COSEWIC Wildlife Species Assessments (detailed version), May 2019

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.

Mammals

Sei Whale ***Balaenoptera borealis*** **Endangered**

Atlantic population

Assessment Criteria A2cd

Reason for Designation
This large whale occurs off Nova Scotia, Newfoundland, and Labrador. The population was greatly reduced by whaling that ended in 1972. Systematic surveys of Canadian Atlantic waters in 2007 and 2016 recorded few animals. The current population is likely fewer than 1,000 mature individuals and below its size at the end of whaling. Major current threats include collisions with ships, and underwater noise, especially that associated with shipping and petroleum exploration and production.

Range Atlantic Ocean

Status History
Species considered in May 2003 and placed in the Data Deficient category. Re-examined in May 2019 and designated Endangered.

Vancouver Island Marmot ***Marmota vancouverensis*** **Endangered**

Assessment Criteria B2ab(v); C2a(i); D1; E

Reason for Designation
This endemic species is found only on Vancouver Island, British Columbia. Since the last assessment in 2008, the species has demonstrated a rapid population increase and then a subsequent decline; there are currently an estimated 88–101 mature animals in the wild. Ongoing predation remains high and there are potential threats from inbreeding and climate change. A successful captive-breeding program and resulting population supplementation has been reduced. A population viability analysis suggests that there is a high probability of extinction if there are extended periods of low adult survival, as observed during previous and most recent declines, and there are relatively few captive-bred animals introduced into the extant wild colonies.

Range BC

Status History
Designated Endangered in April 1978. Status re-examined and confirmed Endangered in April 1997, May 2000, April 2008, and May 2019.

Fin Whale ***Balaenoptera physalus*** **Special Concern**

Atlantic population

Assessment Criteria not applicable

Reason for Designation
Abundance of this species in the Canadian Atlantic was reduced by whaling during much of the 20th century. Although whaling in Canadian waters ended in 1972, it continues in Greenland and Iceland waters. Uncorrected abundance estimates from two large-scale surveys over Canadian continental shelf waters in 2007 and 2016 suggest slightly more than 1,500 mature individuals. Declining abundance has been documented in certain local areas, for example, in the Gulf of St. Lawrence, although there is no evidence that this applies to the overall Canadian population. This species faces a number of current threats including vessel strikes, entanglement in fishing gear, noise and general habitat degradation.

Range Atlantic Ocean

Status History
The species was considered a single unit and designated Special Concern in April 1987. Split into two populations (Atlantic and Pacific) in May 2005. The Atlantic population was designated Special Concern in May 2005. Status re-examined and confirmed in May 2019.

Fin Whale ***Balaenoptera physalus*** **Special Concern**

Pacific population

Assessment Criteria Met criterion for Threatened, A1d, but designated Special Concern due to strong increases in abundance in neighbouring US waters and likelihood of immigration from these adjacent areas.

Reason for Designation
The abundance of this large whale appears to be recovering from depletion due to industrial whaling, which ended in the mid-1970s. Current abundance estimates are less than 1000 mature individuals, but these do not include Canadian waters beyond the continental shelf where substantial numbers were sighted in a 2018 survey. Additionally, populations in neighbouring US waters are increasing and could augment the Canadian population. Individuals continue to be at risk mainly from vessel strikes and underwater noise from shipping.

Range Pacific Ocean

Status History
The species was considered a single unit and designated Special Concern in April 1987. Split into two populations (Atlantic and Pacific) in May 2005. The Pacific population was designated Threatened in May 2005. Status re-examined and designated Special Concern in May 2019.

Sowerby's Beaked Whale ***Mesoplodon bidens*** **Special Concern**

Assessment Criteria not applicable

Reason for Designation
This small beaked whale is endemic to the North Atlantic Ocean where it is found mainly in deep, offshore waters. Little is known about its biology, fine-scale distribution, and abundance. Anthropogenic noise in the ocean has been increasing over the past several decades. It belongs to a family of beaked whales in which acute exposure to intense sounds (especially from military sonar, but also from seismic operations) has led to serious injury and mortality. Seismic operations are currently widespread and have increased over deeper shelf edge and slope waters that comprise the habitat of this species. Military activities involving the use of mid- and low-frequency sonar also occur occasionally in the habitat of this species off Canada's East Coast. These whales are also vulnerable to vessel strikes and fishing gear entanglement.

Range Atlantic Ocean

Status History
Designated Special Concern in April 1989 and in November 2006. Status re-examined and confirmed in May 2019.

Birds

Hudsonian Godwit ***Limosa haemastica*** **Threatened**

Assessment Criteria A2b

Reason for Designation
This large Arctic-nesting shorebird is poorly monitored on its known breeding grounds in the Hudson Bay Lowlands, Mackenzie Delta, and Alaska. However, both migration monitoring and winter surveys indicate substantial population declines over the past two to three generations. Key threats include reduced suitability of nesting habitat and changes in prey availability arising from climate change, and overgrazing by abundant geese in the Hudson Bay Lowlands, as well as loss of habitat and disturbance on the wintering grounds in South America.

