

COSEWIC
Assessment and Update Status Report

on the

Small Whorled Pogonia
Isotria medeoloides

in Canada



ENDANGERED
2000

COSEWIC
COMMITTEE ON THE STATUS OF
ENDANGERED WILDLIFE
IN CANADA



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White, D.J. 1998. Update COSEWIC status report on the Small Whorled Pogonia *Isotria medeoloides* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 1-6 pp.

Previous report:

Brownell, V.R. 1982. COSEWIC status report on the Small Whorled Pogonia *Isotria medeoloides* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 35 pp.

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Également disponible en français sous le titre Rapport du COSEPAC sur la situation de l'isotrie fausse-médéole (*Isotria medeoloides*) au Canada – Mise à jour

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COSEWIC Assessment Summary

Assessment Summary – May 2000

Common name

Small Whorled Pogonia

Scientific name

Isotria medeoloides

Status

Endangered

Reason for designation

Single small population, rare throughout its range, with plants appearing irregularly and none seen since 1989.

Occurrence

Ontario

Status history

Designated Endangered in April 1982. Status re-examined and confirmed in April 1998 and in May 2000. May 2000 assessment based on new quantitative criteria applied to information from the existing 1998 status report.



COSEWIC
Executive Summary

Small Whorled Pogonia
Isotria medeoloides

Description

Small Whorled Pogonia (*Isotria medeoloides*) is a small orchid with a single whorl of five to six leaves at the top of the stem. The leaves may be overtopped by one or rarely two yellowish-green flowers. The five sepals are slightly longer than the petals.

Distribution

This orchid occurs in the United States from New England and Michigan south to Missouri and South Carolina. Its only Canadian occurrence is a single site in southwestern Ontario.

Habitat

Small Whorled Pogonia requires level, damp mixed woods with small openings in the canopy and an acidic soil. There is usually abundant leaf mould but with limited shrub and herbaceous cover.

General biology

Due to the small size and inconspicuous nature of Small Whorled Pogonia, and its close similarity to non-flowering shoots of the common Indian Cucumber-root (*Medeola virginiana*), the orchid could easily be trampled inadvertently.

Population size and trends

The orchid is only known from a single site in southwestern Ontario where it has been seen at four locations (all within a few hundred metres of one another). The last sighting was in 1987 even though it has been searched for by a number of people since then.

Limiting factors and threats

The main threat is lack of suitable habitat in the heavily modified Carolinian Zone of southwestern Ontario. A trail used by motorcycles and ATVs passes through the site

and at least one subpopulation has been destroyed by trail use. Due to the plant's high profile as a very rare orchid, the site has been visited by many naturalists, orchid enthusiasts, and photographers. This puts the plant at considerable risk from inadvertent trampling

Existing protection

The orchid is protected under Ontario's Endangered Species Act. The only site is owned by the Catfish Creek Conservation Authority.



COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) determines the national status of wild species, subspecies, varieties, and nationally significant populations that are considered to be at risk in Canada. Designations are made on all native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fish, lepidopterans, molluscs, vascular plants, lichens, and mosses.

COSEWIC MEMBERSHIP

COSEWIC comprises representatives from each provincial and territorial government wildlife agency, four federal agencies (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biosystematic Partnership), three nonjurisdictional members and the co-chairs of the species specialist groups. The committee meets to consider status reports on candidate species.

DEFINITIONS

Species	Any indigenous species, subspecies, variety, or geographically defined population of wild fauna and flora.
Extinct (X)	A species that no longer exists.
Extirpated (XT)	A species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A species facing imminent extirpation or extinction.
Threatened (T)	A species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
Not at Risk (NAR)**	A species that has been evaluated and found to be not at risk.
Data Deficient (DD)***	A species for which there is insufficient scientific information to support status designation.

* 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.

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.



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Update
COSEWIC Status Report
on the
Small Whorled Pogonia
Isotria medeoloides
in Canada

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1998

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INTRODUCTION

Small Whorled Pogonia (*Isotria medeoloides* (Pursh) Raf.) was designated as endangered in 1982 due to its very limited number of plants known in Canada (Brownell, 1982). Prior to 1982, the plant was known from a small population in Elgin County. Small Whorled Pogonia requires mixed forest habitat with a flat floor and prefers small openings in the forest (Brownell, 1982).

