

COSEWIC Wildlife Species Assessments (detailed version), December 2021*

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

Black-footed Ferret *Mustela nigripes* **Extirpated**
Assessment Criteria not applicable

Reason for Designation

This is the only ferret species native to North America. Disease and the persecution of its primary prey, Black-tailed Prairie Dog, resulted in the extirpation of ferret from Canada. Captive-bred ferrets were released from 2009 to 2012 in Grasslands National Park, Saskatchewan. Prior to those efforts, this species was last observed in 1937. Insufficient prey resulted in suspension of the release program in 2013, and intensive monitoring has revealed no observations of ferret since then. Although the species is still held in captivity, it no longer occurs in the wild in Canada.

Range AB SK

Status History

Extirpated by 1974. Designated Extirpated in April 1978. Status re-examined and confirmed in May 2000, April 2009, and December 2021.

Birds

Greater Prairie-Chicken *Tympanuchus cupido pinnatus* **Extirpated**
Assessment Criteria not applicable

Reason for Designation

This grassland bird formerly occurred in mixed and tallgrass prairie habitat in parts of Alberta, Saskatchewan, Manitoba, and Ontario, but has not been observed in Canada since 1987. Although it persists in the Great Plains of the United States, it is rare and declining in the states bordering Canada, making immigration from there unlikely. Key threats to re-establishment of the species in Canada are loss and degradation of habitat from agricultural expansion and fire suppression, and hybridization with Sharp-tailed Grouse.

Range AB SK MB ON

Status History

Last reported in 1987. Designated Endangered in April 1978. Status re-examined and designated Extirpated in April 1990. Status re-examined and confirmed in May 2000, November 2009, and December 2021.

Greater Sage-Grouse *phaios* subspecies *Centrocercus urophasianus phaios* **Extirpated**
Assessment Criteria not applicable

Reason for Designation

Historically this large grouse had a restricted distribution in Canada, occurring only in British Columbia's Okanagan Valley, where it was last observed in the 1960s. It persists in small numbers in the United States, including a rare and declining population in Washington State. The species is dependent on sagebrush-dominated landscapes, which have been substantially degraded and reduced in extent in both Canada and the adjacent United States.

Range BC

Status History

Has not been reported since the 1960s. Designated Extirpated in April 1997. Status re-examined and confirmed in May 2000, April 2008, and December 2021.

Greater Sage-Grouse *urophasianus* subspecies

Centrocercus urophasianus urophasianus

Endangered

Assessment Criteria D1

Reason for Designation

In Canada, this large grouse is restricted to sagebrush-dominated landscapes in southern Alberta and Saskatchewan. The loss, fragmentation and degradation of this habitat as a result of oil and gas exploration, overgrazing by livestock, and conversion to crops has resulted in a substantial population decline over the past several decades. Trend estimates over the past three generations are imprecise, but monitoring efforts indicate further abandonment of some historically occupied breeding sites. Despite recovery efforts, the Canadian population remains small, with a current estimate of only 120 to 200 mature individuals. There may be limited immigration from Montana, but the numbers are likely insufficient to substantially increase the Canadian population.

Range AB SK

Status History

Given conditional designation of Threatened in April 1997. Status re-examined and designated Endangered in April 1998 based on a revised status report. Status re-examined and confirmed in May 2000, April 2008, and December 2021.

Mountain Plover

Charadrius montanus

Endangered

Assessment Criteria D1

Reason for Designation

This shorebird of shortgrass prairies reaches the northern limits of its breeding distribution in extreme southern Alberta and Saskatchewan. It has become exceedingly rare in Canada, with no observations since 2012, although small numbers may persist in areas with little survey effort. Historically, the population is believed to have declined primarily as a result of habitat loss from agricultural intensification and fire suppression. Temperature extremes and changes to habitat related to climate change are also of concern. Immigration from outside Canada is unlikely, because the nearest potential source population in Montana is also small and declining.

Range AB SK

Status History

Designated Endangered in April 1987. Status re-examined and confirmed in November 2000, November 2009, and December 2021.

