COSEWIC Wildlife Species Assessments (detailed version), May 2025[1]

Results are grouped by taxon and then by status category. The range of occurrence in Canada (by province, territory or ocean) and history of status designation are provided for each wildlife species.

Birds

Snowy Owl

Scientific name: *Bubo scandiacus*

Status: Threatened

Assessment criteria: A2b+4b

Reason for designation: An estimated 90-95% of the North American population of this Arctic owl breeds in Canada. In 1995 the species was assessed by COSEWIC as Not at Risk because it was widespread, with no evidence of decline. Since then, improved estimation techniques have revised the population size downward by an order of magnitude. Data from the North American Christmas Bird Count (CBC), which capture trends in the southern portion of the wintering range, show a decline of 42.6% (2.3% annually) over the last 3 generations or 24 years. Indigenous knowledge from Baffin Island and the Yukon coast reports that this species is observed less frequently than before, likely due to warming conditions. Ongoing threats to the species include avian influenza, poisoning with anticoagulant rodenticides, collisions, electrocution, and, although specific impacts over the next three generations are uncertain, changes on breeding and wintering grounds brought about by climate change.

Range: YT, NT, NU, BC, AB, SK, MB, ON, QC, NB, NS, PE, NL

Status history: Designated Not at Risk in April 1995. Status re-examined and designated Threatened in May 2025.

Reptiles

Eastern Massasauga

Scientific name: *Sistrurus catenatus*

Status: Threatened

Assessment criteria: A2acd+3cd+4acd

Reason for designation: This rattlesnake consists of four subpopulations in Ontario, including Eastern Georgian Bay, Bruce Peninsula, Windsor, and Wainfleet. This species was previously assessed as two designatable units (DUs). However, based on the best and current evidence, snakes across the Canadian range were historically connected, and do not exhibit unique adaptations, so it was assessed as a single DU. All subpopulations are declining because of continued degradation and loss of habitat, increasing mortality on roads, and ongoing persecution of this venomous species. Human activity in the species' limited remaining range is intensifying, and the overall impact of current and future threats may lead to declines of greater than 30 percent over the species' next 25 years.

Range: ON

Status history: The species was considered a single unit and designated Threatened in April 1991.

[1] The assessment on Snapping Turtle (*Chelydra serpentina*) was deferred to incorporate additional information in the status report.

Status re-examined and confirmed in November 2002. Split into two populations in November 2012 (Carolinian population and Great Lakes / St. Lawrence population). The original designation was de-activated. In May 2025, the Carolinian population and the Great Lakes / St. Lawrence population were considered a single unit which was designated Threatened. The Carolinian population and Great Lakes / St. Lawrence population were de–activated.

Fishes

Pugnose Minnow

Scientific name: *Opsopoeodus emiliae*

Status: Endangered

Assessment criteria: B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

Reason for designation: This small fish is found in the extreme southwestern part of Ontario. It inhabits rivers and streams, and it is negatively affected by habitat alteration, increasing water temperature, drought, and pollution from nutrient and sediment loading. The revised status since the previous assessment of Threatened reflects the fact that, in the last 10 years, it has been found at only one of the 10 previous sites where it occurred, despite extensive search effort. Continuing declines are likely. This distinctive species is therefore at high risk of extirpation from Canada.

Range: ON

Status history: Designated Special Concern in April 1985. Status re-examined and confirmed in May 2000. Status re-examined and designated Threatened in May 2012. Status re-examined and designated Endangered in May 2025.

Bull Trout (Saskatchewan - Nelson Rivers population)

Scientific name: *Salvelinus confluentus*

Status: Threatened

Assessment criteria: B2ab(i,ii,iii,v)

Reason for designation: This large freshwater fish is broadly distributed east of the Rocky Mountains in southern Alberta. It is a slow-growing and late-maturing species that thrives in cold, pristine waters and often requires long, unimpeded migratory routes that connect spawning and adult habitats. Historical range contractions now limit the species to the foothills and east slopes of the Rocky Mountains, and there is evidence of continuing habitat deterioration and a decline in area of spawning habitat and number of mature individuals. The species is particularly vulnerable to negative effects from increases in water temperature, drought, fishing mortality, dams and water management activities, pollution, and competition and hybridization with non-native Brook Trout. If these threats cannot be mitigated, they could lead to this population becoming Endangered.

