

## COSEWIC Wildlife Species Assessments (detailed version), November 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

**Western Harvest Mouse *dychei* subspecies**

*Reithrodontomys megalotis dychei*

**Endangered**

Assessment Criteria B1b(v)c(iv)+2b(v)c(iv)

Reason for Designation

This tiny mouse occurs at the northern edge of its distribution at the Suffield National Wildlife Area in southeastern Alberta, and is one of two designatable units of the species in Canada. It is among Canada's shortest-lived mammals. Populations monitored in the United States suggest extreme fluctuations in the number of mature individuals. These fluctuations increase the vulnerability of the species to disturbances, when numbers are low in spring and early summer. Although comprehensive data describing population abundance and trends are lacking, existing capture data suggest a decline in the number of mature individuals since 2011. That decline in the species' small range and extreme fluctuations in abundance are the reasons for designation. Climate change, including the possibility of more frequent wildfires and intense drought, is an increasing future threat.

Range AB

Status History

Species considered in April 1994 and placed in the Data Deficient category. Re-examined in April 2007 and designated Endangered. Status re-examined and confirmed in November 2019.

**Western Harvest Mouse *megalotis* subspecies**

*Reithrodontomys megalotis megalotis*

**Endangered**

Assessment Criteria B1b(iii)c(iv)+2b(iii)c(iv)

Reason for Designation

This tiny mouse occurs at the northern edge of its distribution within the Okanagan and Similkameen valleys of British Columbia, and is one of two designatable units of the species in Canada. It is among Canada's shortest-lived mammals. This species demonstrates extreme fluctuations in the number of mature individuals over time, increasing vulnerability to disturbances when populations are at a low in spring and early summer. The species' limited distribution, extreme fluctuations, and habitat loss are the reasons for designation. Change in status from Special Concern to Endangered is the result of inclusion of extreme fluctuations in the latest assessment. Continued urban and agricultural expansion threaten the persistence of this mouse.

Range BC

Status History

Designated Special Concern in April 1994 and in April 2007. Status re-examined and designated Endangered in November 2019.

**Ringed Seal**

*Pusa hispida*

**Special Concern**

Assessment Criteria not applicable

Reason for Designation

This small seal needs sea ice to thrive. It is wide-ranging and is the most abundant marine mammal in the Canadian Arctic. It is an important species for Inuit and is the primary prey of Polar Bear. Its population levels and trends are uncertain, although the total population is about 2 million individuals. Aboriginal Traditional Knowledge from local communities across the species' range suggests that its population status varies regionally, but is generally considered stable. Reductions in the area and duration of sea ice due to climate warming in the Canadian Arctic, with consequent reductions in suitable pupping habitat due to loss of stable ice and a lower spring snow depth, are the primary threats to this species. The Canadian population is predicted to decline over the next three generations, and may become Threatened due to extensive and ongoing changes in sea ice and snow cover in a rapidly-warming Arctic.

Range YT NT NU MB ON QC NB PE NS NL Pacific Ocean Arctic Ocean Atlantic Ocean

Status History

Designated Not at Risk in April 1989. Status re-examined and designated Special Concern in November 2019.

## **Birds**

**Chestnut-collared Longspur**

*Calcarius ornatus*

**Endangered**

Assessment Criteria A2bc+4bc

Reason for Designation

This striking grassland songbird is only found on North America's Great Plains. It has experienced a population decline of more than 50% over the past decade, and about 95% since 1970. The Canadian breeding range has contracted to the south and west since the 1970s. The primary threat is degradation and fragmentation of native grasslands, especially through conversion to agriculture. Ongoing loss of habitat in the core wintering region of northern Mexico is currently believed to be of greatest concern, but declines in habitat extent and quality are also an issue in Canada, where grassland parcels of at least 40 hectares are generally required for breeding.

Range AB SK MB

Status History

Designated Threatened in November 2009. Status re-examined and designated Endangered in November 2019.

