

**COSEWIC**  
**Assessment and Update Status Report**

on the

**Spotted Wintergreen**  
*Chimaphila maculata*

in Canada



**ENDANGERED**  
**2000**

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



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

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COSEWIC 2000. COSEWIC assessment and update status report on the spotted wintergreen *Chimaphila maculata* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 6 pp.

White, D.J. 1998. Update COSEWIC status report on spotted wintergreen *Chimaphila maculata* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 1-6 pp.

Previous report:

Kirk, D.A. 1987. COSEWIC status report on the spotted wintergreen *Chimaphila maculata* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 36 pp.

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## COSEWIC Assessment Summary

### Assessment Summary – May 2000

**Common name**

Spotted Wintergreen

**Scientific name**

*Chimaphila maculata*

**Status**

Endangered

**Reason for designation**

Range restricted to two small areas where historic populations have been lost and where the few small remaining populations are under continued threats.

**Occurrence**

Ontario

**Status history**

Designated Endangered in April 1987. Status re-examined and confirmed Endangered 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**

**Spotted Wintergreen**  
*Chimaphila maculata*

**Description**

Spotted Wintergreen (*Chimaphila maculata*) is a low, evergreen herb or half-shrub that spreads by creeping rhizomes to form sparse patches. Each stem is 10-25 cm high and consists of a whorl of thick, evergreen, toothed leaves that have a variegated upper surface with white mainly along the mid-rib and larger veins. Topping the whorl of leaves is a stalk supporting one to five nodding flowers with white or pinkish reflexed petals. Only some of the stems in a population produce flowers. The seed capsules become erect after flowering.

**Distribution**

In the United States it occurs from New England and Michigan south to Georgia. Its only Canadian occurrence is in southern Ontario where there are perhaps four extant locations.

**Habitat**

Spotted Wintergreen requires sandy habitats in dry-mesic Oak-Pine woods (Kirk, 1987). All extant stations are very close to one of the Great Lakes. The ameliorating effect of these large bodies of water on the local climate may be an important factor in the distribution of the species.

**General Biology**

The evergreen leaves with their attractive variegated pattern puts Spotted Wintergreen at risk from would-be-gardeners.

**Population Size and Trends**

In 1987, Spotted Wintergreen was known from two areas: Wasaga Beach Provincial Park at the south end of Georgian Bay and the St. Williams Provincial Forestry Station near Long Point on Lake Erie. Although the original Wasaga Beach station cannot be relocated and may have disappeared, another nearby station was

found in 1995. One of the original two St. Williams stations is still extant with plants having increased in number. The other station cannot be relocated. Two additional small stations have been found nearby. A third new station—10 km away—was last seen in 1992 but could not be relocated in 1997. A fourth new station from Turkey Point just east of St. Williams was found in 1996.

### **Limiting Factors and Threats**

The main threat is habitat disturbance from trail use and forest operations. Lack of suitable habitat is also a factor since dry, sandy mixed woods near one of the Great Lakes are of limited extent in Canada. The Wasaga Beach area is heavily developed for recreation.

### **Existing Protection**

No formal protection exists.



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

**Update  
COSEWIC Status Report**

on the

**Spotted Wintergreen**  
*Chimaphila maculata*

**in Canada**

David J. White<sup>1</sup>

1998

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## INTRODUCTION

Spotted Wintergreen (*Chimaphila maculata* (L.) Pursh) was designated as endangered in 1987 due to its limited number of locations in Canada (Kirk, 1987). Prior to 1987, the plant was known from a small population in Wasaga Beach Provincial Park and from two sites within the St. Williams Forestry Station—one with a few plants and a larger colony with 20-40 plants (Kirk, 1987; Oldham, 1997). Spotted Wintergreen requires sandy habitats in dry-mesic Oak-Pine woods (Kirk, 1987).

## DISTRIBUTION

Spotted Wintergreen occurs in the United States from New England and Michigan south to Georgia. Its only Canadian occurrence is in southern Ontario. There are perhaps four extant locations: Wasaga Beach Provincial Park, Trout Creek, St. Williams Forestry Station, and just east of Turkey Point.

## PROTECTION

Since the designation of Spotted Wintergreen as an endangered species by COSEWIC, no steps are known to have been taken to enhance the species' chances of survival in Ontario.

