

COSEWIC Wildlife Species Assessments (detailed version), November 2020

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

Beluga Whale *Delphinapterus leucas* **Endangered**
Cumberland Sound population

Assessment Criteria A2bd+4bd; C1+2a(ii)

Reason for Designation

This is a small population with a restricted range, heavily reduced by commercial whaling in the past. While whales from this population continue to be harvested for subsistence, recent models suggest that reported removals are not sustainable. There are also concerns related to fishery removals of Greenland Halibut, a prey item for this population of belugas.

Range NU Arctic Ocean

Status History

The Southeast Baffin Island-Cumberland Sound population was designated Endangered in April 1990. In May 2004, the structure of the population was redefined: the Southeast Baffin Island animals (formerly part of the Southeast Baffin Island-Cumberland Sound population) were included as part of the "Western Hudson Bay population, 2004 designation". The newly defined "Cumberland Sound population" was designated Threatened in May 2004. Status re-examined and designated Endangered in November 2020.

Beluga Whale *Delphinapterus leucas* **Endangered**
Ungava Bay population

Assessment Criteria A2bd; D1

Reason for Designation

All signs indicate that the population residing in Ungava Bay remains very low and may be extinct. However, it is difficult to definitively conclude that none remain because whales from other populations may visit Ungava Bay during their migration. Unsustainable hunting caused the population decline and it continues in Ungava Bay, posing a threat to any remaining whales.

Range QC Arctic Ocean Atlantic Ocean

Status History

Designated Endangered in April 1988. Status re-examined and confirmed in May 2004 and November 2020.

Beluga Whale *Delphinapterus leucas* **Threatened**
Eastern Hudson Bay population

Assessment Criteria A1bd

Reason for Designation

The population has declined substantially (about 50%) since 1974 (i.e., over the last 2 generations). The population is still hunted for subsistence, and is at low numbers (ca. 2,600 mature individuals). While harvests have been reduced and the decline in abundance seems to have been halted, current harvest levels are a concern as the primary factor limiting population growth. Noise from increased vessel traffic, particularly in the overwintering areas of Hudson Strait and the Labrador Sea, related in part to declines in ice cover due to climate change, is also a concern.

Range NU QC NL Arctic Ocean Atlantic Ocean

Status History

Designated Threatened in April 1988. Status re-examined and designated Endangered in May 2004. Status re-examined and designated Threatened in November 2020.

Beluga Whale *Delphinapterus leucas* **Special Concern**
Eastern High Arctic - Baffin Bay population
Assessment Criteria not applicable

Reason for Designation

This population was overexploited in the past, with consequent substantial decline (probably >50%). However, harvests are now likely sustainable and the population appears to have stabilized and may be growing. There is concern that increased vessel traffic facilitated by climate change is changing the nature of the acoustic habitat of this population. The population may fit, or is close to fitting, the criteria for Threatened.

Range NU Arctic Ocean

Status History

Designated Special Concern in April 1992. Status re-examined and confirmed in May 2004 and November 2020.

Beluga Whale *Delphinapterus leucas* **Not at Risk**
Western Hudson Bay population
Assessment Criteria not applicable

Reason for Designation

There is good evidence that this population is large, robust, and not declining. However, there is concern about the potential effects of current and increasing ocean noise. Harvesting in Nunavut has been increasing but is currently sustainable.

Range NU MB ON QC NL Arctic Ocean Atlantic Ocean

Status History

The species was considered a single unit ("Western Hudson Bay population, original designation") and designated Special Concern in May 2004. Following the Designatable Unit report on Beluga Whale (COSEWIC 2016), a new population structure was proposed and accepted by COSEWIC; the original "Western Hudson Bay population, 2004 designation" was split into James Bay population and Western Hudson Bay population. The Western Hudson Bay population was designated Not at Risk in November 2020.

Beluga Whale *Delphinapterus leucas* **Not at Risk**
James Bay population
Assessment Criteria not applicable

Reason for Designation

The population is relatively large and appears robust. Current harvest levels are very small, there is little industrial activity within the range of the population, and there has been no new hydroelectric development in recent years. Animals from this population do not appear to undertake long-distance seasonal movements.

Range NU ON QC

Status History

The species was considered a single unit ("Western Hudson Bay population, original designation") and designated Special Concern in May 2004. Following the Designatable Unit report on Beluga Whale (COSEWIC 2016), a new population structure was proposed and accepted by COSEWIC; the original "Western Hudson Bay population, 2004 designation" was split into James Bay population and Western Hudson Bay population. The James Bay population was designated Not at Risk in November 2020.

