

Update  
**COSEWIC STATUS REPORT**

on

**Hoary Mountain-Mint**  
*(Pycnanthemum incanum)*



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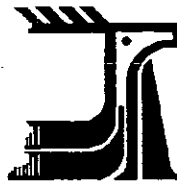


David J. White

**ENDANGERED**  
Update, 1998



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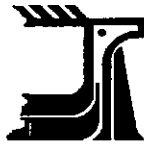
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## Hoary Mountain-Mint

**Reason for status:** Two very small nearby populations with drastic decline in plant numbers and increased threat from exotic plants. [Designated endangered in 1986 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.

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**White, David J. 1998.** Update COSEWIC Status report on Hoary Mountain-Mint, *Pycnanthemum incanum*. Committee on the Status of Endangered Wildlife in Canada. 15 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

**Hoary Mountain-Mint**  
*(Pycnanthemum incanum)*

by

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

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

## Executive Summary

### Description

Hoary Mountain-Mint (*Pycnanthemum incanum*) is a conspicuous, hairy, and fragrant member of the mint family that grows to one metre in height. The plant has broad, opposite, toothed leaves that occur all the way up the stem into the inflorescence. The roundish flower clusters occur primarily at the top of the stem and in the upper leaf axils. The small individual flowers are white with purple spots.

### Distribution

The species occurs in the United States from New England and southern Illinois south to South Carolina. Its only Canadian occurrence is in southern Ontario at two locations that are less than two kilometres apart.

### Habitat

This plant requires open, dry, sandy-clay habitats in open-canopied deciduous woods on warmer-than-normal slopes that can be very steep.

### General Biology

Hoary Mountain-Mint is reproducing in Ontario largely vegetatively with no evidence of new stems that have come from seed. Thus, the small number of plants at the Willow Point site—along with only one plant at the Woodland Cemetery station—leaves the species in a very precarious position if it is not spreading from seed.

### Population Size and Trends

This species is known from only two nearby sites in southwestern Ontario. It appears to be relatively stable at one site where competing shrubby vegetation is being removed. The other population has declined drastically since 1993. A third site found in 1991 cannot be relocated and may have disappeared.

### Limiting Factors and Threats

The primary limiting factor is lack of suitable open, south-facing slopes. Shoreline erosion and encroachment by competing shrubby vegetation are the main threats.

### Existing Protection

Hoary Mountain-Mint is protected under Ontario's Endangered Species Act. Both known stations are on private property.

## **Evaluation and Status**

When the status designation of endangered was assigned in 1986, Hoary Mountain Mint was known from one site in Burlington. Since that time, it has been found at two new sites nearby, however, one site has since disappeared and the other site has only one stem, with the plant's persistence now being very precarious. Hoary Mountain-Mint is considered an endangered species in Canada.

## Résumé

### Description

Le pycnanthème gris (*Pycnanthemum incanum*) est un membre remarquable, velu et odorant de la famille de la menthe qui atteint un mètre de hauteur. Cette plante porte de larges feuilles dentées qui s'opposent le long de la tige jusqu'à l'inflorescence. L'inflorescence en grappes rondes se produit surtout au sommet de la tige et dans les aisselles des feuilles supérieures. Les petites fleurs isolées sont blanches mouchetées de violet.

### Distribution

Aux États-Unis, l'espèce s'étend de la Nouvelle-Angleterre et du sud de l'Illinois vers le sud jusqu'en Caroline du Sud. Au Canada, on ne l'a observé qu'en deux emplacements, éloignés l'un de l'autre de moins de deux kilomètres, dans le sud de l'Ontario.

### Habitat

Cette plante nécessite un sol argilo-sablonneux dans un habitat ouvert et sec, dans des forêts caducifoliées se trouvant sur des pentes plus chaudes que la moyenne, dont la déclivité peut être très forte.

### Biologie générale

En Ontario, le pycnanthème gris se propage surtout par multiplication végétative sans que l'on puisse observer la production de nouvelles tiges par des graines. Sans reproduction par graine, la situation de l'espèce est donc très précaire : on ne trouve qu'un petit nombre d'individus au site de Willow Point et un seul représentant au cimetière Woodland.

### Taille et tendances de la population

On n'a signalé l'espèce que dans deux sites rapprochés du sud-ouest ontarien. Elle semble relativement stable à l'un des sites, où l'on extirpe la végétation broussailleuse concurrente. Depuis 1993, l'autre peuplement a décliné de façon drastique. On n'a pas pu retrouver le troisième site signalé en 1991; l'espèce pourrait en avoir disparu.

