

COSEWIC
Rapid Review of Classification

on the

Incurved Grizzled Moss
Ptychomitrium incurvum

in Canada

EXTIRPATED
2021

COSEWIC
Committee on the Status
of Endangered Wildlife
in Canada



COSEPAC
Comité sur la situation
des espèces en péril
au Canada

The Rapid Review of Classification process is used by COSEWIC for Wildlife Species that have not changed status since the previous COSEWIC assessment. Readily available information from the previous status report or status appraisal summary, recovery documents, recovery teams, jurisdictions, conservation data centres, and species experts was initially reviewed by the relevant Species Specialist Subcommittees before being reviewed by COSEWIC. The following is a summary of the relevant information.

COSEWIC Rapid Review of Classification are working documents used in assigning the status of wildlife species suspected of being at risk in Canada. This document may be cited as follows:

COSEWIC. 2021. COSEWIC Rapid Review of Classification on the Incurved Grizzled Moss *Ptychomitrium incurvum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix pp. (<https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>).

Production note:

COSEWIC acknowledges Jennifer Doubt for writing the rapid review of classification on the Incurved Grizzled Moss, *Ptychomitrium incurvum*, in Canada, prepared under contract with Environment and Climate Change Canada. This rapid review of classification was overseen and edited by René Belland, Co-chair of the COSEWIC Mosses and Lichens Species Specialist Subcommittee.

For additional copies contact:

COSEWIC Secretariat
c/o Canadian Wildlife Service
Environment and Climate Change Canada
Ottawa, ON
K1A 0H3

Tel.: 819-938-4125

Fax: 819-938-3984

E-mail: ec.cosepac-cosewic.ec@canada.ca
www.cosewic.ca

Également disponible en français sous le titre Examen rapide de la classification du COSEPAC sur la Ptychomitre à feuilles incurvées (*Ptychomitrium incurvum*) au Canada.

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COSEWIC Assessment Summary

Assessment Summary – November 2021

Common name

Incurved Grizzled Moss

Scientific name

Ptychomitrium incurvum

Status

Extirpated

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.

Occurrence

Ontario

Status history

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



COSEWIC Rapid Review of Classification

PREFACE

Since Incurved Grizzled Moss (*Ptychomitrium incurvum*) was last assessed (COSEWIC 2012), digitization has advanced in herbarium collections worldwide. Furthermore, the citizen science platform iNaturalist has facilitated sharing species occurrences, and connecting bryology enthusiasts who might otherwise not have been aware of each other's work. Despite this improved data access, no Canadian specimens of Incurved Grizzled Moss have surfaced other than the one – from Thomas Drummond in 1825* – upon which the species' Canadian presence is based.

Three reportedly-Canadian specimens other than Drummond's (a single collection with many widely-distributed duplicates, in the form of an exsiccata) appeared in the Global Biodiversity Information Facility (GBIF 2021a) at the time of this Rapid Review of Classification:

1. CHR-B-0003838, from western Ontario, was borrowed in November 2018 and was determined by J. Doubt to represent a different taxon.
2. TENN-B-0028814, from British Columbia appears to have been mis-transcribed: it is databased as *Grimmia muehlenbergii*, which is a synonym of *Ptychomitrium incurvum*, but the label reads *Grimmia muehlenbeckii*, which is a distinct, accepted taxon in a different family.
3. E00049071 is a data entry error. The label information clearly shows that it was collected in the United States, but the search results suggest it came from Canada..

A few new occurrences of Incurved Grizzled Moss have been documented in the northeastern United States over the past 10 years, showing that it is still extant – if rare – in the northern part of its historical North American range.

Status History:

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

* Although 1828 is mentioned in previous versions of the Reasons for Designation, that is the time of reporting rather than the date of collection.

Updated Map:

Not required, as there are no recent changes in distribution in Canada; see previous assessment (COSEWIC 2012)

TECHNICAL SUMMARY

Pychomitrium incurvum

Incurved Grizzled Moss

Ptychomitre à feuilles incurvées

Range of occurrence in Canada: Ontario (historical)

Status and Reasons for Designation:

Status: Extirpated	Alpha-numeric codes: Not applicable
Reasons 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.	

Applicability of Criteria

Criterion A (Decline in Total Number of Mature Individuals): Not applicable.
Criterion B (Small Distribution Range and Decline or Fluctuation): Not applicable.
Criterion C (Small and Declining Number of Mature Individuals): Not applicable.
Criterion D (Very Small or Restricted Population): Not applicable.
Criterion E (Quantitative Analysis): Not done.

ACKNOWLEDGEMENTS

Sincere thanks are extended to all the authorities contacted (below) for access to current, curated species occurrence information for Ontario; to the iNaturalist, Global Biodiversity Information Facility (GBIF) and Consortium of North American Bryophyte Herbaria (CNABH) communities, including collection and data managers, and amateur and professional botanists, for digitizing and sharing species occurrence and specimen information; to René Belland, Co-chair of the Mosses and Lichens Subcommittee of COSEWIC for guidance in preparing the RROC; and to Jenny Wu and other members of the COSEWIC Secretariat for administrative support.

Authorities Contacted:

Bradley, D. Ontario Natural Heritage Information Centre, Ontario Ministry of Natural Resources and Forestry

Brinker, S. Ontario Natural Heritage Information Centre, Ontario Ministry of Natural Resources and Forestry

Harris, D. Herbarium (E), Royal Botanic Garden, Edinburgh

King, M. Herbarium (CHRB), Rutgers University

Oliver, M. Herbarium (TENN), University of Tennessee

INFORMATION SOURCES

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WRITER OF RAPID REVIEW OF CLASSIFICATION

Jennifer Doubt



COSEWIC HISTORY

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was created in 1977 as a result of a recommendation at the Federal-Provincial Wildlife Conference held in 1976. It arose from the need for a single, official, scientifically sound, national listing of wildlife species at risk. In 1978, COSEWIC designated its first species and produced its first list of Canadian species at risk. Species designated at meetings of the full committee are added to the list. On June 5, 2003, the *Species at Risk Act* (SARA) was proclaimed. SARA establishes COSEWIC as an advisory body ensuring that species will continue to be assessed under a rigorous and independent scientific process.

COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species, subspecies, varieties, or other designatable units that are considered to be at risk in Canada. Designations are made on native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fishes, arthropods, molluscs, vascular plants, mosses, and lichens.

COSEWIC MEMBERSHIP

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government science members and the co-chairs of the species specialist subcommittees and the Aboriginal Traditional Knowledge subcommittee. The Committee meets to consider status reports on candidate species.

DEFINITIONS (2021)

Wildlife Species	A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)**	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)***	A category that applies when the available information is insufficient (a) to resolve a species' eligibility for assessment or (b) to permit an assessment of the species' risk of extinction.

* Formerly described as "Vulnerable" from 1990 to 1999, or "Rare" prior to 1990.

** Formerly described as "Not In Any Category", or "No Designation Required."

*** Formerly described as "Indeterminate" from 1994 to 1999 or "ISIBD" (insufficient scientific information on which to base a designation) prior to 1994. Definition of the (DD) category revised in 2006.



Environment and
Climate Change Canada
Canadian Wildlife Service

Environnement et
Changement climatique Canada
Service canadien de la faune

Canada

The Canadian Wildlife Service, Environment and Climate Change Canada, provides full administrative and financial support to the COSEWIC Secretariat.