## POPULATION SIZE AND TRENDS

The original Wasaga Beach Provincial Park colony consisted of about 6 plants when it was found in 1975 but it seems to have disappeared since then. Dan Brunton conducted a life science inventory of the Park in 1989 and he could not relocate the colony even though he had a detailed map of the site from A. Reznicek who had seen the colony in 1975 (D. Brunton, pers. com., 1997). Spotted Wintergreen was found at a nearby location in the Park by Heather Stewart in 1995 but the species could not be relocated at the new station by Mike Oldham, Don Sutherland, and Wasyl Bakowsky in 1996 (Oldham, 1997). Kirk (1987) stated in his status report that “there is a strong probability that [the original] station is still extant” and that statement is still applicable today—Spotted Wintergreen is likely still present in Wasaga Beach Provincial Park (Figure 1, site A).

One of the original St. Williams Forestry Station sites for Spotted Wintergreen—on the north side of the pond on Dedrick Creek—was visited by the present author in July 1997. The colony appeared healthy and supported 87 stems with 15 stems in full flower. This is a significant increase from the less than 20 plants known in 1985 (M. Gartshore, pers. com., 1997) and the 36 plants recorded in 1989 (Oldham, 1997). In 1996, Mary Gartshore (pers. com., 1997) estimated approximately 100 stems. The other original colony in the Forestry Station was discovered in 1986 by Don Sutherland and

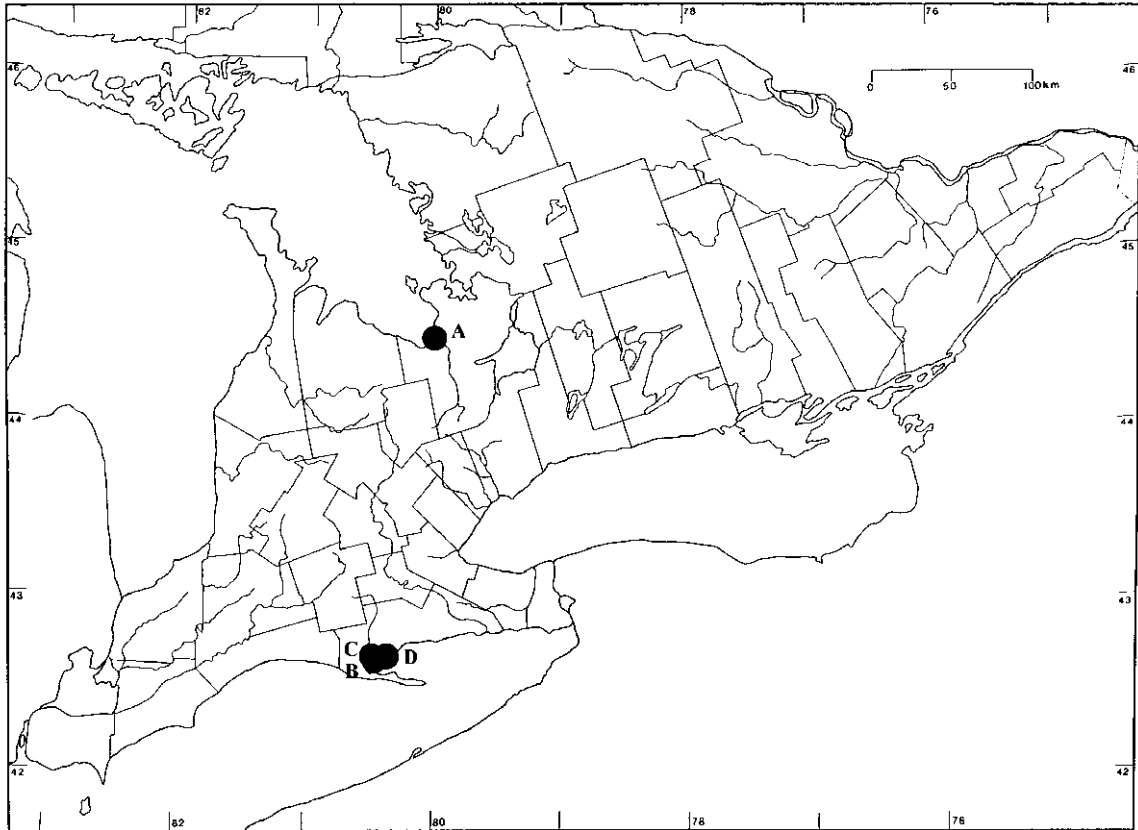


Figure 1. Recent localities confirmed or thought to still contain populations of Spotted Wintergreen.

supported 14 stems (Kirk, 1987). The colony was seen by a number of people that year but the site can no longer be relocated and it is not known whether it has disappeared or is simply hard to find (M. Gartshore, pers. com., 1997).