## **Reptiles**

**Plains Hog-nosed Snake**

*Heterodon nasicus*

**Special Concern**

Assessment Criteria not applicable

Reason for Designation

This large prairie snake, distinguished by its prominent upturned snout, belongs to a suite of grassland species restricted to the arid interior of North America. It has a widespread but patchy distribution in southern Alberta, Saskatchewan and Manitoba. Habitat loss is mostly historical, but conversion of grasslands to more intensive agricultural uses continues. The current population size is probably under 10,000 mature individuals, but robust estimates are lacking. Recent population trends are unknown, but continuing decline is suspected based on threats. These include ongoing habitat loss, fragmentation and degradation from agriculture, fire suppression, energy development, and road mortality. The species is near to meeting criteria for Threatened status and could continue to decline if threats are not effectively managed.

Range AB SK MB

Status History

Designated Special Concern in November 2019.

## **Amphibians**

**Great Basin Spadefoot**

*Spea intermontana*

**Threatened**

Assessment Criteria B2b(iii,v)c(iv)

Reason for Designation

This toad-like amphibian is one of a suite of grassland and open woodland species restricted to the arid southern interior of British Columbia. It prefers to breed in temporary waterbodies, and requires terrestrial habitats with loose, friable soils for refuge from freezing and drought. Frequent widespread droughts in this area result in highly variable breeding success and recruitment among years, causing populations to fluctuate greatly. Current population size likely exceeds 10,000 mature individuals, although robust estimates are lacking. Recent population trends are unknown, but a continuing decline in number of mature individuals is inferred and projected, based on threats from road mortality, pollution of breeding sites, reduction in water tables associated with increasingly severe and frequent droughts, and agriculture. The species is designated Threatened based on its restricted area of occupancy, extreme fluctuations in number of mature individuals, an inferred and projected decline in number of mature individuals, and an observed, inferred, and projected continuing decline in extent and quality of habitat.

Range BC

Status History

Designated Special Concern in April 1998. Status re-examined and designated Threatened in November 2001, April 2007, and November 2019.

## **Fishes**

**Striped Bass**

*Morone saxatilis*

**Extinct**

**St. Lawrence River population**

Assessment Criteria not applicable

Reason for Designation

This large-bodied fish was a highly prized commercial and sport fish in the St. Lawrence River. This population was one of three in Canada. Unlike the other two populations that still exist, fish from the St. Lawrence River population have not been caught since 1968 despite extensive scientific, recreational and commercial sampling. In 2002, fish from another population (originating from the Miramichi River) began to be stocked in the St. Lawrence River and, as the key historical threats in the St. Lawrence River had decreased, these fish established a self-reproducing population there. Because these newly-established fish were from another population, they are not considered to be part of the original St. Lawrence River population. The original St. Lawrence River population no longer exists.

Range QC

Status History

Designated Extirpated in November 2004. Status re-examined and designated Endangered in November 2012. Status re-examined and designated Extinct in November 2019.

**Coastrange Sculpin**

*Cottus aleuticus*

**Endangered**

**Cultus Lake population**

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

Reason for Designation

This small-bodied freshwater fish is found in a single lake that drains into the lower Fraser River, in southwestern British Columbia. This area is undergoing increasing urbanization and recreational use. Every night, this unique population migrates from the lake bottom toward the lake surface to feed. A recent introduction of an exotic predator, Smallmouth Bass, is a serious concern to the long term persistence of the sculpin. The species is also threatened by the cumulative impacts of aquatic invasive species, water pollution (eutrophication) and climate change. These threats reduce sculpin habitat by reducing oxygen in deep waters, and reducing surface water habitat due to increased predation from Smallmouth Bass.

Range BC

Status History

Designated Special Concern in April 1997. Status re-examined and designated Threatened in November 2000 and in April 2010. Status re-examined and designated Endangered in November 2019.

**Rocky Mountain Sculpin**

*Cottus* sp.

**Threatened**

**Saskatchewan - Nelson River populations**

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

Reason for Designation

This small freshwater fish has a very restricted area of occurrence in the St. Mary River in southern Alberta, where it has been impacted by invasive species, habitat loss, and degradation from water diversion. These conditions have been exacerbated in recent years by drought conditions likely exacerbated by climate change and water management activities. While meeting criteria for Endangered, this species was designated Threatened because the primary threats are not likely to lead to extirpation in the short term.

Range AB

Status History

The species was considered a single population unit (Eastslope populations) and designated Threatened in November 2005. When the species was split into separate units in November 2019, the "Saskatchewan - Nelson River populations" unit was designated Threatened.