Birds

Red Knot *rufa* subspecies *Calidris canutus rufa* **Endangered**
Southeastern USA / Gulf of Mexico / Caribbean wintering population
Assessment Criteria A2bc+4bc

Reason for Designation

This medium-sized shorebird breeds in the central Canadian Arctic and overwinters along the coasts of southeastern United States, Gulf of Mexico and islands in the Caribbean Sea. Migration and wintering surveys indicate that the population has experienced steep declines, in the range of 33-84% over three generations, with no evidence of recovery. The current population is estimated to be about 9300 mature individuals. During migration it congregates at a few key sites

on the eastern seaboard of the United States, making it vulnerable to threats from human harvesting of Horseshoe Crabs (whose eggs are an essential food source for northbound migrants) in Delaware Bay, disturbance and predation from recovering falcon populations, and disturbance from recreational activities. Risks from exposure to storms and severe weather during fall and winter may increase with climate change.

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

Status History

The species '*roselaari* type' was considered a single unit (which included three groups) and designated Threatened in April 2007. Based on the Designatable Unit report on Red Knot (COSEWIC 2019), a new population structure was proposed and accepted by COSEWIC; two groups previously assessed under the '*roselaari* type' were transferred to the *rufa* subspecies. The Southeastern USA / Gulf of Mexico / Caribbean wintering population of the *rufa* subspecies was designated Endangered in November 2020.

Red Knot *rufa* subspecies

Calidris canutus rufa

Endangered

Tierra del Fuego / Patagonia wintering population

Assessment Criteria A2bc+4bc

Reason for Designation

This medium-sized shorebird breeds in the central Canadian Arctic and overwinters in Tierra del Fuego at the southern tip of South America, with migratory round-trips of over 30,000 km each year. Annual winter surveys indicate that the population of about 7,500 mature individuals has declined by 73% over the past three generations. Habitat quality is declining in areas used for breeding, wintering, and migration. Population and habitat declines are anticipated to continue. The population congregates at a few key sites on migration on the east coasts of North and South America, and on the wintering grounds, making it highly vulnerable to threats. Threats include human harvesting of Horseshoe Crab (whose eggs are an essential food source for northbound migrants) in Delaware Bay, disturbance and predation from recovering falcon populations, oil development, and disturbance from recreational activities. Risks from exposure to storms and severe weather during very long trans-oceanic migratory flights may increase with climate change.

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

Status History

The *rufa* subspecies was considered a single unit (consisting solely of southern wintering birds from Tierra del Fuego/Patagonia) and designated Endangered in April 2007. Based on the Designatable Unit report on Red Knot (COSEWIC 2019), a new population structure was proposed and accepted by COSEWIC; two groups previously assessed under the '*roselaari* type' were transferred to the *rufa* subspecies (Northeastern South America wintering population, Southeastern USA / Gulf of Mexico / Caribbean wintering population). The Tierra del Fuego/Patagonia wintering population of the *rufa* subspecies was designated Endangered in November 2020.

Leach's Storm-Petrel

Oceanodroma leucorhoa

Threatened

Atlantic population

Assessment Criteria Meets criteria for Endangered, A2bce+4bce, but designated Threatened, A2bce+4bce, as the population remains widespread and abundant, and is thus not facing imminent extirpation.

Reason for Designation

This small, long-lived pelagic seabird has an extensive global range, nesting on offshore islands in disjunct populations in the North Atlantic and North Pacific Oceans. The Atlantic population nests in underground burrows at more than 80 colonies in eastern Canada. Birds often fly hundreds of kilometers from colonies to forage on tiny bioluminescent fish. This population overwinters in productive equatorial waters of the Atlantic Ocean, with some birds reaching waters off South Africa and Brazil. Surveys at eight major colonies indicate that the number of individuals has declined by 54% over the past three generations (44 years), and the rate of decline is increasing. Some Québec colonies have been lost in recent years, and expanding Atlantic Puffin colonies are displacing this species from preferred nesting habitat at several large colonies. Low adult survival related to higher predation rates by gulls appears to be a key demographic factor in the observed declines. These declines are expected to continue. Additional threats include changes in the food web of the northwest Atlantic, as well as offshore oil and gas production and attraction to human sources of light which cause collisions and stranding of young birds. Despite declines, the overall population remains large and widespread, with about 5 million mature individuals estimated to breed in Canada.

Range QC NB PE NS NL Atlantic Ocean

Status History

Designated Threatened in November 2020.

