COSEWICRapid Review of Classification

on the

White-headed Woodpecker

Dryobates albolarvatus

in Canada

ENDANGERED 2023

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:

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Production note:

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Également disponible en français sous le titre Examen rapide de la classification du COSEPAC pour le Pic à tête blanche (*Dryobates albolarvatus*) au Canada.

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Assessment Summary - May 2023

Common name

White-headed Woodpecker

Scientific name

Dryobates albolarvatus

Status

Endangered

Reason for designation

This distinctive non-migratory woodpecker occurs from extreme southern British Columbia to southern California. In Canada, it is found only in mature Ponderosa Pine forest in the southern Okanagan Valley, on which it depends for both food and nest cavities. In recent years, fewer than five mature individuals have been recorded annually in Canada, and the species may no longer regularly breed here. The population is exposed to ongoing threats to its remaining habitat, particularly from fire and fire suppression, harvesting of older pines, housing development, and effects of pine beetle infestation.

Occurrence

British Columbia

Status history

Designated Threatened in April 1992. Status re-examined and designated Endangered in November 2000, November 2010 and May 2023.



Assessment Summary

English nameWhite-headed Woodpecker

French name
Pic à tête blanche

Scientific name
Dryobates albolarvatus

Status Endangered

Reasons for designation (COSEWIC 2010)

In Canada, this distinctive woodpecker breeds only in British Columbia. Its Canadian population is extremely small, likely fewer than 100 individuals. The population is exposed to ongoing threats from habitat loss and degradation. Rescue from the U.S., where populations are sparse, is expected to be limited due to U.S. population declines and restricted remaining habitat in Canada.

PREFACE

Formerly in genus *Picoides*, the American Ornithological Society now assigns White-headed Woodpecker to genus *Dryobates* (Chesser *et al.* 2020), although authorities such as the International Ornithologists' Union assign it to *Leuconotopicus* (literature reviewed by Kozma *et al.* 2020).

White-headed Woodpecker has always been uncommon in Canada (Weber and Cannings 1976; Campbell *et al.* 1990). By 1997, the species was sufficiently rare that systematic breeding period surveys within its previous known range in extreme southern British Columbia failed to detect breeding birds, although a few individuals were still reported (Ramsay 1997). White-headed Woodpecker was recorded in two 10 × 10 km squares during the five-year field data collection process involved in creating the British Columbia Breeding Bird Atlas (2008–2012), where the species' breeding status was assessed as "probable," but unconfirmed (Chytyk and Fraser 2015).

White-headed Woodpecker numbers in Canada have apparently continued to decline since the last status report (COSEWIC 2010), based on the reduced frequency of sightings and indications of a marked decline in extent of occurrence (EOO). The British Columbia Conservation Data Centre has records in only four of the last ten years (2011–2020): 2011 (pair at Camp McKinney Road), 2013 (single bird at Camp McKinney Road and pair at White Lake), 2014 (single bird at Okanagan Falls) and 2015 (pair at Vaseux Wildlife Refuge; British Columbia Conservation Data Centre 2021). There were no sightings reported from 2016–2021, despite checks of known sites and in other suitable habitat. Most local birders believe that no White-headed Woodpeckers are currently present in the Okanagan Valley (Charlesworth pers. comm. 2021).

COSEWIC (2010) estimated EOO to be approximately 1,500 km², which is identical to the value calculated here based on observations during 2001–2010 (Figure 1). Calculating current EOO using observations during the most recent ten-year period (2011–2020) gives a much smaller indirect estimate of 90 km² (Figure 2), representing a likely reduction of about 94%. All EOO estimates exclude the very small number of sporadic sightings from outside the known breeding range in the Similkameen Valley, Grand Forks area and the Kootenay Mountains of southern British Columbia. Those sightings are regarded here as "casual," as in previous status reports (Cannings 2000; COSEWIC 2010) and the federal recovery strategy (Environment Canada 2014).

COSEWIC (2010) estimated the White-headed Woodpecker population in Canada as "perhaps in the order of ten adults." The current population size is unknown; however, it is likely that only 0–5 mature individuals were present in Canada in each of the last ten years, and White-headed Woodpecker may no longer regularly breed in the country.

