- Since 1996, more vascular plants deteriorated in conservation status than improved.
- All marine mammals either stayed the same or improved in status. This is because many are still recovering from historically low numbers, as measures to protect them take effect.

Changes in the conservation status of animals and plants in B.C.



Source: Quayle et al. 2007

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Threats to species at risk in British Columbia

Most Red listed species are currently affected by at least two broad-scale threats such as habitat loss, competition from non-native species, overexploitation, pollution, or natural causes (e.g. predation, forest fires).

Habitat loss is the greatest threat to most (86%) of the species at risk in B.C.

Habitat loss occurs when natural habitat is lost or degraded due to activities associated primarily with urbanization, agriculture, human disturbance, resource extraction and infrastructure development.

With continued population growth and development activities, habitat loss and alteration will continue to be a critical issue affecting many species.

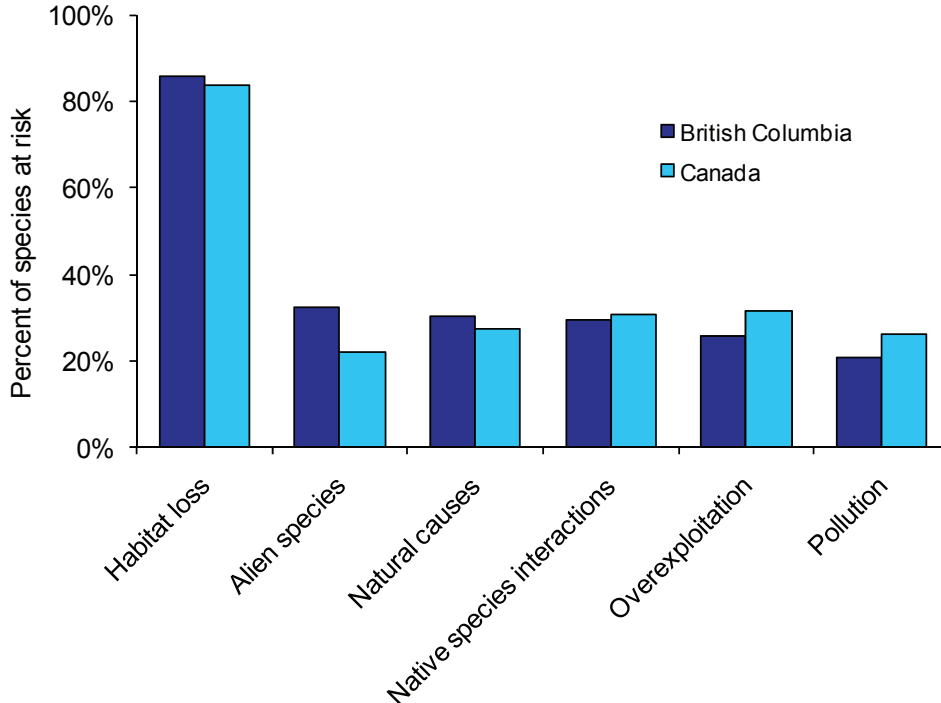
The second greatest threat to B.C. species is the **introduction of non-native species**. These may compete with or prey upon native species, modify their habitat or have other effects.

While climate change is expected to affect many species, this is mostly a long-term threat.

Overexploitation and pollution are particular threats to marine mammals, marine fish, and amphibians.



Threats to species at risk in B.C



Source: COSEWIC (Committee on the Status of Endangered Wildlife in Canada) 2005 and Venter et al. 2006.

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Number of non-native species in British Columbia

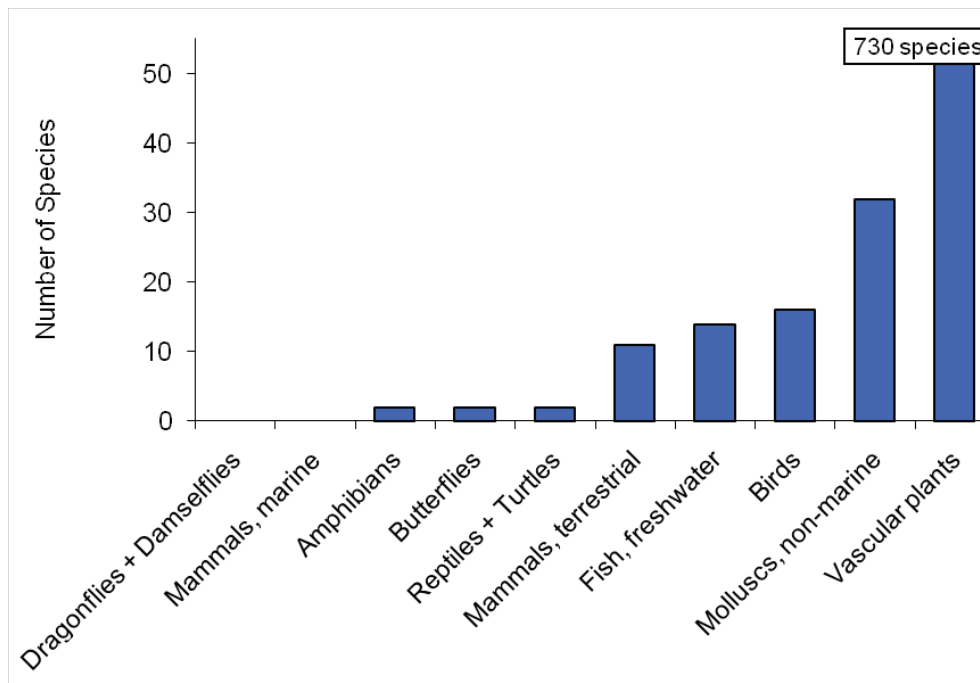
Non-native plants and animals (also known as 'alien' or 'exotic' species) live outside their natural range usually because they have been deliberately or accidentally introduced there by humans.