Lesser Yellowlegs

Tringa flavipes

Threatened

Assessment Criteria A2bcd+4bcd

Reason for Designation

This medium-sized shorebird has 80% of its breeding range in Canada's boreal region, migrates through the United States and Caribbean, and winters mostly in South America. It has experienced substantial long- and short-term declines, most recently estimated at 25% over three generations (12 years) based on the Breeding Bird Survey, and greater than 50% over 10 years based on International Shorebird Surveys. Declines are expected to continue. Key concerns include the loss of wetland and intertidal habitat used on migration and in winter, and hunting for sport and subsistence, which has been reduced in some areas but likely remains the most significant threat. Additionally, emerging threats from climate change include increased risk of drought in breeding areas, coastal flooding, and greater severity of hurricanes during fall migration.

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

Status History

Designated Threatened in November 2020.

Red Knot *roselaari* subspecies

Calidris canutus roselaari

Threatened

Assessment Criteria A2bc+4bc

Reason for Designation

This medium-sized shorebird breeds in northwestern Alaska and on Wrangel Island in the eastern Russian Arctic, overwintering on the Pacific coast of the Americas. The global population numbers about 22,000 mature individuals, most of which likely migrate through Canadian airspace, although only small numbers are recorded annually on coastal islands of British Columbia on spring migration and in winter. Migration and winter counts indicate a long-term population decline of 39-64% over three generations, although trend estimates have low precision. Habitat quality is declining in areas used throughout the year. Population and habitat declines are anticipated to continue. Individuals congregate at key sites on migration in Alaska, Washington, and California, making them vulnerable to localized threats. Threats include disturbance from recreational activities, coastal development, aquaculture, and shoreline stabilization, as well as over-fishing of grunion (small fish whose eggs are an important food source) in coastal Mexico. Exposure to storms and severe weather during long migratory flights may increase with climate change.

Range YT BC

Status History

The species '*roselaari* type' was considered a single unit (which included three groups) and designated Threatened in April 2007. Based on the Designatable Unit report on Red Knot (COSEWIC 2019), a new population structure was proposed and accepted by COSEWIC; two groups previously assessed under the '*roselaari* type' were transferred to the *rufa* subspecies (Northeastern South America wintering population, Southeastern USA / Gulf of Mexico / Caribbean wintering population). The remaining unit now includes only the *roselaari* subspecies. The *roselaari* subspecies was designated Threatened in November 2020.

Canada Warbler

Cardellina canadensis

Special Concern

Assessment Criteria not applicable

Reason for Designation

This small songbird has 80% of its breeding range in Canada and winters in the northern Andes Mountains. Breeding Bird Survey results show that the long-term decline of the Canadian population began to slow down in 2003 and that numbers have increased steadily since 2012, with an overall growth of 46% over the past decade. However, significant threats persist, most notably clearing of forests in South America for livestock farming and other agriculture. The revised status reflects the substantial improvement in population trend since the previous assessment of Threatened, but concern remains that the species is at risk of becoming Threatened again if threats are not managed effectively.

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

Status History

Designated Threatened in April 2008. Status re-examined and designated Special Concern in November 2020.

Red Knot *rufa* subspecies***Calidris canutus rufa*****Special Concern****Northeastern South America wintering population**Assessment Criteria not applicableReason for Designation

This medium-sized shorebird breeds in the central Canadian Arctic and migrates long distances to overwinter on the northeastern coast of South America, centred in northern coastal Brazil. Overall numbers appear to be stable, with an estimated wintering population of about 19,800 mature individuals. During migration, the population congregates at key sites on the eastern seaboard of the United States, where it is vulnerable to threats from human harvesting of Horseshoe Crab (whose eggs are an essential food source for northbound migrants) in Delaware Bay, disturbance and predation from recovering falcon populations, and disturbance from recreational activities. Risks from exposure to storms and severe weather during long migratory flights may increase with climate change.

Range NT NU AB SK MB ON QC NB PE NS NLStatus History

The species '*roselaari* type' was considered a single unit (which included three groups) and designated Threatened in April 2007. Based on the Designatable Unit report on Red Knot (COSEWIC 2019), a new population structure was proposed and accepted by COSEWIC; two groups previously assessed under the '*roselaari* type' were transferred to the *rufa* subspecies. The Northeastern South America wintering population of the *rufa* subspecies was designated Special Concern in November 2020.

