

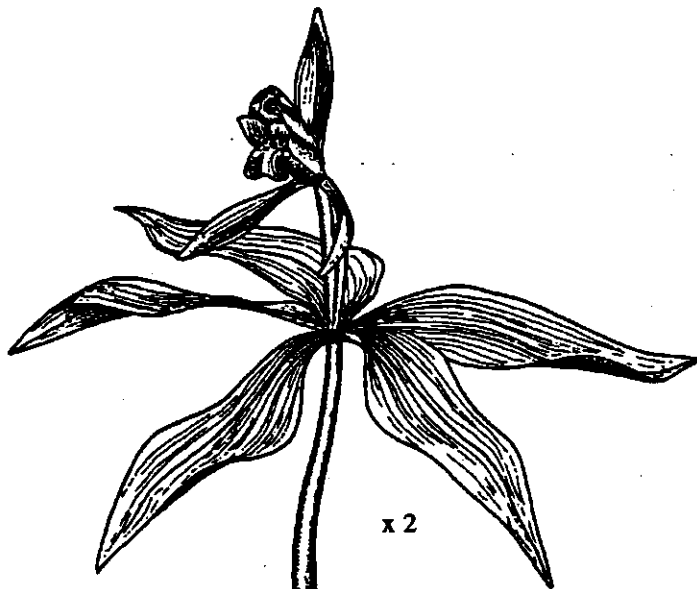


# Update COSEWIC STATUS REPORT

on

## Small Whorled Pogonia (*Isotria medeoloides*)

QL  
88  
S73

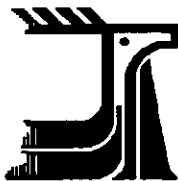


David J. White



**ENDANGERED**  
Update, 1998

**COSEPAC**  
**COMITÉ SUR LA SITUATION**  
**DES ESPÈCES EN PÉRIL**  
**AU CANADA**



**COSEWIC**  
**COMMITTEE ON THE STATUS**  
**OF ENDANGERED WILDLIFE**  
**IN CANADA**

For additional copies contact:

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

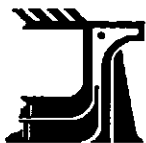
Tel: (819) 997-4991/(819) 994-2407

Fax: (819) 994-3684

E-mail: [sylvia.normand@ec.gc.ca](mailto:sylvia.normand@ec.gc.ca)  
[shirley.sheppard@ec.gc.ca](mailto:shirley.sheppard@ec.gc.ca)

**Cover illustrations:**

**Small Whorled Pogonia - Erich Haber, National Botanical Services, Ottawa.**



## Small Whorled Pogonia

**Reason for status:** Single small population, rare throughout its range, with plants appearing irregularly and none seen for nearly a decade. [Designated endangered in 1984 and reconfirmed as endangered in 1998.]

**Occurrence:** Ontario

### NOTES

COSEWIC status reports are working documents used in assigning status. Reports are released in their original form in the interest of making scientific information available to the public.

Reports are the property of COSEWIC and the author. They may not be presented as the work of any other person or agency. Anyone wishing to quote or cite information contained in status reports may do so provided that both the author and COSEWIC are credited. The report may be cited as follows:

**White, David J. 1998.** Update COSEWIC Status report on Small Whorled Pogonia, *Isotria medeoloides*. Committee on the Status of Endangered Wildlife in Canada. 13 pp.

### COSEWIC

A committee of representatives from federal, provincial and private agencies that assigns national status to species at risk in Canada and the chairs of the scientific species specialist groups

### COSEPAC

Un comité de représentants d'organismes fédéraux, provinciaux et privés qui attribue un statut national aux espèces canadiennes en péril ainsi que des président(e)s des groupes des spécialistes scientifiques.

Update  
**COSEWIC Status Report**

on

**Small Whorled Pogonia**  
*(Isotria medeoloides)*

by

**David J. White**  
RR #3, Lanark, Ontario, K0G 1K0

**Funding provided by Canadian Wildlife Service  
Environment Canada**

## Executive Summary

### 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.

### Evaluation and Status

Due to its decline and occurrence at only one site, Small Whorled Pogonia is considered an endangered species in Canada.

## Résumé

### Description

La petite pogonie verticillée (*Isotria medeoloides*) est une petite orchidée pourvue d'un simple verticille de cinq ou six feuilles au sommet de sa tige. Les feuilles peuvent être surcimées par une ou, rarement, deux fleurs d'un vert tirant sur le jaune. Les cinq sépales sont légèrement plus longs que les pétales.

### Distribution

Cette orchidée pousse aux États-Unis, de la Nouvelle-Angleterre et du Michigan ver le sud jusqu'au Missouri et en Caroline du Sud. Le seul site canadien connu se trouve dans le sud-ouest ontarien.