DISTRIBUTION

Small Whorled Pogonia occurs in the United States from New England and Michigan south to Missouri and South Carolina. Its only Canadian occurrence is in Elgin County in southwestern Ontario (Figure 1).

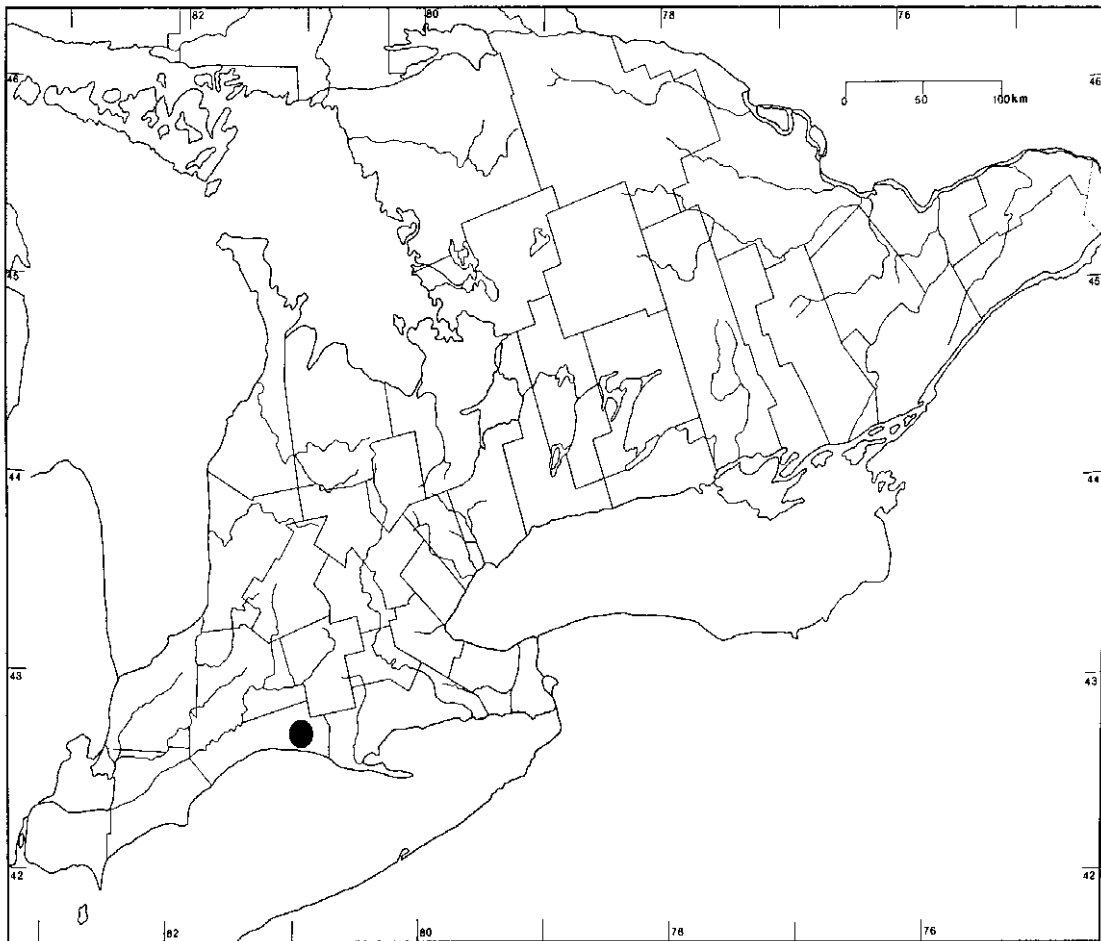


Figure 1. Location of the single occurrence of Small Whorled Pogonia in Canada (solid circle).