**Rocky Mountain Sculpin** *Cottus sp.* **Threatened**  
**Missouri River populations**

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

Reason for Designation

This small freshwater fish has a very restricted area of occurrence in the Milk and North Milk Rivers in southern Alberta, where it has been impacted by invasive species, habitat loss, and degradation from water diversion. These conditions have been exacerbated in recent years by drought conditions likely related to climate change and water management activities. While meeting criteria for Endangered, this species was designated Threatened because the primary threats are not likely to lead to extirpation in the short term.

Range AB

Status History

The species was considered a single population unit (Eastslope populations) and designated Threatened in November 2005. When the species was split into separate units in November 2019, the "Missouri River populations" unit was designated Threatened.

**Columbia Sculpin** *Cottus hubbsi* **Special Concern**

Assessment Criteria not applicable

Reason for Designation

This small freshwater fish is endemic to the Columbia River watershed in southern British Columbia where it has a small geographic distribution. It is a bottom-dwelling and sedentary fish as an adult, affected by multiple past impacts and ongoing threats. It is particularly susceptible to declines in habitat area and quality from drought and changes in water flow resulting from water management and climate change, in addition to pollution and invasive species. It may become Threatened if factors suspected of negatively influencing the persistence of this fish are neither reversed or managed with effectiveness.

Range BC

Status History

Designated Special Concern in May 2000. Status re-examined and confirmed in November 2010 and November 2019.

**Rocky Mountain Sculpin** *Cottus sp.* **Special Concern**  
**Pacific populations**

Assessment Criteria not applicable

Reason for Designation

This small freshwater fish is restricted to a small number of streams within the Flathead River basin in southeastern British Columbia. It is sedentary as an adult and is susceptible to habitat degradation and sediment inputs from forest fires, road building and use, off-road activities, and droughts and warming temperatures due to climate change. It may qualify for Threatened if factors suspected of negatively impacting the species' persistence are not effectively managed.

Range BC

Status History

Designated Special Concern in April 2010. Population name changed to Pacific populations in November 2019; status re-examined and confirmed as Special Concern.

## Arthropods

**Reversed Haploa Moth** *Haploa reversa* **Endangered**

Assessment Criteria B2ab(iii,v)

Reason for Designation

This rare moth is restricted to four areas of southwestern Ontario, which are considered separate subpopulations (Lambton County, Norfolk County, London, and Essex County). It has only been detected in proximity to oak savanna, oak woodland and dunes. In Ontario, up to 98% of oak savanna has been lost and remaining oak woodlands are small and fragmented. The quality of remaining habitat continues to decline as a result of fire suppression and invasive plants. Other

potential threats include insecticide spraying during Gypsy Moth outbreaks which kills both the pest and the caterpillars of this moth.

Range ON

Status History

Designated Endangered in November 2019.

**Suckley's Cuckoo Bumble Bee**

*Bombus suckleyi*

**Threatened**

Assessment Criteria A2bce

Reason for Designation

This bumble bee is a nest parasite of other bumble bees and depends on its hosts to rear its young. It is found in all provinces and territories except Nunavut. It is more frequent in the west than in the east and always much less frequent than its hosts. Despite significantly increased search effort for bumble bees in Canada over the last two decades, fewer individuals of this species have been encountered than in the past. There has been a decline of more than 30% in relative abundance compared to all bumble bees (indicating a population decline) and a decline in area of occupancy. The decline has been particularly severe in areas where the species was historically more frequent, in British Columbia and Alberta. The primary threat is the steep decline of the host bumble bee species, again in British Columbia and Alberta. The major threats to the hosts are the escape of pathogen-infected bumble bees from managed colonies in commercial greenhouses, pesticide use (particularly neonicotinoids), and climate change.

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

Status History

Designated Threatened in November 2019.

**Manitoba Oakworm Moth**

*Anisota manitobensis*

**Special Concern**

Assessment Criteria not applicable

Reason for Designation

This large moth has a small global distribution, most of which is in Canada, and restricted to a small area in southern Manitoba and the adjacent United States. Localized population irruptions occurred irregularly through the 1900s, but their frequency declined and the last one was in 1997; no individuals have been detected since 2000. Threats are primarily related to declines of Bur Oak, its larval host plant. Bur Oak is susceptible to secondary diseases, especially when compounded with anthropogenic and environmental stress. Other threats include fire suppression, deer browsing and subsequent invasive plant incursion, and insecticides targeting pest moths, all of which contribute cumulatively to ongoing decline in Bur Oak health and subsequent loss or reduction of habitat. Bur Oak woodlands are fragmented throughout their range in Manitoba, and subpopulations of this moth are perhaps even more fragmented because of their limited dispersal ability, and its larval preference for younger Bur Oak. This species may actually be Threatened, but data are currently insufficient to assess whether it meets thresholds for status criteria.

