

**COSEWIC**  
**Rapid Review of Classification**

on the

**Greater Sage-Grouse**  
***phaios* subspecies**

*Centrocercus urophasianus phaios*

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 Greater Sage-Grouse *phaios* subspecies *Centrocercus urophasianus phaios* 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 Andrew G. Horn for writing the rapid review of classification on the Greater Sage-Grouse *phaios* subspecies, *Centrocercus urophasianus phaios*, in Canada, prepared under contract with Environment and Climate Change Canada. This rapid review of classification was overseen and edited by Marcel Gahbauer, Co-chair of the COSEWIC Birds Specialist Subcommittee.

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Également disponible en français sous le titre Examen rapide de la classification du COSEPAC sur le Tétrás des armoises de la sous-espèce *phaios* (*Centrocercus urophasianus phaios*) au Canada.



## COSEWIC Assessment Summary

### Assessment Summary – November 2021

**Common name**

Greater Sage-Grouse *phaios* subspecies

**Scientific name**

*Centrocercus urophasianus phaios*

**Status**

Extirpated

**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.

**Occurrence**

British Columbia

**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.



## COSEWIC Rapid Review of Classification

### PREFACE

The previous status report on Greater Sage-Grouse (COSEWIC 2008) cited genetic evidence (from mtDNA, microsatellites, and SNP) suggesting that the *phaios* subspecies found in British Columbia is not evolutionarily distinct from the *urophasianus* subspecies found in Alberta and Saskatchewan (Benedict *et al.* 2003; Oyler *et al.* 2005). Nonetheless, the limited dispersal, wide geographic separation, and morphological distinctions between the populations was deemed to support their treatment as two distinct designatable units (COSEWIC 2008; Environment and Climate Change Canada 2017), a contention supported by further analysis of microsatellite variation across United States subpopulations (Cross *et al.* 2016). More recent whole-genome sequencing offers additional support for maintaining separate designatable units, by showing that United States populations that are contiguous with *urophasianus* in Canada are genetically distinct from birds breeding in Washington (Oh *et al.* 2019; Oyler-McCance *et al.* 2020). The latter are considered to be *phaios* and are the source of any potential immigration to British Columbia (Environment and Climate Change Canada 2017). Collectively, the available evidence meets the current COSEWIC (2020) criteria for recognizing distinct designatable units with respect to discreteness (criterion D1 – evidence of heritable markers and D2 – natural geographic disjunction) and significance (criterion S2 – heritable traits that would not be reconstituted if lost).

The *phaios* subspecies of Greater Sage-Grouse has not been recorded in its former Canadian range, the Okanagan Valley of British Columbia, since 1966 (Environment and Climate Change Canada 2017; Govindarajulu pers. comm. 2021). A Recovery Strategy for the *phaios* subspecies was developed (Environment and Climate Change Canada 2017), which concluded that recovery is not feasible, because suitable habitat is lacking and individuals are not available for translocation from the United States. Rescue is unlikely, because the population most likely to provide immigrants (in Washington State) is Threatened (Stinson 2016), assessed as S1 (Critically Imperilled) by the Washington Heritage Program, and has continued to decline to the point (676 individuals) that it is being considered for Endangered status (Anderson 2019).

#### **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.

**Updated Map:**

Not required, as there are no recent observations; see previous assessment (COSEWIC 2008).

## TECHNICAL SUMMARY

*Centrocercus urophasianus phaios*

Greater Sage-Grouse *phaios* subspecies

Tétras des armoises de la sous-espèce *phaios*

Range of occurrence in Canada (province/territory/ocean): British Columbia

### Status and Reasons for Designation:

<b>Status:</b> Extirpated	<b>Alpha-numeric codes:</b> Not applicable
<b>Reasons for designation:</b> 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.	

### Applicability of Criteria

Criterion A (Decline in Total Number of Mature Individuals): Not applicable. No mature individuals detected in Canada since 1966.
Criterion B (Small Distribution Range and Decline or Fluctuation): Not applicable. No mature individuals detected in Canada since 1966.
Criterion C (Small and Declining Number of Mature Individuals): Not applicable. No mature individuals detected in Canada since 1966.
Criterion D (Very Small or Restricted Population): Not applicable. No mature individuals detected in Canada since 1966.
Criterion E (Quantitative Analysis): Not done. No mature individuals detected in Canada since 1966.

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### Authorities Contacted

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## **WRITER OF RAPID REVIEW OF CLASSIFICATION**

Andrew G. Horn





## 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.



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