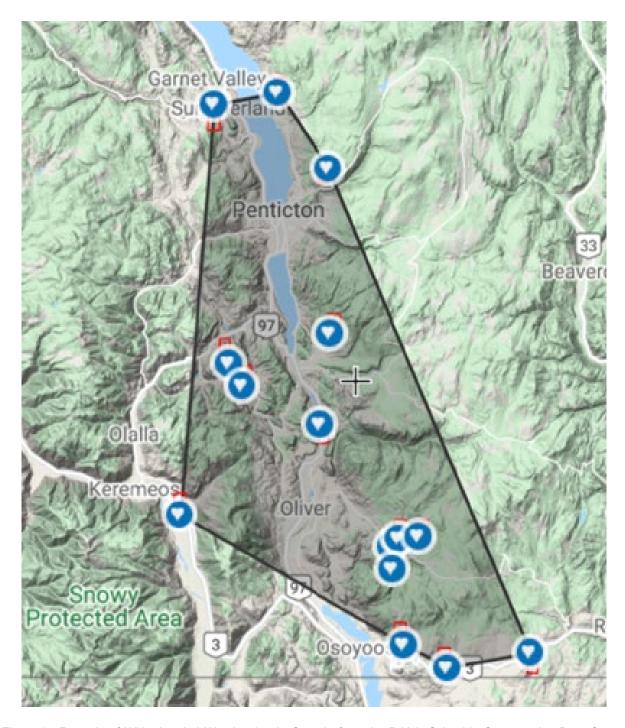


Figure 1. Records of White-headed Woodpecker in Canada from the British Columbia Conservation Data Centre (2021), eBird (2021) and Environment Canada (2014), during the ten-year period ranging from 2001–2010, excluding records of casual birds. Approximate EOO for that period is shaded in grey, and is estimated at 1,500 km².

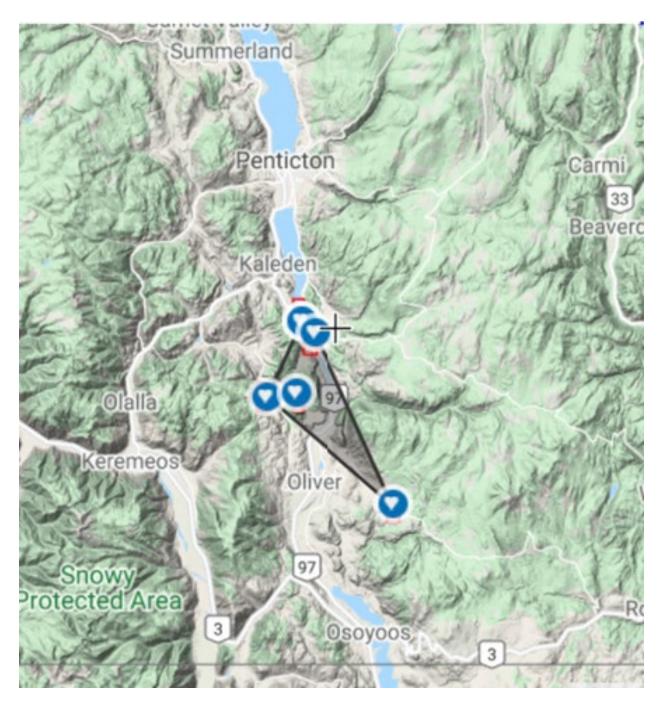


Figure 2. Records of White-headed Woodpecker in Canada from the British Columbia Conservation Data Centre (2021) during the ten-year period ranging from 2011–2020, excluding records of vagrant birds. There were no records reported in eBird during that period. Approximate EOO for that period is shaded in grey and is estimated at 90 km².