Red Knot *islandica* subspecies***Calidris canutus islandica*****Not at Risk**Assessment Criteria not applicableReason for Designation

This medium-sized shorebird breeds in the northeastern Canadian High Arctic and migrates across the North Atlantic Ocean to overwinter in coastal Europe. About 120,000 birds breed in Canada and make up 40% of the global population. Winter surveys in Europe indicate that populations have been stable or fluctuating slightly over the past three generations. Individuals congregate at many sites in winter, where they may be exposed to threats such as disturbance and effects of shoreline stabilization. Risks from exposure to storms and severe weather during trans-oceanic migratory flights may increase with climate change. However, as past population declines have been halted, and former threats from shellfish harvesting in Europe are much reduced, the status of this population has improved since the last assessment.

Range NT NUStatus History

Designated Special Concern in April 2007. Status re-examined and designated Not at Risk in November 2020.

Fishes**Chinook Salmon*****Oncorhynchus tshawytscha*****Endangered****Lower Fraser, Ocean, Summer population**Assessment Criteria B2ab(iii,v); C2a(ii)Reason for Designation

Mature fish in this population return in summer and spawn at a single site (Maria Slough), in the lower Fraser River. A continuing decline in spawner abundance is expected as a result of highly modified freshwater and marine habitats, low marine survival and harvest. Failed water control structures and low water levels prevented spawners from accessing the spawning site in 2018. A continuing decline in water quality and quantity is expected due to increasing urbanization and run-off.

Range BC Pacific OceanStatus History

Designated Endangered in November 2020.

Chinook Salmon *Oncorhynchus tshawytscha* **Endangered**
South Thompson, Stream, Summer 1.3 population
Assessment Criteria C2a(ii)

Reason for Designation

Mature fish in this population migrate up the Fraser River in summer, through the Thompson River to spawn in major Shuswap Lake tributaries such as the Seymour, Eagle, Scotch and the Salmon rivers. The estimated number of remaining wild spawners is fewer than 2500 fish, and there is a projected continuing decline in numbers. Threats include decreased water levels (water withdrawal and changes in volume as a result on low marine survival, harvest, and timing of snow melt), agricultural runoff, pollution from transportation accidents, and highly-modified freshwater habitats. Such threats are accentuated due to a relatively long freshwater residence.

Range BC Pacific Ocean

Status History

Designated Endangered in November 2020.

Chinook Salmon *Oncorhynchus tshawytscha* **Endangered**
Lower Thompson, Stream, Spring population
Assessment Criteria A4bcde

Reason for Designation

Mature fish in this population migrate up the Fraser River in spring to the Thompson River and then into the Nicola, Deadman and Bonaparte rivers to spawn. Marine survival has been low since 2000. There has been a steep decline in the number of mature individuals from 2013 to 2018. This wildlife species faces a number of continuing and severe threats in its freshwater and marine habitat, including post Pine Beetle deforestation, short and long-term effects from wildfires (the large Elephant Hill fire occurred here in 2018), habitat destabilization, and climate-change induced disruption to water quality. Agriculture water withdrawal is substantial and ongoing.

Range BC Pacific Ocean

Status History

Designated Endangered in November 2020.

Chinook Salmon *Oncorhynchus tshawytscha* **Endangered**
East Vancouver Island, Ocean, Summer population
Assessment Criteria C2a(ii)

Reason for Designation

Mature fish in this population return in summer to spawn in the upper reaches of rivers draining the east side of Vancouver Island, from the Koksilah River in the south to the Puntledge River in the north. According to a consensus of expert opinion, fewer than 1000 wild spawners remain in this population. Exploitation rates are relatively high (about 40%), and marine survival estimates have been low for many years. Additional threats include ecosystem modifications (dam construction and channelization) and drought. The contribution of fish from hatcheries confounds the determination of population trends; hatchery-origin spawners may be a continued threat through direct competition and gene flow.

Range BC Pacific Ocean

Status History

Designated Endangered in November 2020.

Northern Brook Lamprey *Ichthyomyzon fossor* **Endangered**
Saskatchewan - Nelson River populations
Assessment Criteria B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

Reason for Designation

This small, nonparasitic lamprey has a very limited distribution in the Winnipeg River watershed in southeastern Manitoba. The number of mature individuals is declining based on observed reductions in extent of occurrence, area of occupancy, and number of locations, and an inferred decline in quantity and quality of aquatic habitat. These populations are exposed to threats, such as decreases in stream flows under current and future climates, and are very susceptible to anticipated increases in water temperature. Substantial recent targeted sampling, using both conventional methods and

environmental DNA (sampling water to confirm presence of DNA from the species), now provides sufficient data to conclude that this species is at risk of extinction.