Two additional populations have been found within the St. Williams Forestry Station since the 1987 status report. One colony was found by Peter Carson in 1988 and consisted of two or three stems (M. Gartshore, pers. com., 1997). It has not been looked for since. The second new colony consisted of three stems and was found in 1994 by Mary Gartshore. Mary saw this colony in 1997 and there were still three stems present (M. Gartshore, pers. com., 1997). Due to the close proximity of the three small populations to the larger population along Dedrick Creek, these additional sites could be regarded as subpopulations of the Dedrick Creek site (Figure 1, site B).

Another small population of Spotted Wintergreen was found by Don Sutherland near Trout Creek, about 10 km north of the St. Williams Forestry Station. This colony had three stems in 1987 and the same number in 1992 (D. Sutherland, pers. com., 1997). The present author searched this site in July 1997 but was unable to find any Spotted Wintergreen there. It is not clear whether the population has disappeared since 1992 or whether the plants were simply overlooked (Figure 1, site C).

Mary Gartshore has very recently found a colony at the United Church Camp just east of Turkey Point (Figure 1, site D). Ten to fifteen stems were found there in 1996 (Oldham, 1997). There are historical records of Spotted Wintergreen from “Turkey Point” that may refer to the same population or to other populations nearby (Oldham, 1997).

There are 5 other historical records that have not been reconfirmed for at least 30 years (Oldham, 1997). These stations have been discussed in the status report (Kirk, 1987) and the plants must be assumed to have been extirpated at these localities.

Detailed site information has been provided to the Chair, Species Specialist Group for Vascular Plants, Mosses and Lichens (COSEWIC).

## **HABITAT**

Spotted Wintergreen requires sandy habitats in dry-mesic Oak-Pine woods (Kirk, 1987). All extant stations are very close to one of the Great Lakes and the ameliorating effect of these large bodies of water on the local climate may be an important factor in the distribution of the species.

## **BIOLOGY**

Spotted Wintergreen is an evergreen plant with a very attractive variegated leaf venation. This puts the plant at risk from would-be gardeners who might try to transplant the species, or from those who might pick the plant to liven up a dried flower arrangement. Several stems were removed from the Dedrick Creek population in 1995 for a table centerpiece by someone unfamiliar with the endangered status of the species (A. Heagy, pers. com., 1997).

## **LIMITING FACTORS**

Habitat disturbance is the main threat at most sites. The Trout Creek site—if it still exists—occurs adjacent to a very well-used dirt-bike and ATV trail. The Dedrick Creek stand occurs between a forest access trail and a Red Pine plantation where it is vulnerable to vehicles or thinning operations.

## **EVALUATION AND STATUS RECOMMENDATION**

When the status designation of endangered was assigned in 1987, Spotted Wintergreen was known from two sites in the St. Williams Forestry Station and one site in Wasaga Beach Provincial Park. Since that time, it has been found at a new site near Turkey Point and two additional small stands in the St. Williams Forestry Station. The original Wasaga Beach stand may have disappeared but other plants nearby have been found.

Although there have been new finds since designation, all stands are small and very localized – both in terms of colony size and in terms of total Ontario range. The species is still at great risk. Thus, there is little reason to change the designation of endangered status for Spotted Wintergreen.

### **ACKNOWLEDGEMENTS**

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- Kirk, D.A. 1987. Status report on the Spotted Wintergreen (*Chimaphila maculata*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Canadian Wildlife Service, Ottawa. Unpublished report. 36 pp.
- Oldham, M.J. 1997. Element Occurrence records of Spotted Wintergreen (*Chimaphila maculata*) from the database of the Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough. 8 pp.

### **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 quinquefolius*), Golden-seal (*Hydrastis canadensis*), and Branched Bartonian (*Bartonia paniculata*).