Sage Thrasher

Oreoscoptes montanus

Endangered

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

Reason for Designation

This songbird is restricted to small areas of southern British Columbia, Alberta, and Saskatchewan, where it is closely associated with remnant sagebrush grasslands. Its distribution and abundance in Canada appear to have been stable over the past decade, but the population remains very small, with an estimated total of 7 to 36 mature individuals. Immigration from small and declining subpopulations in Washington and Montana is likely insufficient to increase the Canadian population. Loss of sagebrush-dominated habitat to residential development, agricultural development, and fire is believed to have resulted in population declines. Climate change presents a growing concern.

Range BC AB SK

Status History

Designated Endangered in April 1992. Status re-examined and confirmed in November 2000, November 2010, and December 2021.

Reptiles

Sharp-tailed Snake

Contia tenuis

Endangered

Coast Mountains population

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

Reason for Designation

The Canadian distribution of this tiny snake is confined to a small area of the Pemberton Valley in the southwestern interior of British Columbia. First documented in 2011, this population represents the only confirmed occurrence of the

species in mainland Canada. The population is thought to be small (~345 mature individuals, based on extrapolation from Vancouver Island densities), although no accurate estimates are available. Since this population was documented, its habitat has declined due to ongoing urban development. Other threats include off-trail recreation, gravel extraction, habitat fragmentation by roads, and storms and flooding associated with climate change. Small population size, restricted distribution, and inferred and projected continuing population decline from multiple threats contributed to the Endangered status.

Range BC

Status History

Designated Endangered in December 2021.

Eastern Foxsnake

Pantherophis vulpinus

Threatened

Carolinian population

Assessment Criteria A2cd+3cd+4cd

Reason for Designation

This large, non-venomous snake is confined to a few small disjunct areas of southwestern Ontario within a landscape subjected to intensive agriculture and urbanization and crisscrossed by a network of roads. New information since the last assessment includes better understanding of population genetic structure, abundance, and habitat use, and clarification of threats. Aggregation of snakes at hibernation sites increases their vulnerability to natural catastrophes and human disturbance. Long seasonal migrations to and from these sites place them at particular risk from road mortality. The number of mature individuals is expected to continue to decline as a result of road mortality and other threats, including storms and flooding associated with climate change. A better understanding of the snake's distribution and re-evaluation of the degree of population fragmentation contributed to the change in status from Endangered to Threatened.

Range ON

Status History

The species was considered a single unit and designated Threatened in April 1999 and May 2000. Split into two populations in April 2008. The Carolinian population was designated Endangered in April 2008. Status re-examined and designated Threatened in December 2021.

Eastern Foxsnake

Pantherophis vulpinus

Threatened

Great Lakes / St. Lawrence population

Assessment Criteria C2a(i)

Reason for Designation

This large, non-venomous snake is restricted to the eastern shoreline of Georgian Bay, where it reaches the northern limits of its distribution. Population size is small, most likely less than 2000 mature individuals, but further sampling of historical sites is required. Large aggregations of snakes at hibernation sites increase their vulnerability to natural catastrophes and human disturbance. Long seasonal migrations to and from these sites place them at particular risk from road mortality. A better understanding of the snake's distribution and re-evaluation of the degree of population fragmentation contributed to the change in status from Endangered to Threatened.

Range ON

Status History

The species was considered a single unit and designated Threatened in April 1999 and May 2000. Split into two populations in April 2008. The Great Lakes / St. Lawrence population was designated Endangered in April 2008. Status re-examined and designated Threatened in December 2021.

Sharp-tailed Snake

Contia tenuis

Threatened

Pacific Coast population

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

Reason for Designation

The Canadian distribution of this tiny snake is confined to a small area in southeastern Vancouver Island and the southern Gulf Islands of British Columbia. Increased search effort since the last assessment has resulted in the documenting of five previously unrecorded subpopulations, extending the known range. The number of mature individuals is thought to be ~12,000. These snakes continue to face threats from introduced species, ongoing development, off-trail recreation, habitat fragmentation by roads, and increasing droughts associated with climate change. The explosive growth of the introduced

invasive Common Wall Lizard in recent years is of concern; these lizards may prey on eggs and hatchling snakes and have the potential to eliminate or greatly reduce some subpopulations in the near future. Re-evaluation of the degree of population fragmentation and better understanding of the snakes' distribution and abundance contributed to the change in status from Endangered to Threatened.