PROTECTION

The orchid is protected under the Ontario Endangered Species Act. The orchid occurs in the Calton Swamp Area of Natural and Scientific Interest and is owned by the Catfish Creek Conservation Authority (CCCA). The CCCA knows of the location of the Small Whorled Pogonia and developed interim guidelines to ensure that no activities or management of the area would have negative impacts on the orchid or its habitat (Anonymous, 1984). The 1984 guidelines proposed to relocate a motorbike trail, however, there is still trail-bike use of a path that goes through the general vicinity of the orchid locations despite signage prohibiting such use at the roadside entrance to the trail (D. White, pers. obs., 1997).

POPULATION SIZE AND TREND

No thorough inventory has been undertaken to determine the extent and distribution of the orchid within the Calton Swamp, however, a number of people have searched the area at various times and since 1980, plants have been noted in 4 distinct locations within a few hundred metres of one another (Oldham, 1990). The last recorded sighting of the orchid at any of the four stations was in 1989 when a single vegetative individual was found by Mike Oldham and Dave McLeod (M. Oldham, pers. com., 1997). Dave McLeod searched the area unsuccessfully in 1995 (D. McLeod, pers. com., 1997) and the present author also searched unsuccessfully in July 1997. According to Oldham (1990) station #1 was last seen in 1981 when three plants were found; station #2 was last seen in 1980 when one plant was seen (this station has since been destroyed by a trail-bike path); station #3 was found in 1982 and contained 2 plants but no plants have been seen there since; and station #4 was found in 1989 but no plants have been seen there since. Whether the orchid has disappeared from the area or still exists in low numbers is not known.

HABITAT

Small Whorled Pogonia requires damp mixed woods with an acidic soil (Brownell, 1982; Oldham, 1990). There is usually abundant leaf mould but with limited shrub and herbaceous cover (Brownell, 1982). The orchid prefers a habitat with a flat floor with small openings in the forest (Brownell, 1982).

BIOLOGY

Due to the small size and inconspicuous nature of Small Whorled Pogonia, and its close similarity to non-flowering shoots of the common Indian Cucumber-root (*Medeola virginiana*), the orchid could easily be trampled inadvertently.

LIMITING FACTORS

The general area in which the orchid occurs is crossed by a trail used by trail bikes and all-terrain vehicles that could destroy individual plants and did destroy station #2 (as noted above). Due to the plant's high profile as a very rare orchid, the site has been visited by many naturalists, orchid enthusiasts, and photographers. This puts the plant at considerable risk and at least one plant has been damaged in the past by inadvertent trampling (Oldham, 1990).

EVALUATION AND STATUS RECOMMENDATION

When the status designation of endangered was assigned in 1982, Small Whorled Pogonia was known from one site in Elgin County. Since that time, it has been discovered at three other adjacent stations—all within a few hundred metres of one another. Unfortunately, only one plant was found in 1989 and none have been seen since that time. Whether the species has disappeared at the site or has just been overlooked is not known. Thus, there is little reason to change the designation of endangered status for Small Whorled Pogonia.

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Allen Woodliffe, District Ecologist, Ontario Ministry of Natural Resources, Chatham District, provided information on the orchid at Calton Swamp and gave the author a detailed site map to the colony. Mike Oldham, Botanist, Natural Heritage Information Centre, Peterborough, provided background reports and a listing of known orchid records with details of recent confirmations. Dave McLeod, formerly of Aylmer District office of the Ontario Ministry of Natural Resources, provided information on the site. Funding provided by the Canadian Wildlife Service, Environment Canada.

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THE AUTHOR

David J. White has a B.Sc. in biology and has been conducting natural area inventories and evaluating the status and significance of rare plants for more than 25 years. He began doing field surveys in 1972 for the International Biological Program. From 1973 to 1983, David was employed by the Canadian Museum of Nature as a research technician. During that period he co-authored a number of publications on rare plants, including the *Atlas of the Rare Vascular Plants of Ontario*. From 1984 to the present, David has worked as a self-employed life science consultant. He has completed projects ranging from natural area inventories and evaluations to reports on invasive species. David has previously written COSEWIC Status Reports on Ginseng (*Panax quinquefolium*), Golden-seal (*Hydrastis canadensis*), and Branched Bartonian (*Bartonia paniculata*).