### Facteurs limitants et menaces

Le facteur limitant principal est l'absence de pentes ouvertes convenables qui sont orientées vers le sud. L'érosion des berges et l'empiètement des arbustes concurrents constituent les menaces principales.

### Protection existante

Le pycnanthème gris est protégé par la *Endangered Species Act* de l'Ontario. Les deux peuplements connus sont situés sur des propriétés privées.

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

Lorsqu'on a désigné l'espèce comme espèce en danger de disparition en 1986, seul un peuplement de pycnanthèmes gris à Burlington était connu. Depuis ce temps-là, on a découvert l'espèce dans deux nouveaux sites à proximité. Cependant, celle-ci a depuis disparu à l'un des sites, et l'autre site ne contient qu'une plante dont la pérennité n'est pas assurée. On considère que le pycnanthème gris est en danger de disparition au Canada.



## Introduction

Hoary Mountain-Mint (*Pycnanthemum incanum* (L.) Michx.) was designated as endangered in 1986 based on a small population in Canada at Willow Point adjacent to the Holy Sepulchre Cemetery in Burlington (Crins, 1986). Hoary Mountain-Mint requires open, dry, sandy-clay habitats in open-canopied deciduous woods on warmer-than-normal slopes (Crins, 1986).

## Distribution

Hoary Mountain-Mint occurs in the United States from New England and southern Illinois south to South Carolina. Its only Canadian occurrence is in southern Ontario. There are two extant locations: Willow Point in Burlington and Woodland Cemetery in Hamilton. Although the two sites occur in different jurisdictions, they are less than two kilometres apart (Figure 1).

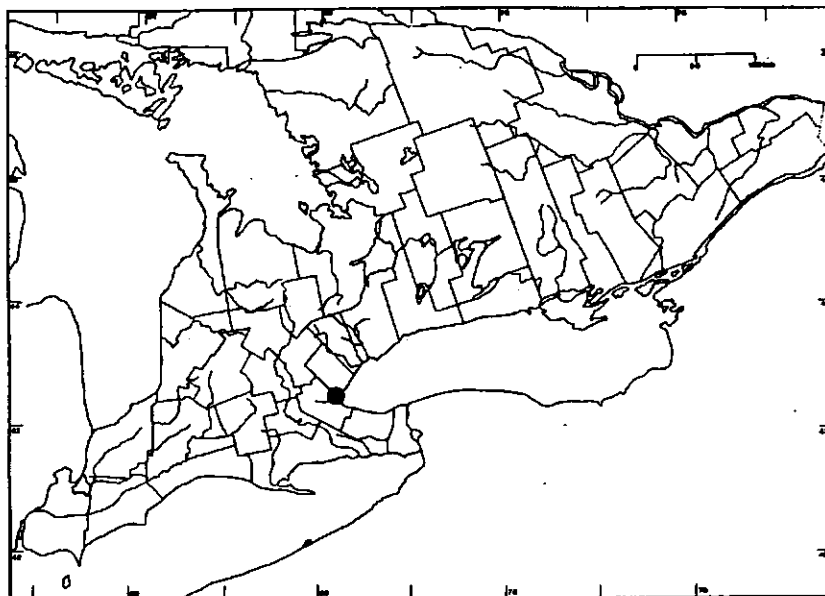


Figure 1. Location of the two extant populations of Hoary Mountain-Mint in Canada.

## Protection

Since the designation of Hoary Mountain-Mint as an endangered species by COSEWIC, the species has been protected under the Ontario Endangered Species Act. The Ontario Ministry of Natural Resources has had discussions with the property owners of the two sites and the owners are aware of the presence of Hoary Mountain-Mint (D. Kirk, pers. com., 1997). Don Kirk, Natural Heritage Ecologist, Cambridge District office of the Ontario Ministry of Natural

Resources, has been monitoring the sites for a number of years. In 1994 Don noticed that the Hoary Mountain-Mint plants at Willow Point were becoming overgrown, were diminished in size, and were hard to find. Although no formal recovery plan has been developed for Hoary Mountain-Mint, Kirk did some manual clearing of competing shrubby vegetation at the Willow Point site in 1995 and 1996 (D. Kirk, pers. com., 1997).