Range MB

Status History

Designated Special Concern in November 2019.

## **Molluscs**

**Shagreen**

*Inflectarius inflectus*

**Endangered**

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

Reason for Designation

This medium-sized terrestrial snail occurs in the Carolinian zone of southwestern Ontario, where it exists near the northern extremity of its global range. Historically, it is known from two sites in mainland Ontario and five islands in Lake Erie. It is currently known to persist only on two islands, where it inhabits rocky or open woods and can be found clustering under logs or rocks, and in leaf litter. Suitable Canadian habitat has experienced historical loss and degradation, and continuing habitat fragmentation is problematic for this species due to its low dispersal ability. The species is threatened by climate change (extreme temperatures, droughts, and flooding), prescribed burns, and invasive species.

Range ON

Status History

Designated Endangered in November 2019.

**Toothed Globe**

*Mesodon zaletus*

**Endangered**

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

Reason for Designation

In Canada, this large terrestrial snail is near the northernmost extent of its global range in southern Ontario. The species is known from islands in Lake Erie and from Essex and Middlesex counties on the mainland. It is likely extirpated from six of nine known sites. Although the species has not been observed alive since 1994, it may still occur at the remaining three inaccessible sites where suitable habitat still exists. Main threats include increased droughts and flooding associated with climate change, invasive species, and pollution.

Range ON

Status History

Designated Endangered in November 2019.

**Carolina Mantleslug**

*Philomycus carolinianus*

**Threatened**

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

Reason for Designation

In Canada, this large terrestrial slug inhabits undisturbed older-growth forests and riparian areas in the Carolinian Forest Region of Ontario, near the northern limit of its global range. The earliest reliable records (1994, 1995) are from two mainland sites in southwestern Ontario and Pelee Island. Recent searches have confirmed only a small number of additional sites within this small range. Suitable habitat in Canada has experienced historical loss and degradation, and continuing habitat fragmentation is problematic because this species has low dispersal ability. The species is threatened by climate change (extreme temperatures, droughts, and flooding), prescribed burns, and invasive species.

Range ON

Status History

Designated Threatened in November 2019.

## **Vascular Plants**

**Gillman's Goldenrod**

*Solidago gillmanii*

**Endangered**

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

Reason for Designation

This perennial plant species is a Great Lakes endemic now found in Canada only on one island off the south shore of Manitoulin Island in Lake Huron. The species is threatened by habitat disturbance caused by invasive plants.

Range ON

Status History

Designated Endangered in November 2019.

**Puvirnituk Mountain Draba**

*Draba puvirnitukii*

**Special Concern**

Assessment Criteria not applicable

Reason for Designation

The entire global distribution of this small, perennial mustard plant is restricted to two small sites on a rare type of igneous rock rubble on the tundra of Nunavik, in Northern Québec. Its known range occupies less than 13 km<sup>2</sup>. Although there are too few data to determine trends, the population size of this species is undoubtedly very small, estimated to be less than 1000 individuals. Habitat changes associated with climate change are potential threats.

Range QC

Status History

Designated Special Concern in November 2019.

## **Mosses**

**Slender Yoke-moss**

*Zygodon gracilis*

**Endangered**

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

### Reason for Designation

In North America, this moss is confined to a single location on Haida Gwaii, British Columbia. The extremely small population occurs on a one square-metre patch of limestone cliff face near the ocean. Imminent threats to the species are the proliferation of young, dense woody vegetation adjacent to the cliff, exerting both direct (increased shade and moisture) and indirect (overgrowth by cyanobacteria) effects on the population. Other important threats include altered precipitation patterns, droughts and temperature extremes associated with climate change, quarrying of the high-quality Sadler limestone on which the species grows, and stochastic events such as inundation by tsunamis.

Range BC

### Status History

Designated Endangered in November 2019.

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