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

Status History
Designated Threatened in May 2019.

Fishes

Gravel Chub ***Erimystax x-punctatus*** **Extirpated**

Assessment Criteria not applicable

Reason for Designation
The historical Canadian range of this small minnow was originally a single watershed in southern Ontario. The most recent record for this species was in 1958 despite extensive, repeated sampling at known sites and other areas of suitable

habitat over the last 60 years. Natural recolonization by the species is not possible because there are no adjacent populations in the Great Lakes watershed.

Range ON

Status History
Last recorded in Thames River drainage, Ontario in 1958. Designated Endangered in April 1985. Status re-examined and designated Extirpated in April 1987. Status re-examined and confirmed in May 2000, April 2008, and May 2019.

Paddlefish ***Polyodon spathula*** **Extirpated**
Assessment Criteria not applicable

Reason for Designation
This fish, once found in the Great Lakes, was never common in the Canadian portion of its range. The species has not been observed in Canadian waters since the early 1900s despite extensive sampling and being a large distinctive fish that is easily recognizable.

Range ON

Status History
Disappeared from Canada in approximately 1917. Designated Extirpated in April 1987. Status re-examined and confirmed in May 2000, April 2008, and May 2019.

Shortfin Mako ***Isurus oxyrinchus*** **Endangered**
Atlantic population
Assessment Criteria A2bd

Reason for Designation
This wildlife species has a single highly migratory population in the North Atlantic, a portion of which is present seasonally in Canadian waters. The primary threat is considered to be bycatch in pelagic longline fisheries in the North Atlantic. The 2017 stock assessment indicates that the population is depleted and overfishing above sustainable levels is continuing. Life-history characteristics such as slow growth, late age of maturity and low reproductive rates mean that this shark species has relatively low productivity when compared to other shark species. Thus, the susceptibility to continued decline is considerable and once the population is depleted, the capacity to recover is limited.

Range QC NB PE NS NL Atlantic Ocean

Status History
Designated Threatened in April 2006. Status re-examined and designated Special Concern in April 2017. Status re-examined and designated Endangered in May 2019.

Arthropods

Frosted Elfin ***Callophrys irus*** **Extirpated**
Assessment Criteria not applicable

Reason for Designation
This butterfly occurred in one restricted area of oak savanna in southern Ontario. It was last recorded in 1988 and has not been seen since despite repeated surveys.

Range ON

Status History
Extirpated by 1988. Designated Extirpated in April 1999. Status re-examined and confirmed in May 2000, April 2010, and May 2019.

Karner Blue ***Plebejus samuelis*** **Extirpated**
Assessment Criteria not applicable

Reason for Designation
This butterfly occurred within a restricted range in oak savannah and woodland habitats in southern Ontario. Its population

decline and degradation of its habitat are well documented. The species has not been seen since 1991 despite ongoing search efforts.

Range ON

Status History
Has not been observed since 1991. Designated Extirpated in April 1997. Status re-examined and confirmed in May 2000, April 2010, and May 2019.

Vascular Plants

Columbia Quillwort ***Isoetes minima*** **Endangered**

Assessment Criteria B1ab(iii)+2ab(iii)

Reason for Designation
This relative of the ferns grows in thin, acidic substrate over steeply sloping bedrock. It occurs in spring ephemeral seepages in otherwise dry coniferous forest glades. A rare Pacific Northwest endemic, the species is known in Canada from four subpopulations in extreme southern British Columbia (Castlegar area), all of which have been discovered since 1996. As of 2017, there were 1,145 plants (1,019 mature) known in Canada. Reductions in habitat quality and quantity have resulted from recreational activities (specifically mountain biking), and from establishment of non-native plants, such as Spotted Knapweed. All Canadian sites are on Provincial Crown Land and where logging of surrounding areas and/or road building activity could change site hydrology with potential negative impacts on this species. Limited genetic diversity is expected in this population.

Range BC

Status History
Designated Endangered in May 2019.

Dwarf Hesperochiron ***Hesperochiron pumilus*** **Endangered**

Assessment Criteria B1ab(iii)+2ab(iii); C2a(i); D1

Reason for Designation
This small, perennial plant is restricted to seasonally wet montane forest openings at four sites in a small area of southeastern British Columbia. The total number of mature individuals is very small (under 200). All Canadian sites are on Provincial Crown Land and potentially subject to logging of surrounding areas and/or road building activity with subsequent changes to site hydrology. Negative impact on the thin substrate by mountain-biking activity has been noted close to one occurrence. Competition from non-native plants, most notably Spotted Knapweed, is the most significant threat expected to lead to habitat degradation over time. Drought and atypically intensive natural fire, as per climate-change projections, could potentially damage or eliminate one or more occurrences within three generations.