### Habitat

La petite pogonie verticillée nécessite un terrain plat, un sol acide, dans une forêt mixte humide, au couvert percé de petites ouvertures. Habituellement, le terreau de feuilles est abondant, mais la strate arbustive et le tapis herbacé sont limités.

### Biologie générale

La petite pogonie verticillée est petite, peut facilement passer inaperçue et ressemble beaucoup aux tiges non florifères du concombre sauvage (*Medeola virginiana*); il est facile de la piétiner par inadvertance.

### Taille et tendances de la population

L'orchidée n'a été signalée que sur un seul site dans le sud-ouest ontarien, où on l'a relevée à quatre endroits (séparés les uns des autres de quelques centaines de mètres). La dernière observation remonte à 1989, même si plusieurs personnes l'ont cherchée depuis.

### Facteurs limitants et menaces

La principale menace est l'absence d'habitats propices dans la zone carolinienne fortement urbanisée du sud-ouest ontarien. Un sentier emprunté par des motocyclettes et des véhicules tout-terrains traverse le site; son utilisation a provoqué la destruction d'au moins une sous-population. Plusieurs naturalistes, orchidophiles et photographes ont visité le site, attirés par la grande réputation de l'orchidée rare; cela fait courir à la plante un risque considérable de piétinement par inadvertance.

### Protection existante

La *Endangered Species Act* de l'Ontario protège cette orchidée. Le seul site appartient à *Catfish Creek Conservation Authority*.

## **Évaluation et statut de l'espèce**

**À cause de son déclin et de sa présence en un seul endroit, la petite pogonie verticillée est considérée comme une espèce en danger de disparition au Canada.**

## 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).

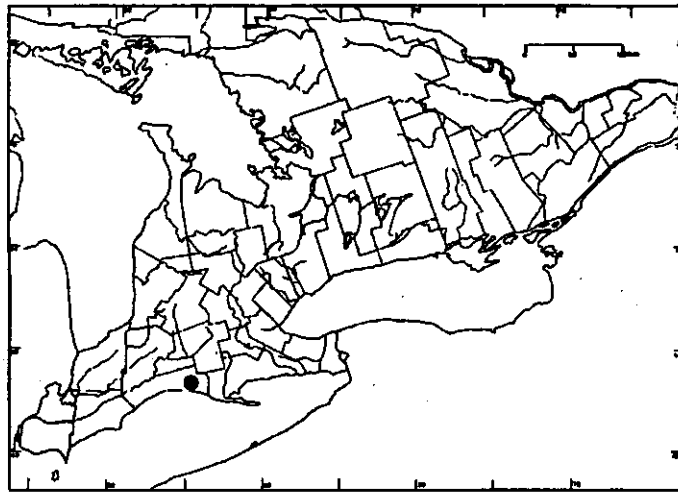


Figure 1. Location of the single occurrence of Small Whorled Pogonia in Canada (solid circle).

## 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.

### Acknowledgements

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.

### Literature Cited

- Anonymous. 1984.** Interim management guidelines for Small Whorled Pogonia habitat on the Authority's Calton Swamp properties. Draft. Catfish Creek Conservation Authority. Aylmer, Ontario. 3 pp.
- Brownell, V. R. 1982.** Status report on the Small Whorled Pogonia (*Isotria medeoloides*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Canadian Wildlife Service, Ottawa. Unpublished report. 30 pp.
- Oldham, M.J. 1990.** 1989 status of the Small Whorled Pogonia (*Isotria medeoloides*) at Calton Swamp, Elgin County. Ontario Ministry of Natural Resources, Aylmer District. Unpublished report. 11 pp.
- Oldham, M.J. 1997.** Element Occurrence records of Small Whorled Pogonia (*Isotria medeoloides*) from the database of the Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough. 2 pp.

### Biographical Summary of 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 Bartonia (*Bartonia paniculata*).



## MANDATE

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 groups: fish, amphibians, reptiles, birds, mammals, molluscs, lepidoptera, vascular plants, mosses and lichens.

## MEMBERSHIP

COSEWIC is comprised of representatives from each provincial and territorial government wildlife agency, four federal agencies (Canadian Wildlife Service, Parks Canada, Fisheries and Oceans, Canadian Museum of Nature), three national conservation organizations (Canadian Nature Federation, Canadian Wildlife Federation, and World Wildlife Fund Canada) and the chairs of the scientific species specialist groups. The Committee meets annually in April to consider status reports on candidate species.

## DEFINITIONS

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



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. COSEWIC meets annually in April each year. Species designated at this meeting are added to the list.



Environment  
Canada  
Canadian Wildlife  
Service

Environnement  
Canada  
Service canadien  
de la faune

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