Range: AB

Status history: Designated Threatened in November 2012. Status re-examined and confirmed in May 2025.

Bull Trout (Pacific population)

Scientific name: *Salvelinus confluentus*

Status: Special Concern

Assessment criteria: Not applicable

Reason for designation: This large freshwater fish is broadly distributed throughout Pacific drainages in British Columbia. It is a slow-growing and late-maturing species that thrives in cold, pristine waters, and requires unimpeded migratory routes that connect spawning and adult habitats. Although never abundant, there are many dispersed sub-populations across this area. There is no evidence of overall decline in abundance of mature individuals or distribution, but the species is particularly vulnerable to negative effects from road development associated with forest harvesting and mining exploration, dams and water management activities, increases in water temperature, drought, fishing mortality, and pollution. The revised status reflects these increasing threats; if they are not reversed or managed effectively, this distinctive Canadian population could become Threatened.

Range: BC

Status history: Designated Not at Risk in November 2012. Status re-examined and designated Special Concern in May 2025.

Bull Trout (South Coast British Columbia population)

Scientific name: *Salvelinus confluentus*

Status: Special Concern

Assessment criteria: Not applicable

Reason for designation: This large freshwater fish is found in five river systems in southwestern British Columbia. It exhibits considerable diversity in life history traits, including a unique anadromous form that migrates to the sea. Although abundance is unknown for all areas, the total number of mature individuals is likely not high. This slow-growing and late-maturing species thrives in cold, pristine waters, and many sub-populations require long unimpeded migratory routes that connect spawning and adult habitats. The species is particularly vulnerable to negative effects from competition with non-native Brook Trout, fishing mortality, increases in water temperature, drought, and pollution, including sedimentation from forestry. This distinctive Canadian population could become Threatened if these threats are neither reversed nor managed effectively.

Range: BC

Status history: Designated Special Concern in November 2012. Status re-examined and confirmed in May 2025.

Bull Trout (Western Arctic population)

Scientific name: *Salvelinus confluentus*

Status: Special Concern

Assessment criteria: Not applicable

Reason for designation: This large freshwater fish is distributed throughout northeastern British Columbia, southern Yukon, southwestern Northwest Territories, and parts of Alberta. There is evidence of a decline in numbers and distribution for some areas, but quantitative estimates for the entire range are lacking. This slow-growing and late-maturing species thrives in cold, pristine waters, and many sub-populations require long unimpeded migratory routes that connect spawning and adult habitats. The species is particularly vulnerable to negative effects from dams and water management activities, increases in water temperature, drought, fishing mortality, and pollution. This distinctive Canadian population could become Threatened if these threats are neither reversed nor managed effectively.

Range: YT, NT, BC, AB

Status history: Designated Special Concern in November 2012. Status re-examined and confirmed in May 2025.

Greenland Shark

Scientific name: *Somniosus microcephalus*

Status: Special Concern

Assessment criteria: Not applicable

Reason for designation: This large, highly-mobile shark inhabits primarily northern waters throughout the Atlantic and Arctic oceans. It is caught incidentally in trawl, benthic longline, and gillnet fisheries, with estimates of at least 1700 sharks bycaught annually in Canada. The remarkably slow growth, late maturity (approximately 150 years), and longevity, make it vulnerable to overfishing. This species inhabits regions experiencing accelerated climate change, which may impact its distribution, fitness, and population dynamics.

Range: NU, QC, NB, NS, PE, NL, Arctic Ocean, Atlantic Ocean

Status history: Designated Special Concern in May 2025.

Bull Trout (Upper Yukon Watershed population)

Scientific name: *Salvelinus confluentus*

Status: Data Deficient

Assessment criteria: Not applicable

Reason for designation: This large freshwater fish is found in the upper Yukon River drainage in northern British Columbia and southern Yukon, but information on population sizes and trends is not available. This slow-growing and late-maturing species thrives in cold, pristine waters, and many sub-populations require long unimpeded migratory routes that connect spawning and adult habitats. The species is particularly vulnerable to habitat degradation and fishing mortality, but specific threats to this population are largely unknown.

Range: YT, BC

Status history: Species considered in November 2012 and placed in the Data Deficient category. Status re-examined and confirmed in May 2025.