Range MB

Status History

The species was considered a single unit and designated Special Concern in April 1991. When the species was split into separate units in April 2007, the "Saskatchewan-Nelson population" unit was designated Data Deficient. Status re-examined and designated Endangered in November 2020.

Steelhead Trout

Oncorhynchus mykiss

Endangered

Thompson River population

Assessment Criteria A2bcde+3bcde+4bcde; B2ab(iii,v); C1+2a(i,ii); D1

Reason for Designation

This population is among the longest migrating anadromous trout in Canada. It migrates from the headwaters of the Thompson River to the Bering Sea, returning after two years to swim up the Fraser River in the fall. Within the Thompson River watershed, this population is culturally significant and was an economic and food resource for Secwépemc and Nl̓eʔkpmx communities for thousands of years. Dramatic population declines over the last three generations are largely a consequence of declining habitat quality and reduced survival rates while at sea, due to factors such as interception by fisheries, competition from hatchery fish, and possible predation from pinnipeds. The returning numbers of spawners are now very low and future population reductions are expected.

Range BC Pacific Ocean

Status History

Designated Endangered in an emergency assessment conducted on January 10, 2018. Status re-examined and confirmed in November 2020.

Steelhead Trout

Oncorhynchus mykiss

Endangered

Chilcotin River population

Assessment Criteria A2bcde+3bcde+4bcde; B2ab(iii,v); C1+2a(i,ii); D1

Reason for Designation

This population is among the longest migrating anadromous trout in Canada. It migrates from the headwaters of the Chilcotin River to the Bering Sea, returning after two years to swim up the Fraser River in the fall. Within the Chilcotin River watershed, this population is culturally significant and was an important economic and food resource for Tsilhqot'in communities for thousands of years. Dramatic population declines over the last three generations are largely a consequence of declining habitat quality and reduced survival rates while at sea, due to factors such as interception by fisheries, competition from hatchery fish, and possible predation from pinnipeds. Landslides such as occurred recently at Big Bar can also cause rapid declines for this population. The returning numbers of spawners are now very low and future population reductions are expected.

Range BC Pacific Ocean

Status History

Designated Endangered in an emergency assessment conducted on January 10, 2018. Status re-examined and confirmed in November 2020.

Chinook Salmon

Oncorhynchus tshawytscha

Threatened

Southern Mainland Boundary Bay, Ocean, Fall population

Assessment Criteria D1

Reason for Designation

Mature fish in this population spawn in tributaries to Boundary Bay such as the Serpentine, Nicomekl and Little Campbell rivers, in southern British Columbia. This wildlife species occurs in highly altered freshwater and marine habitats. Ongoing low marine survival, bycatch, and fish culture effects are cumulative threats to the remaining wild fish. Hatchery releases are ongoing and have included fish from other populations, threatening the genetic integrity of the few remaining wild fish. While hatchery production has allowed the total population size to increase, a consensus of expert opinion estimates fewer than 1000 mature wild fish remain.

Range BC Pacific Ocean

Status History

Designated Threatened in November 2020.

Chinook Salmon

Oncorhynchus tshawytscha

Threatened

West Vancouver Island, Ocean, Fall (South) population

Assessment Criteria C2a(ii)

Reason for Designation

Mature fish in this population return in fall to spawn at a large number of sites in rivers along the south west coast of Vancouver Island including the Nahmint, San Juan, Somass-Sproat, Nitinat, and Sarita Rivers. Survey information is available for many spawning locations, and while the overall trends are unclear, <10,000 wild adults are thought to remain. Large-scale hatcheries operating with the aim of augmenting production has resulted in straying of hatchery-origin spawners throughout the range. Such straying likely compromises the genetic composition of spawners and therefore represents a continuing threat to the wildlife species. Other threats include ecosystem modifications (primarily due to slides and sedimentation from forestry) and aquaculture of Atlantic Salmon, all of which are inferred to result in a future decline in numbers of wild fish.

Range BC Pacific Ocean

Status History

Designated Threatened in November 2020.