Range BC

Status History

Designated Endangered in April 1999. Status re-examined and confirmed in October 1999 and November 2009. Status re-examined and designated Threatened in December 2021.

Amphibians

Northern Leopard Frog

Lithobates pipiens

Endangered

Rocky Mountain population

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

Reason for Designation

The Canadian distribution of this frog is restricted to a small area of south-central British Columbia, where a single natural population exists within the Creston Valley Wildlife Management Area. Since the previous assessment, increased search efforts have extended the frog's known range by approximately 1.5-2.5 km. Habitat restoration and seasonal road closures have been undertaken to mitigate threats. Reintroductions have continued at two sites (Upper Kootenay Floodplain and Columbia Marshes) but are not yet self-sustaining. Restricted range and small population size (estimated at fewer than 50 mature individuals), together with declining habitat quality and ongoing cumulative high impact threats from disease, introduced American Bullfrogs, and road mortality, contributed to the retention of Endangered status.

Range BC

Status History

Designated Endangered in April 1998. Status re-examined and confirmed in May 2000, April 2009, and in December 2021.

Fishes

Sockeye Salmon

Oncorhynchus nerka

Extinct

North Barriere-ES population (original)

Assessment Criteria not applicable

Reason for Designation

This population spawned and reared upstream from the 1913 Hell's Gate landslide and was considered eliminated by a dam in the North Barriere watershed that was constructed in 1914 and removed in 1952. More than 50 years have passed since the last credible record of the wildlife species.

Range BC Pacific Ocean

Status History

Designated Extinct in December 2021.

Sockeye Salmon

Oncorhynchus nerka

Extinct

Seton-S population (original)

Assessment Criteria not applicable

Reason for Designation

This population spawned and reared upstream from the 1913 Hell's Gate landslide. Several factors led to its demise in the early 1900s including poor hatchery techniques, the Hell's Gate rockslide, and water diversion in 1934 from the Bridge River to Seton Lake that reduced primary productivity in the lake and its capacity to rear this species. More than 50 years have passed since the last credible record of the wildlife species.

Range BC Pacific Ocean

Status History

Designated Extinct in December 2021.

Sockeye Salmon *Oncorhynchus nerka* **Extinct**

Adams-ES population (original)

Assessment Criteria not applicable

Reason for Designation

This population spawned in the upper Adams River, upstream from the 1913 Hell's Gate landslide. It was considered eliminated by a splash dam at the outlet of Adams Lake that operated between 1908 to 1921 and lacked a fish passage mechanism for upriver migration. Subsequent translocation programs from other populations would have eliminated remnant surviving fish via genetic replacement. Fish currently returning to the Upper Adams River have not been evaluated to determine whether they are a new population or part of another nearby population.

Range BC Pacific Ocean

Status History

Designated Extinct in December 2021.

Sockeye Salmon *Oncorhynchus nerka* **Endangered**

Momich-ES population (original)

Assessment Criteria A2bcde; B2ab(iii,v); C2a(i,ii); D1

Reason for Designation

This population spawns upstream from the 1913 Hell's Gate landslide and a splash dam that was operational from 1908 to 1921. It is culturally significant to Indigenous communities and a key ecosystem component. Mature fish in this population return to spawn in the Momich River / Cayenne Creek and juveniles rear in the Momich Lake watershed of British Columbia. This small population faces a number of threats, including declining habitat quality both in marine and freshwater environments, and incidental mortality from Pacific Salmon fisheries. The population has been declining since 2000 and is now at its lowest level since 1985.

Range BC Pacific Ocean

Status History

Designated Endangered in December 2021.