TECHNICAL SUMMARY

Dryobates albolarvatus
White-headed Woodpecker
Pic à tête blanche

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

Demographic Information

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Generation time (usually average age of parents in the population)	2.6 years	Based on International Union for Conservation of Nature (IUCN) estimate (Bird <i>et al.</i> 2020)
Is there an [observed, inferred, or projected] continuing decline in number of mature individuals	Yes	Inferred, based on estimated decline in EOO and decline in number of sightings reported in the past ten years.
Estimated percent of continuing decline in total number of mature individuals within [5 years or 2 generations, whichever is longer up to a maximum of 100 years]	Unknown	
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over the last [10 years, or 3 generations, whichever is longer up to a maximum of 100 years].	Magnitude of continuing decline is unknown	Decline inferred from estimated decline in apparent EOO, with no observations in the last five years, and no known nest sites in the last 10 years.
[Projected or suspected] percent [reduction or increase] in total number of mature individuals over the next [10 years, or 3 generations, whichever is longer up to a maximum of 100 years].	Unknown	
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over any period [10 years, or 3 generations, whichever is longer up to a maximum of 100 years], including both the past and the future.	Unknown	Decline inferred in past ten years likely continuing, but at unknown rate of reduction.
Are the causes of the decline clearly understood?	Yes	Mainly habitat loss and threats to Ponderosa Pine (<i>Pinus ponderosa</i>) stand on which the species depends (see Chytyk and Fraser 2015; Environment Canada 2014).
Have the causes of the decline ceased?	No	
Are the causes of the decline clearly reversible?	No	

Are there extreme fluctuations in	No	
number of mature individuals?		

Extent and Occupancy information

Estimated extent of occurrence (EOO)	About 90 km²	Inferred, based on distribution of five records during the most recent ten-year period (2011–2020).
Index of area of occupancy (IAO), reported as 2 × 2 km grid value.	0—8 km²	Inferred, based on a maximum of two breeding pairs, although there have been no observations in the last five years, and no known nest sites in the last 10 years.
Is the population "severely fragmented" i.e., is >50% of its total area of occupancy in habitat patches that are (a) smaller than would be required to support a viable population, and (b) separated from other habitat patches by a distance larger than the species can be expected to disperse?	a. Possibly b. No	
Number of "locations" * (use plausible range to reflect uncertainty if appropriate)	0-2	Most potential nest sites occur separately on private land, and each land holding is considered a separate location due to anticipated differences in management of forest habitat, including snag management and fire abatement. There would be one location if all sites could be eliminated by a single event (e.g., effects of Mountain Pine Beetle Dendroctonus ponderosae, Western Pine Beetle D. brevicomis, or fire), and no locations if no breeding pairs remain.
Is there an [observed, inferred, or projected] continuing decline in extent of occurrence?	Probably	Decline of about 94% inferred between decades, from EOO of about 1,500 km² estimated from records in 2001–2010, and EOO of about 90 km², estimated from records in 2011–2020 (Figures 1, 2).
Is there an [observed, inferred, or projected] continuing decline in index of area of occupancy?	Probably	Inferred from the difference in IAO estimated for the last ten-year period (2011–2020; 0–8 km²), compared to IAO estimated for the previous 10 years (2001–2010; <20 km²).

st See Definitions and Abbreviations on <u>COSEWIC website</u> for more information on this term.

Is there an [observed, inferred, or projected] continuing decline in number of subpopulations?	No	Only one subpopulation in Canada.
Is there an [observed, inferred, or projected] continuing decline in number of "locations" *?	No	Previous assessment identified one location, based on the threat posed by Western and Mountain Pine Beetle to Ponderosa Pine habitat.
Is there an [observed, inferred, or projected] continuing decline in [area, extent and/or quality of] habitat?	Yes, observed and projected decline in area, extent and quality of habitat is expected to continue	Continued loss of mature Ponderosa Pine to fire, timber cutting, residential development and vineyard expansion. Habitat quality reduced by loss of older snags used for nesting to fire and woodcutting.
Are there extreme fluctuations in number of subpopulations?	No	
Are there extreme fluctuations in number of "locations"*?	No	
Are there extreme fluctuations in extent of occurrence?	No	
Are there extreme fluctuations in index of area of occupancy?	No	

Number of Mature Individuals (in each subpopulation)

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Subpopulations	N Mature Individuals (give plausible ranges)	Notes on individual estimates
Total (one subpopulation)	Population estimated to be between 0–5 in any one year.	Population likely at lower end of range of estimate in most years, especially the most recent five years (2016–2020).

Quantitative Analysis

Is the probability of extinction in the wild at least [20% within 20 years or 5 generations whichever is longer up to a maximum of 100 years, or 10% within 100 years]?	Unknown	Analysis not conducted
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Threats and Limiting Factors

Was a threats calculator completed for this species?	Yes, completed for the British Columbia CDC in 2016 (British Columbia Conservation Data Centre 2022).	Overall threat impact: Very High
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st See Definitions and Abbreviations on <u>COSEWIC website</u> for more information on this term.