Chinook Salmon

Oncorhynchus tshawytscha

Threatened

West Vancouver Island, Ocean, Fall (Nootka & Kyuquot) population

Assessment Criteria C2a(ii)

Reason for Designation

Mature fish in this population return in fall to the remote Nootka and Kyuquot Sounds on the west coast of Vancouver Island. They spawn in larger rivers such as the Conuma, Gold, Tahsish, and Zeballos Rivers. While this wildlife species spawns at a large number of sites, with survey information being available from many spawning areas, population trends are most likely heavily influenced by hatchery releases aimed to augment natural production. Straying of hatchery-origin spawners has been documented throughout the range and is expected to continue, likely compromising the genetic composition of wild spawners. Other threats include long-term effects from forestry, mainly slides and sedimentation.

Range BC Pacific Ocean

Status History

Designated Threatened in November 2020.

Yelloweye Rockfish

Sebastes ruberrimus

Threatened

Pacific Ocean outside waters population

Assessment Criteria Meets criteria for Endangered, A2bd+4bd, but designated Threatened, A2bd+4bd, because the species is not at risk of imminent extirpation.

Reason for Designation

This marine fish is an important component of most nearshore rocky reef waters on the Pacific coast of British Columbia, outside the Strait of Georgia. This population is important to the commercial and recreational fisheries, and it is culturally significant for Aboriginal communities. New analyses since the last assessment determined that the population has declined dramatically over the last 100 years and indicate the conservation risk is greater than previously assessed. Due to its relatively slow growth, late age of maturity, and territorial behaviour, this population is slow to recover once depleted. However, the population is not regarded to be in imminent danger of extinction because survey data indicates the population has been stable for 20 years (0.5 generation) and current exploitation levels are considered sustainable. Ongoing threats from pervasive ecosystem modifications and climate change remain.

Range BC Pacific Ocean

Status History

Designated Special Concern in November 2008. Status re-examined and designated Threatened in November 2020.

Yelloweye Rockfish***Sebastes ruberrimus*****Threatened****Pacific Ocean inside waters population**

Assessment Criteria Meets criteria for Endangered, A2bd+4bd, but designated Threatened, A2bd+4bd, because the species is not at risk of imminent extirpation.

Reason for Designation

This marine fish is an important component of near shore rocky reef waters within the Strait of Georgia on the west coast of British Columbia. This population is important to commercial and recreational fisheries, and it is culturally significant for Aboriginal communities. New analyses since the last assessment determined that the population has declined dramatically over the last 100 years and indicate the conservation risk is greater than previously assessed. Due to its relatively slow growth, late age of maturity, and territorial behaviour, this population is slow to recover once depleted. However, the population is not in imminent danger of extinction because survey data indicate the population has been stable for 20 years (0.5 generation), population abundance is near sustainable levels, and long-term projections are stable. Ongoing threats from pervasive ecosystem modifications and climate change remain.

Range BC Pacific Ocean

Status History

Designated Special Concern in November 2008. Status re-examined and designated Threatened in November 2020.

Chinook Salmon***Oncorhynchus tshawytscha*****Special Concern****East Vancouver Island, Ocean, Fall population**

Assessment Criteria not applicable

Reason for Designation

Mature fish in this population return in fall to the east side of Vancouver Island to spawn in multiple rivers from the Goldstream near Victoria north to Campbell River. Five of the six watersheds within the range of this wildlife species are mostly inhabited by hatchery-origin fish. While the overall abundance in the single remaining watershed is increasing, several large-scale hatcheries aim to augment production within the other watersheds and straying could pose threats from competition and gene flow to the remaining wild fish. Other threats include low marine survival, relatively high exploitation rates, ecosystem modifications and water management/use. This wildlife species could become Threatened if these factors are not properly managed.

Range BC Pacific Ocean

Status History

Designated Special Concern in November 2020.

Northern Brook Lamprey***Ichthyomyzon fossor*****Special Concern****Great Lakes - Upper St. Lawrence populations**

Assessment Criteria not applicable

Reason for Designation

This small, nonparasitic lamprey is found in streams throughout the Laurentian Great Lakes basin and in southwestern Québec. In the Great Lakes basin, most of its Canadian range, about half of the streams it is known to inhabit are subjected to ongoing chemical treatment for Sea Lamprey control, which causes significant mortality to larval lampreys. Barriers that exclude Sea Lamprey protect this species from exposure to lampricides in upper reaches of many tributaries, and it is still relatively abundant in untreated streams. The overall population is not known to be declining currently. However, it may be exposed to additional threats such as pollution from agricultural effluents and increased temperatures and decreased water flows related to climate change and water control structures. If these threats are not managed effectively, this species may become at greater risk of extinction.

Range ON QC

Status History

The species was considered a single unit and designated Special Concern in April 1991. When the species was split into separate units in April 2007, the "Great Lakes - Upper St Lawrence populations" unit was designated Special Concern. Status re-examined and confirmed in November 2020.