Sockeye Salmon *Oncorhynchus nerka* **Endangered**

Fraser-ES population (original)

Assessment Criteria D1

Reason for Designation

Mature fish in this population returned to spawn in Endako River and Ormonde Creek that flow into the Fraser Lake, British Columbia. This population is upstream from the 1913 Hell's Gate landslide and the 2018 Big Bar landslide. Sockeye have not been seen in Ormonde Creek since 1976, nor in Endako River since 1991, despite two surveys in 1992 and 2000, and Chinook Salmon surveys in late summer from 2001 to the present. Sockeye returning during these surveys would likely have been seen if they were present. Although likely extinct, fewer than 50 years have passed since the last credible record, and so the wildlife species is still considered Endangered.

Range BC Pacific Ocean

Status History

Designated Endangered in December 2021.

Sockeye Salmon *Oncorhynchus nerka* **Special Concern**

Coquitlam-ES population (original)

Assessment Criteria not applicable

Reason for Designation

Sockeye are a key component of the Coquitlam ecosystem and are culturally significant to Indigenous communities. Historically fully anadromous, this population's ability to migrate to the ocean and return to spawning areas was cut-off by the construction of a dam in 1914 that created the Coquitlam Reservoir. Since dam construction, the population (approximately 14,000 mature individuals) has retained its anadromous capability and has lived entirely in the reservoir. An ecosystem restoration and water management program allowing fish passage to the ocean started in 2005 and anadromous returns started 2 years later. Since 2007, zero to 9 mature anadromous individuals have annually returned.

The ocean migrants face a number of threats common to sockeye, including declining habitat quality and incidental mortality from Pacific Salmon fisheries. The ecosystem restoration and water management program that enables ocean migration is required to allow expression of the anadromous life history and the loss of this expression will increase the extinction risk of this anadromous population.

Range BC Pacific Ocean

Status History

Designated Special Concern in December 2021.

Sockeye Salmon

Oncorhynchus nerka

Special Concern

Alouette-ES population (original)

Assessment Criteria not applicable

Reason for Designation

Sockeye are a key component of the Alouette ecosystem and are culturally significant to Indigenous communities. Historically fully anadromous, this population's ability to migrate to the ocean and return to spawning areas was cut-off by the construction of the hydroelectric dam in 1926 that created the Alouette Reservoir. Since dam construction, the population (currently 20,000 - 33,000 mature individuals) has retained its anadromous capability and has lived entirely in the reservoir. An ecosystem restoration and water management program allowing fish passage to the ocean started in 2005 and returns started 2 years later. Since 2007, zero to 103 mature anadromous individuals have annually returned. The ocean migrants face a number of threats common to sockeye, including declining habitat quality and incidental mortality from Pacific Salmon fisheries. The ecosystem restoration and water management program that enables ocean migration is required to allow expression of the anadromous life history and the loss of this expression will increase the extinction risk of this anadromous population.

Range BC Pacific Ocean

Status History

Designated Special Concern in December 2021.

Molluscs

Dwarf Wedgemussel

Alasmidonta heterodon

Extirpated

Assessment Criteria not applicable

Reason for Designation

This freshwater mussel was previously known in Canada from only the Petitcodiac River drainage in New Brunswick. It disappeared after construction of a causeway across the river in 1967/68, presumably because of the loss of the host fishes which are required for completion of the mussel species life cycle. The species has not been found since, despite intensive systematic searches of its former habitat. The causeway has been partially removed, and is no longer fully blocking access to the river for the host fishes. Some host fishes have been observed in the river but the mussel remains Extirpated in Canada.

Range NB

Status History

Extirpated by 1968. Designated Extirpated in April 1999. Status re-examined and confirmed in May 2000, November 2009, and December 2021.

Mosses

Incurved Grizzled Moss

Ptychomitrium incurvum

Extirpated

Assessment Criteria not applicable

Reason for Designation

This small moss is widely distributed in the eastern deciduous forests of North America but is rare throughout the northern portion of its range. In Canada, it was only known from one occurrence in southern Ontario, documented in 1825. Despite many years of botanical activity in the region, the species has never been rediscovered.

Range ON

Status History

Designated Extirpated in November 2002. Status re-examined and confirmed in May 2012 and December 2021.

*The review of classification of the Northern Leopard Frog (*Lithobates pipiens*), Western Boreal/Prairie populations, was completed. This report was deferred to allow further consideration of the Designatable Unit structure.

01/12/2021