Threats identified in the 2016 Threats Assessment (British Columbia Conservation Data Centre 2022), in decreasing order of impact.

7.1 Fire and Fire Suppression: High11.1 Habitat Shifts and Alterations: High5.3 Logging and Wood Harvesting: Medium

1.1 Housing and Urban Areas: Low

3.2 Mining and Quarrying: Low

8.2 Problematic Native Species: Low

What additional limiting factors are relevant?

Strong dependence on mature Ponderosa Pine seed crops for foraging (COSEWIC 2010).

Rescue Effect (natural immigration from outside Canada)

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Status of outside population(s) most likely to provide immigrants to Canada.	S2 (Imperilled) in adjoining states (Washington and Idaho) where the species occurs (NatureServe 2021)	
Is immigration known or possible?	Yes	Canadian population may be reliant on immigration from the United States (Environment Canada 2014).
Would immigrants be adapted to survive in Canada?	Yes	Species is known to breed successfully in Canada.
Is there sufficient habitat for immigrants in Canada?	Yes, but limited in extent	Ponderosa Pine habitat is fragmented and declining (Environment Canada 2014; British Columbia Conservation Data Centre 2022).
Are conditions deteriorating in Canada? +	Yes	Habitat is subject to multiple threats (Environment Canada 2014; British Columbia Conservation Data Centre 2022).
Are conditions for the source (i.e., outside) population deteriorating?+	Yes	Assessed as S2 (Imperilled) in Washington and Idaho due to population declines and multiple threats.
Is the Canadian population considered to be a sink?+	Possibly	The Canadian population may be a sink, as immigration from the United States likely contributes to maintaining the Canadian population (see 26 above).

⁺ See <u>Table 3</u> (Guidelines for modifying status assessment based on rescue effect).

at rick comm)	No, habitat in Canada is limited and declining, and potential source populations are	Populations are low and declining in adjacent U.S. states, although closest U.S. nest sites are within 40 km of Canada (L. Ramsay pers. comm).
		is limited and declining, and potential

Occurrence Data Sensitivity

Are occurrence data of this species	Yes, in some cases	Nesting site locations on private
sensitive?		land should not be disclosed.

Current Status

COSEWIC: Designated Threatened in April 1992. Status re-examined and designated Endangered in November 2000, November 2010 and May 2023.

Status and Reasons for Designation

Status	Endangered
Alpha-numeric codes	Endangered C2a(i,ii); D1
Reason for change of status	Not applicable
Reasons for designation (2023)	This distinctive non-migratory woodpecker occurs from extreme southern British Columbia to southern California. In Canada, it is found only in mature Ponderosa Pine forest in the southern Okanagan Valley, on which it depends for both food and nest cavities. In recent years, fewer than five mature individuals have been recorded annually in Canada, and the species may no longer regularly breed here. The population is exposed to ongoing threats to its remaining habitat, particularly from fire and fire suppression, harvesting of older pines, housing development and effects of pine beetle infestation.

Applicability of Criteria

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A: Decline in total number of mature individuals	May meet Endangered, A2c. Decline in number of mature individuals suspected to exceed 50% in last ten years, based on inferred decline in extent of occurrence reflecting a decline in the number of sightings over this period, but strong numerical evidence is not available.
B: Small distribution range and decline or fluctuation	May meet Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v). EOO may be <5,000 km²; IAO is <500 km², occurs at <5 locations (likely 0–2), but strong numerical evidence of continuing decline in extent of occurrence, index of area of occupancy, quality of habitat and number of mature individuals is lacking.
C: Small and declining number of mature individuals	Meets Endangered, C2a(i,ii). The total population is estimated to contain fewer than 200 mature individuals, with an inferred and projected continuing decline in number of mature individuals; no population estimated to contain >50 mature individuals; and the only subpopulation having 100% of all mature individuals.

D: Very small or restricted population	Meets Endangered, D1. The population is estimated to be <<250 mature individuals.
E: Quantitative analysis	Not applicable, analysis not conducted.

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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 (2023)

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



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