



Update COSEWIC STATUS REPORT

on

Spotted Wintergreen
(Chimaphila maculata)

QL
88
543

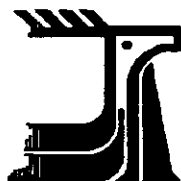


David J. White

ENDANGERED
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

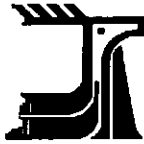
Tel: (819) 997-4991/(819) 994-2407

Fax: (819) 994-3684

E-mail: sylvia.normand@ec.gc.ca
shirley.sheppard@ec.gc.ca

Cover illustrations:

Spotted Wintergreen - Reprinted with permission from *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada* (Volume 3), copyright 1952. The New York Botanical Garden.



Spotted Wintergreen

Reason for status: Range restricted to two small areas where historic populations have been lost and where the few small remaining populations are under continued threats. [Designated endangered in 1987 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 Spotted Wintergreen, *Chimaphila maculata*. Committee on the Status of Endangered Wildlife in Canada. 16 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

Spotted Wintergreen
(Chimaphila maculata)

by

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

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

Executive Summary

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.

Evaluation and Status

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.

Résumé

Description

Le chimaphile maculé (*Chimaphila maculata*) est une herbe ou un petit arbuste sempervirent qui se propage grâce à des rhizomes qui rampent pour former des bosquets clairsemés. Chaque tige, d'une hauteur de 10 à 25 cm, est formée d'un verticille de feuilles persistantes, épaisses et dentées, dont la surface supérieure panachée révèle du blanc, surtout le long des veines principales et moyennes. S'élevant au-dessus du verticille, une hampe porte de une à cinq fleurs pendantes, aux pétales réfléchis, blancs ou rosâtres. Dans une population, seules quelques tiges fleurissent. Les capsules de graines se dressent après la floraison.

Distribution

Aux États-Unis, on trouve le chimaphile maculé de la Nouvelle-Angleterre et du Michigan vers le sud jusqu'en Géorgie. Au Canada, sa présence n'est attestée que dans le sud de l'Ontario, dans peut-être quatre sites.

Habitat

Le chimaphile maculé nécessite un habitat sablonneux dans des forêts de chênes et de pins mésoïques et sèches (Kirk, 1987). Tous les peuplements encore existants sont proches de l'un des Grands Lacs. Le fait que ces grands plans d'eau tempèrent le climat local pourrait être un facteur important de la distribution de l'espèce.

Biologie générale

Le feuillage persistant et panaché du chimaphile maculé expose cette espèce à la convoitise des amateurs d'horticulture.

Taille et tendance de la population

En 1987, il y avait deux sites connus du chimaphile maculé : le parc provincial de Wasaga Beach, à l'extrémité sud de la baie Georgienne, et la *St. Williams Provincial Forestry Station*, près de Long Point, sur le lac Érié. Bien que le premier peuplement de Wasaga Beach n'a pu être retrouvé et pourrait avoir disparu, un autre peuplement a été découvert à proximité en 1995. Un des deux premiers peuplements de St. Williams existe toujours et sa population s'est accrue. On ne peut retrouver l'autre peuplement. On a découvert deux peuplements supplémentaires à proximité. Un troisième nouveau peuplement – dix kilomètres plus loin – a été signalé en 1992, mais n'a pas été retrouvé en 1997. En 1996, un quatrième nouveau peuplement a été signalé à Turkey Point, juste à l'est de St. Williams.

Facteurs limitants et menaces

La principale menace est la perturbation de l'habitat provoquée par l'utilisation des sentiers et les opérations forestières. Le manque d'habitat convenable est un autre facteur, puisque les forêts mixtes sur un sol sablonneux et sec près d'un des Grands Lacs sont rares au Canada. De grandes portions de la région de Wasaga Beach sont utilisées pour des activités de loisir.

Protection actuelle

L'espèce ne jouit d'aucune protection officielle.