Range BC

Status History
Designated Endangered in May 2019.

Hairy Paintbrush ***Castilleja tenuis*** **Endangered**

Assessment Criteria B1ab(iii)+2ab(iii)

Reason for Designation
This delicate annual plant is a spring ephemeral of sparsely vegetated seepages over steeply sloping bedrock in otherwise dry coniferous forest glades. It is only known from one site in Canada. Competition from non-native plants, most notably Spotted Knapweed, is the most significant observable threat. Limited genetic diversity is expected within this isolated population. Potential exists for increased drought and natural fire (as per climate change projections) to damage or eliminate the population within three generations. As a hemiparasite, it is further threatened due to detrimental climate change impacts on its host.

Range BC

Status History
Designated Endangered in May 2019.

Goldenseal ***Hydrastis canadensis*** **Special Concern**

Assessment Criteria not applicable

Reason for Designation
Increased survey effort has resulted in the discovery of new subpopulations of this species since the last assessment. Although the number of mature individuals of this long-lived plant appears to be stable in recent decades, the remaining subpopulations remain subject to threats from deforestation, harvesting, and invasive species.

Range ON

Status History
Designated Threatened in April 1991. Status re-examined and confirmed in May 2000. Status re-examined and designated Special Concern in May 2019.

Mosses

Carey's Small Limestone Moss ***Seligeria careyana*** **Endangered**

Assessment Criteria B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(i); D1

Reason for Designation
This small moss is endemic to Canada, where it is known from three widely separated sites on Haida Gwaii, British Columbia. It is a narrow habitat specialist that occurs exclusively on shaded, pure limestone cliffs in areas of hypermaritime climate. This moss has small, fragile spores that severely limits its dispersal ability to new sites. Two of the subpopulations occur in protected areas but the habitat of the third is susceptible to quarrying. All three subpopulations will be affected by climate change, including drought, and at least one is vulnerable to tsunamis and can be expected to be flooded by future sea-level rise.

Range BC

Status History
Designated Endangered in May 2019.

Dalton's Moss ***Daltonia splachnoides*** **Endangered**

Assessment Criteria B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(i); D1

Reason for Designation
This small moss is known from three sites in North America. It occurs at one remote site in Canada in the hypermaritime temperate rainforests of Haida Gwaii, British Columbia, where it is an epiphyte on native shrubs and trees. It requires very wet conditions to survive. It is threatened by habitat loss and modification linked to climate change and to extreme browsing of understory shrubs by introduced, invasive Sitka Black-tailed Deer.

Range BC

Status History
Designated Endangered in May 2019.

Drooping-leaved Beard-moss ***Oxystegus recurvifolius*** **Endangered**

Assessment Criteria B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(i); D1

Reason for Designation
This moss has a very restricted distribution in Canada, where it is known from one extirpated subpopulation and four extant subpopulations on Haida Gwaii in British Columbia. The nearest population outside Canada is >2900 km away on Adak Island in the north Pacific Ocean. The species has a narrow physiological niche and grows only in extreme oceanic and highly humid climates. It is rare throughout its disjunct global range. Key threats to the species include climate change (particularly at high elevation), landslides, introduced invasive Sitka Black-tailed Deer, and logging. The species is not expected to adapt to predicted climate change, and migration in response to climate change is inhibited by the lack of effective means of reproduction and dispersal.

Range BC

Status History
Designated Endangered in May 2019.

Lichens

Cryptic Paw Lichen ***Nephroma occultum*** **Threatened**

Assessment Criteria A3c+4c

Reason for Designation

This leafy lichen is endemic to western North America. In Canada the total estimated population is approximately 12,000 individuals. The species has specific habitat requirements, growing in humid old coastal and interior cedar-hemlock forests that have depressions kept moist by input from groundwater. The lichen reproduces only by vegetative propagules with limited capability for dispersal. The species is threatened by habitat loss as a result of forest harvesting, and by climate change leading to altered patterns of winter precipitation and warmer drier summers that can enhance the frequency and severity of fires. The IUCN Threats assessment calculator result for this species was Very High to High.

Range BC

Status History

Designated Special Concern in April 1995 and in April 2006. Status re-examined and designated Threatened in May 2019.

White-rimmed Shingle Lichen ***Fuscopannaria leucosticta*** **Threatened**

Assessment Criteria A3c+4c

Reason for Designation

This rare lichen in Canada grows in wet forests of Nova Scotia, New Brunswick and Ontario, with three known subpopulations. The main threat to the species in Canada is logging of host trees Eastern White Cedar and Red Maple. As with other cyanolichens, this species is sensitive to atmospheric pollution in the form of acid rain and to climate change including more extreme weather events leading to blowdown of host trees. The decline in number of mature individuals observed over the past ten years is expected to continue, with about 45% of the population expected to be lost over the next three generations.

Range ON QC NB NS

Status History

Designated Threatened in May 2019.

03/05/2019