Silver Lamprey *Ichthyomyzon unicuspis* **Special Concern**
Great Lakes - Upper St. Lawrence populations
Assessment Criteria not applicable

Reason for Designation

This small parasitic lamprey is distributed in streams and lakes throughout the Laurentian Great Lakes basin and in southern Québec. In the Great Lakes basin, a major part of its range, about half of the streams that it inhabits have barriers, or are subjected to ongoing chemical treatment for Sea Lamprey control. These control methods prevent migration to spawning areas or cause significant mortality to larval individuals, respectively. Throughout its range, it may be exposed to additional threats such as pollution from agricultural effluents, effects of water control structures, and increased temperatures and decreased water flows related to climate change. If these threats are not managed effectively, this species may become at greater risk of extinction.

Range ON QC

Status History

Designated Special Concern in May 2011. Status re-examined and confirmed in November 2020.

Silver Lamprey *Ichthyomyzon unicuspis* **Special Concern**
Saskatchewan - Nelson River populations
Assessment Criteria not applicable

Reason for Designation

This small parasitic lamprey is found in widely disjunct, but limited, areas in streams and lakes in the Nelson and Winnipeg River basins of Manitoba and northwestern Ontario. The species is susceptible to fluctuating water levels as a result of water management and climate change. Recent sampling using conventional methods and environmental DNA (sampling water to confirm presence of DNA from the species) now provide sufficient data to conclude that populations of this species may be declining and may become at greater risk of extinction if these threats are not managed effectively.

Range MB ON

Status History

Species considered in May 2011 and placed in the Data Deficient category. Status re-examined and designated Special Concern in November 2020.

Chinook Salmon *Oncorhynchus tshawytscha* **Not at Risk**
East Vancouver Island, Ocean, Fall (EVI + SFj) population
Assessment Criteria not applicable

Reason for Designation

Mature fish in this population return in fall to spawn in rivers which drain the eastern slope of Vancouver Island's coastal mountain ridge, such as the Adam, Quinsam, Nimpkish, Salmon and Campbell Rivers. While the population faces a number of threats including competition and gene flow from hatchery production, indices of abundance suggest increasing numbers.

Range BC Pacific Ocean

Status History

Designated Not at Risk in November 2020.

Chinook Salmon *Oncorhynchus tshawytscha* **Data Deficient**
West Vancouver Island, Ocean, Fall (WVI + WQCI) population
Assessment Criteria not applicable

Reason for Designation

Mature fish in this population return in fall to the remote watersheds on the west coast of Vancouver Island, north of the Brooks Peninsula. Adults return to spawn at a number of larger rivers, such as the Goodspeed, Marble, and Klaskish Rivers. Juvenile smolt enter Quatsino Sound after a brief residency in fresh water. While this wildlife species is known to spawn at a number of sites, survey information is available from only one site. This single monitoring site is heavily enhanced by hatchery releases and likely does not represent the entire population. Data are too few to assess status.

Range BC Pacific Ocean

Status History

Species considered in November 2020 and placed in the Data Deficient category.

Chinook Salmon

Oncorhynchus tshawytscha

Data Deficient

South Coast - Southern Fjords, Ocean, Fall population

Assessment Criteria not applicable

Reason for Designation

Mature fish in this population return in the fall to the fjords of the Phillips Arm and Bute Inlet near Johnstone Strait in southern BC. Spawners migrate to the remote habitats of the Phillips, Franklin, Orford, and other rivers. While some survey information exists, coverage is incomplete and changes in methodology make it difficult to interpret trends in abundance or recent numbers of mature individuals. Data are too few to assess status.

Range BC Pacific Ocean

Status History

Species considered in November 2020 and placed in the Data Deficient category.

Chinook Salmon

Oncorhynchus tshawytscha

Data Deficient

South Coast - Georgia Strait, Ocean, Fall population

Assessment Criteria not applicable

Reason for Designation

Mature fish in this population return in the fall to rivers flowing into the south coast inlets of the Salish Sea between Burrard inlet near Vancouver and Toba Inlet to the north. Abundance trend information is available for only two of 19 sites within the range of this relatively remote and poorly documented wildlife species. While these show a stable trend from 2005 to 2018, spawning is thought to occur elsewhere in the northern area. Data are too few to determine status.

Range BC Pacific Ocean

Status History

Species considered in November 2020 and placed in the Data Deficient category.