### **Population Size and Trend**

The Willow Point colony was first found in 1981 (Crins, 1986) and in 1984 the colony consisted of 41 stems. In 1986 there were about 40 stems (Oldham, 1997). Stems were not counted in 1994 and 1995 but Don Kirk (pers. com., 1997) noted that the plants were diminished in size and hard to find because of the shrubby vegetation that was taking over the clearing in which the Hoary Mountain-Mint occurred. Don Kirk and the present author counted 48 stems at the site in July 1997.

A new site was found in 1991 adjacent to the Woodland Cemetery by Dave Bradley who was conducting natural area inventories in Hamilton-Wentworth. The new site consisted of 35 stems in one clump (probably all part of one plant) and four single stems (Bradley, 1991). Don Kirk visited the site in 1993 and counted approximately the same number of stems (Don Kirk, pers. com., 1997). Don and the present author counted only one stem at the site (where the 35-stem clump had previously occurred) in July 1997.

Another site – consisting of a single stem – was found in 1991 at the Carrolls Point sand spit by Dave Bradley while conducting natural area inventories in Hamilton-Wentworth. Later in 1991, Don Kirk and Daryl Coulson searched the site and found 3 plants with numerous stems at this new location (Bradley, 1991). Don Kirk and the present author found no Hoary Mountain-Mint at the site in July 1997.

There is a 1971 record of Hoary Mountain-Mint from an area between the Willow Point location and the site at the Woodland Cemetery. The exact locality is unknown and the species has not been seen in that area since 1971 (D. Kirk, pers. com., 1997).

There are other historical records (with vague locality data) from the general vicinity of the four localities documented above that have not been reconfirmed for nearly 100 years (Crins, 1986). These records may have come from one of the four localities or the plants may be assumed to have been extirpated at these historic sites.

Detailed site information has been provided to the Co-chair, Subcommittee for Vascular Plants, Mosses and Lichens (COSEWIC).

### **Habitat**

Hoary Mountain-Mint requires open, dry, sandy-clay habitats in open-canopied deciduous

woods on warmer-than-normal slopes (Crins, 1986). The Woodland Cemetery population occurs in a relatively large opening in the forest that could be described as a 'hanging prairie'. The site is a very steep, south-facing slope dominated by the prairie grasses Little Bluestem (*Schizachyrium scoparium*) and Big Bluestem (*Andropogon gerardii*).

### **Biology**

Crins (1986) felt that Hoary Mountain-Mint was reproducing in Ontario largely vegetatively and saw no evidence of new stems that had come from seed. Although the Willow Point colony had 48 stems in 1997, the number of plants was not determined and is certainly much less than the stem count. Thus, the small number of plants at the Willow Point site—along with only one plant at the Woodland Cemetery station—leaves the species in a very precarious position if it is not spreading from seed.

### **Limiting Factors**

Habitat disturbance by operations related to the adjacent cemetery and encroachment by shrubs are the main threat at the Willow Point site. The Woodland Cemetery site is most at risk from shoreline erosion and slumping. Although the latter site is quite open at present, encroachment by shrubs could also be a factor here in the future. Since the Carrolls Point colony was found in 1991, the point has become overrun with the invasive aliens Garlic Mustard (*Alliaria petiolata*) and Tartarian Honeysuckle (*Lonicera tatarica*) (D. Kirk and D. White, pers. obs., 1997).

### **Evaluation and Status Recommendation**

When the status designation of endangered was assigned in 1986, Hoary Mountain-Mint was known from one site in Burlington. Since that time, it has been found at two new sites nearby, however, one site has since disappeared and the other site has only one stem and is now very precarious. Thus, there is little reason to change the designation of endangered status for Hoary Mountain-Mint.

### **Acknowledgements**

Don Kirk, Natural Heritage Ecologist, Cambridge District, Ontario Ministry of Natural Resources, took the author to all known sites and provided much 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

**Bradley, D. 1991.** Unusual species report for *Pycnanthemum incanum*. Hamilton-Wentworth Natural Areas Inventory. Unpublished. 3 pp.

**Crins, W.J. 1986.** Status report on the Hoary Mountain Mint (*Pycnanthemum incanum*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Canadian Wildlife Service, Ottawa. Unpublished report. 18 pp.

**Oldham, M.J. 1997.** Element Occurrence records of Hoary Mountain-Mint (*Pycnanthemum incanum*) 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 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

<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.



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