Arthropods

Macropis Cuckoo Bee

Scientific name: *Epeoloides pilosulus*

Status: Data Deficient

Assessment criteria: Not applicable

Reason for designation: This very rare cuckoo bee lays its eggs in other bee nests and requires a specialized combination of its host bee (Macropis nuda), and the host's food plants (native oil-producing loosestrifes). Since the first status report, eight additional sites have been recorded, greatly expanding the species' known Canadian distribution. Based on the new information on distribution, there is substantial unsurveyed potential habitat for the cuckoo, host bee, and the host bee's food plants across Canada. It is no longer possible to make conclusions about the species' extent of occurrence, population size, threats, or trends. Thus, there was a change in status from Endangered to Data Deficient.

Range: AB, SK, MB, ON, QC, NB, NS

Status history: Designated Endangered in May 2011. Species considered in May 2025 and placed in the Data Deficient category.

Molluscs

Big-tooth Whitelip

Scientific name: *Neohelix dentifera*

Status: Endangered

Assessment criteria: B1ab(iii)+2ab(iii)

Reason for designation: In Canada, this large (2–2.5 cm shell diameter) land snail is known to occur in at least six sites within mature mixed-wood forest from Perth to south of Algonquin Provincial Park in southern Ontario. It is extirpated from the rest of its historical Canadian range, which extended south to Hamilton, around Ottawa, and eastward to Quebec City where it was found in large numbers in the 1890s. It typically lives near boulders on slopes and ravines but is also found under logs in thick leaf litter. The main threats are climate change (particularly droughts and changes in freeze-thaw cycles) and logging but it is also susceptible to ecosystem modifications from invasive species (including exotic earthworms and slugs) and wildfire. The species' restricted distribution, limited dispersal, low abundance at known sites, and continuing threats make it vulnerable to extirpation from Canada.

Range: ON, QC

Status history: Designated Endangered in May 2025.

Mosses

Roell's Brotherella Moss

Scientific name: *Brotherella roellii*

Status: Endangered

Assessment criteria: C2a(i); D1

Reason for designation: This moss is endemic to western North America, where all known existing subpopulations occur in the densely populated south-western mainland of British Columbia. Extensive sampling within and beyond this region has shown this species occurs only on hardwoods and rotten logs in riparian stands mostly within urban areas. At least 106 individuals have been identified from 30 known subpopulations. The species' life history characteristics increase the vulnerability of the small subpopulations to loss from climate change associated storms and droughts, as well as recreational use, road construction, and urban development, all of which also threaten habitat quantity and quality in terms of moisture levels and air quality.

Range: BC

Status history: Designated Endangered in November 2010. Status re-examined and confirmed in May 2025.

Lichens

Cupped Fringe Lichen

Scientific name: *Heterodermia hypoleuca*

Status: Endangered

Assessment criteria: A3bce+4abce; C2a(i)

Reason for designation: This rare arboreal lichen occurs in southern Canada in the provinces of Ontario, Quebec, and New Brunswick, and is closely associated with the alkaline bark of several broadleaf tree species, including ashes, elms, maples, and oaks. Ash trees in humid forests, its preferred habitat, are suffering from severe mortality associated with a non-native insect, the Emerald Ash Borer. As a result, there is a past and future decline of this lichen reducing the size of the population by more than 70% over the next three generations.

Range: ON, QC, NB

Status history: Designated Endangered in May 2025.

Echinodermata

Sunflower Sea Star

Scientific name: *Pycnopodia helianthoides*

Status: Endangered

Assessment criteria: A2be

Reason for designation: Historically found in the inshore waters along much of the Pacific Coast of North America, this is the world's largest sea star and the only member of its genus. The species was stricken by Sea Star Wasting Disease following abnormally high ocean temperatures during 2014–2015. Extensive diving survey data suggest a loss of over 75% of the Canadian population, with no evidence of recovery since 2015. The species is largely gone from the U.S. portion of its range to the south and Alaskan subpopulations to the north have also declined precipitously, limiting the possibility of rescue. Given these recent declines, continuing disease outbreaks and little potential for rescue, this species is Endangered and at risk of extirpation in Canada.

Range: BC, Pacific Ocean

Status history: Designated Endangered in May 2025.