Silver Lamprey

Ichthyomyzon unicuspis

Data Deficient

Southern Hudson Bay - James Bay populations

Assessment Criteria not applicable

Reason for Designation

This small parasitic lamprey has only recently been confirmed as present in the Southern Hudson Bay-James Bay basin based on the two specimens found on angled Northern Pike in the upper Hayes River system of northern Manitoba. There is insufficient information with which to assess the eligibility and status of this species in this system.

Range MB

Status History

Species considered in November 2020 and placed in the Data Deficient category.

Arthropods

Davis's Shieldback

Atlanticus davis

Threatened

Assessment Criteria B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)

Reason for Designation

This flightless katydid is found only in six small areas of the sand barren and oak savannah habitats of the Norfolk Sand Plain in southwestern Ontario, where it occurs with other rare species of conservation concern such as Fern-leaved Yellow False-foxglove and Virginia Goat's-rue. The Canadian population is estimated at fewer than 1500 mature individuals. The species has presumably declined over the past 150 years due to the over 90% reduction of dry oak woodland, savannah, and sand barren habitats in southern Ontario. This species depends on fire-maintained ecological communities, and the quality and quantity of this habitat have declined as a result of fire-suppression, forest succession, afforestation efforts, and invasive species. These threats continue with one site likely extirpated as a result of land clearing as recently as 2020.

Range ON

Status History

Designated Threatened in November 2020.

Aweme Borer

Papaipema aweme

Data Deficient

Assessment Criteria not applicable

Reason for Designation

Until 2009, this moth was known from only a few sites in Canada. Misinterpreted habitat associations and assumptions with known collection sites led to many years of searching inaccurate habitats. In 2015, Bog Buckbean (*Menyanthes trifoliata*) was confirmed as the larval host plant, the moth's primary habitat narrowed to fens or peatlands with quaking mats, and it was learned that the larvae live inside the stem, making detection difficult. New records from east-central Saskatchewan to the Ottawa Valley in Ontario, extended the geographic range of the species, suggesting the species is likely more common and widespread than previously understood. However, there is much unsurveyed suitable habitat within the moth's range. The population size and trends are unknown. Given these unknowns its status has changed from Endangered to Data Deficient.

Range SK MB ON

Status History

Designated Endangered in April 2006. Species considered in November 2020 and placed in the Data Deficient category.

Vascular Plants

Maleberry

Lyonia ligustrina

Endangered

Assessment Criteria D1

Reason for Designation

This colonial deciduous shrub is part of a disjunct assemblage of Atlantic Coastal Plain flora. It is known from a single lakeshore site in a protected area in southern Nova Scotia separated by more than 245 km from the next nearest site across the Gulf of Maine. The Canadian population appears stable, but its very small size (approx. 33 mature individuals) and extremely local distribution (612 m²) place it at risk. Although immediate threats are low, this population faces potential threats from off-road vehicle activity and invasive Glossy Buckthorn.

Range NS

Status History

Designated Endangered in November 2020.

Deerberry

Vaccinium stamineum

Threatened

Assessment Criteria Meets criteria for Endangered, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v), but designated Threatened, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v), because the species is not at risk of imminent extirpation.

Reason for Designation

This long-lived shrub is found in Canada only in the Niagara and Thousand Islands regions of Ontario, at the northern edge of its range. Restoration and management efforts have resulted in a new subpopulation at Thousand Islands National Park. Other remaining subpopulations are currently threatened by shading (caused by fire suppression) and browsing by White-tailed Deer. One subpopulation is currently very small and not expected to persist. While meeting criteria for Endangered, this species was designated Threatened because four of the five extant subpopulations are protected through conservation stewardship and management actions in recent years that have benefited the species. The long-term persistence of this species depends on continued conservation efforts.

Range ON

Status History

Designated Threatened in April 1994. Status re-examined and confirmed in November 2000 and November 2020.

Green-scaled Willow

Salix chlorolepis

Threatened

Assessment Criteria D1

Reason for Designation

This long-lived dwarf endemic shrub has a generation time of over 30 years. It occurs exclusively in snowbeds on alpine serpentine outcrops of Mount Albert in Parc national de la Gaspésie, Quebec. The entire population is considered to have

fewer than 500 mature individuals. Continued searches have not revealed additional subpopulations. The population is probably stable at present, but may decline in the future as a result of climate change (particularly due to more frequent or prolonged droughts and increased temperatures).

Range QC

Status History

Designated Threatened in April 2006. Status re-examined and confirmed in November 2020.

15/02/2021