Évaluation et statut de l'espèce

Bien que l'on ait découvert de nouveaux peuplements depuis la désignation de l'espèce, tous les peuplements sont petits et très restreints – tant par la taille des colonies que par l'aire de répartition en Ontario. L'espèce est toujours en péril. Il y a peu de raison de modifier le statut d'espèce en danger de disparition du chimaphile maculé.

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.

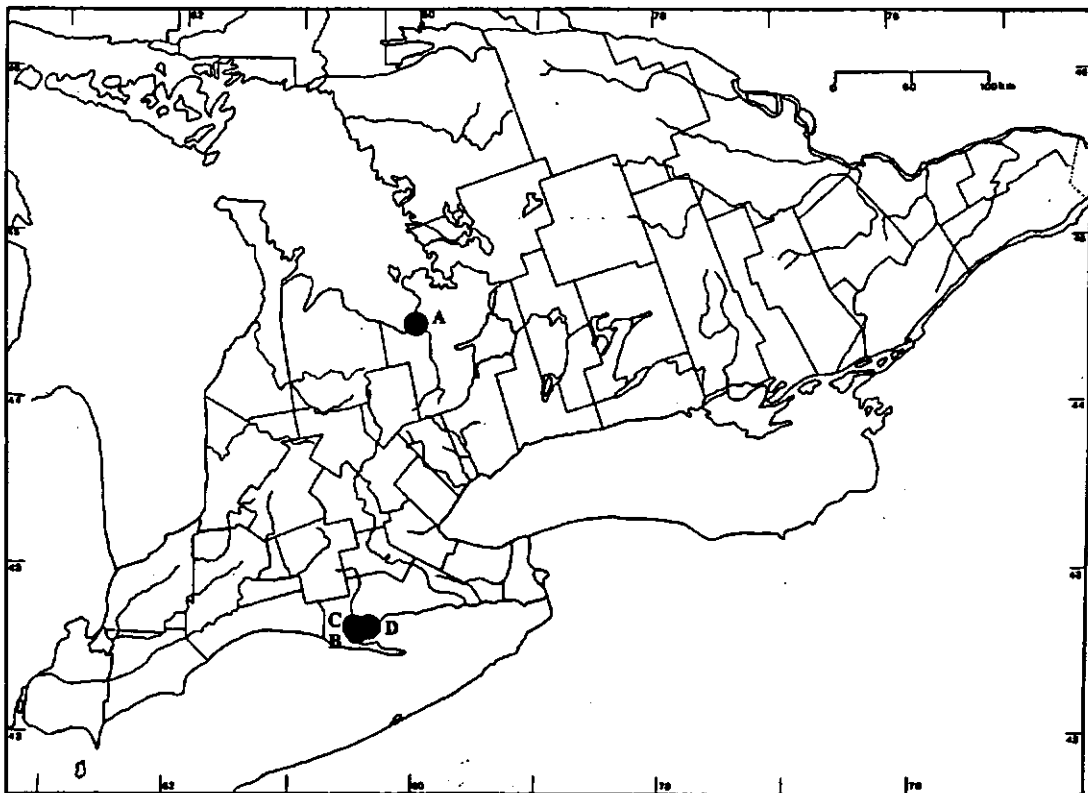


Figure 1. Recent localities confirmed or thought to still contain populations of Spotted Wintergreen.

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 Trend

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 Wasył 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 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, Subcommittee 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

Mary Gartshore, Haldimand-Norfolk, provided details of and directions to several populations. Don Sutherland, Zoologist, Natural Heritage Information Centre, Peterborough, provided details of and directions to several populations. Don Kirk, Natural Heritage Ecologist, Cambridge District, Ontario Ministry of Natural Resources, provided background information. Mike Oldham, Botanist, Natural Heritage Information Centre, Peterborough, provided a listing of known specimens and records with details of recent confirmations.

Literature Cited

Kirk, D. 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. 31 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.

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 Bartonian (*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

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.
Vulnerable (V)	- 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.
Indeterminate (I)	- 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.