About 10% of non-native species become invasive, causing ecological damage and economic losses.

Provincial regions with the greatest increase in distribution of non-native species are those with the largest human population: Vancouver Island, Lower Mainland, Okanagan, and Kootenays.

- In 2007, 809 non-native species were recorded in B.C. This is nearly one-fifth of all species, native and non-native combined, in the province.
- More than 90% of these non-native species were vascular plants. Since 1994 the number of non-native plant species in B.C. has increased by 29%.

Non-native species recorded in B.C. in 2007



Source: Conservation Data Centre, 2007

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Recovery strategies for species at risk in British Columbia.

As a signatory to the 1996 Accord for the Protection of Species at Risk, British Columbia is committed to action that will enable Red-listed species to recover.

Recovery planning brings together species experts, interest groups, industry representatives, and other experts to work towards the welfare of a species.

- As of March 2007, recovery strategies were in progress or completed for 95% of BC's Red-listed species.
- Some of the earliest recovery plans in B.C. were developed for the marbled murrelet, the Vancouver Island marmot and a subspecies of peregrine falcon.
- Recovery efforts are also underway for commercial species such as rockfish. About 28 species of rockfish are caught commercially which are also vulnerable to over-fishing. Starting in 2003, designated Rockfish Conservation Areas now protect 20-30% of the total rockfish habitat on the coast.

Status of recovery strategies for B.C.'s Red-listed species

Total # of Red-listed species	Not yet started	In Process			Approved & published on <i>Species at Risk Act</i> registry
		Draft in preparation	Draft in Review	Update in progress	
140	7	48	42	7	36
(100%)	(5%)	(34%)	(42%)	(7%)	(26%)

Sources: COSEWIC; Ecosystem Branch, Ministry of Environment



Environmental Trends in British Columbia: 2007

Taking Action - What is being done?

Key Federal Initiatives

- Canada's *Species at Risk Act* (SARA) came into force in June 2004.
- The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) determines the conservation status of species in Canada.
- The Invasive Alien Species Strategy for Canada addresses threats from invasive plants and animals to Canada's wildlife, forests, fisheries, and resource sectors.
- Canada's Oceans Strategy was developed to understand and protect the marine environment, support sustainable development, and provide international leadership.

Other Initiatives

There are many other initiatives by international bodies, municipal governments, community groups, and volunteers. Here are just a few:

- Nature Canada and Bird Studies Canada
- Habitat Stewardship Program for Species at Risk
- B.C. Trust for Public Lands

Key B.C. Government Initiatives

- The B.C. Conservation Data Centre collects and provides information on plant, animals and ecosystems at risk in B.C.
- Strategic Land Use Planning identifies key areas for management and conservation.
- In 2004, 39 species (all previously listed by COSEWIC) were identified as Species at Risk under the Forest and Range Practices Act. Plans for forestry and range activities now require greater consideration of these species.
- The Mountain Caribou Recovery Implementation Plan, announced in 2007, aims to restore the mountain caribou population to pre-1995 levels.
- Biodiversity BC, a partnership of governments and non-governmental organizations, produced a report on the Status of Biodiversity in British Columbia in 2007, and is currently developing a Biodiversity Action Plan for 2009.

What can you do?

- Learn more about B.C.'s flora and fauna through local natural history societies or by visiting national, provincial, or regional parks.
- Encourage backyard biodiversity. Naturescape British Columbia provides information about how to restore, preserve, and enhance habitat in urban and rural landscapes and yards.
- Share your knowledge of and passion for biodiversity with friends, children, and co-workers.
- Get involved! Join a local advisory board, wildlife enhancement group, or community planning team. Support groups working on species at risk in British Columbia.
- Never move non-native species, such as fish, frogs, turtles, or problem wildlife to other areas and don't grow invasive plants in your garden. Remove invasive plants on your property.
- Be informed about sustainably-harvested and locally-grown food from the wild, including fish.
- Keep pets from roaming free: dogs, and especially cats, kill birds, snakes and other wildlife.
- Consider protecting your land for the future with conservation covenants or agreements.

For detailed information on these and other indicators, including an in-depth report [pdf], see the Environmental Trends in British Columbia: 2007 website:

<http://www.env.gov.bc.ca/soe/et07/>