

The revised recovery plan for the small whorled pogonia is available by contacting:

Fish and Wildlife Reference Service
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the Small Whorled Pogonia



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DEPARTMENT OF THE INTERIOR
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A Recovering
Endangered Species

Introduction

The small whorled pogonia (*Isotria medeoloides*) is one of the rarest wild orchids in eastern North America and has been reclassified as federally threatened by the U.S. Fish and Wildlife Service. The largest populations of small whorled pogonia are found in central New Hampshire and southern Maine, although the species is widely distributed in the eastern United States and Ontario, Canada. Concerns about habitat loss led to the listing of this species as endangered in 1982. Since it was listed, botanists have located additional populations and sought to protect a number of sites. The success of finding more populations and protecting them led to the 1994 reclassification of this species.

However, being placed on the Federal Endangered Species List does not provide universal protection to the small whorled pogonia. Most population losses in the past occurred simply because landowners were unaware of the presence of small whorled pogonia on their property. Therefore, informed and concerned citizens continue to make a huge difference in the protection and recovery of this plant.

How to Recognize Small Whorled Pogonia

Careful inspection of a plant in the field can easily determine if it is the small whorled pogonia. Thus, collecting a specimen for identification is not necessary.



Diana Dee Tyler

The small whorled pogonia is a wildflower that reappears in the spring from a perennial underground rootstock. The stems usually occur singly (sometimes in groups of two or three), and are usually 3-6" (8-15 cm) tall. The elliptical leaves, usually numbering five, are 1-3" (2.5-8 cm) long and grow in a single whorl at the top of the stem. Flowering individuals have one (occasionally two) greenish-yellow flower, about 1" (2.5 cm) long, borne atop the whorl of leaves. The cylindrical fruit capsule which can develop after flowering is up to 1" (2.5 cm) long. It turns from green to brown as it dries. By late fall, it splits and releases thousands of dust-like seeds.



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This rare orchid could be confused with similar forest plants such as the large whorled pogonia or the Indian cucumber-root. The large whorled pogonia (*Isotria verticillata*), found occasionally from southern New England southward can grow in the same habitat as small whorled pogonia. The large whorled pogonia differs from the small whorled pogonia in several characteristics: its sepals are brownish, not green; and the flower is separated from the leaves by a longer stalk (more than 2 cm or 3/4" long).

Indian cucumber-root (*Medeola virginiana*) is a very common woodland plant with a strong resemblance to small whorled pogonia. Indian cucumber-root's leaves are deeper green than those of small whorled pogonia; the stem is thin and wiry, and has fine hairs, compared to that

of small whorled pogonia which is thicker, pale green, and hairless. Small individuals of Indian cucumber-root have just one set of leaves, like small whorled pogonia, but reproducing individuals are easily distinguished by having two whorls of leaves.

Characteristic	Small Whorled Pogonia	Large Whorled Pogonia
stem color	usually grayish-green	purplish
leaf orientation*	pointed downward	pointed upward
leaf color	grayish-green	dark green
flower stalk	very short or absent	present
sepal length	less than 1 inch	1.25 to 2.5 inches
sepal color	grayish green	purplish
sepal position	arching over flower	widely spreading
fruit stalk length	equal to fruit	twice as long as fruit

*when plants begin flowering

Habitat

The small whorled pogonia grows in a variety of wooded habitats. Most sites are mid-successional mixed woods with trees 40 to 75 years old and 8-18" in diameter. Maple and oak, beech, and white pine are common tree species. The shrub and herb layers where small whorled pogonia grows are usually sparse. Herbaceous plants often associated with small whorled pogonia in the northern part of its range include Indian cucumber-root (*Medeola virginiana*), New York fern (*Thelypteris novaboracensis*), partridge berry (*Mitchella repens*), and rattle-snake plantain (*Goodyera pubescens*). Witch-hazel (*Hamamelis virginiana*) is a common shrub.

Most small whorled pogonia populations grow on gently sloping ground, often with thick leaf litter. Many sites are underlain by soils with a hardpan layer that impedes the downward flow of water and leads to the formation of shallow braided channels on the ground surface. Soils in which the small whorled pogonia grows are generally dry during most of the growing season.

Virtually all known small whorled pogonia sites in New England are on lands with signs of human use in the

not-too-distant past. Many are in woods laced with old stone fences, indicating that they were once cleared. The forests often contain decaying stumps as well, evidence of timber harvest following regrowth of the forest. Several populations are in woods that have been selectively harvested in the last twenty-five years. Exactly how selective tree harvest affects this plant is still under study.

Most populations of small whorled pogonia contain fewer than twenty plants at any one time, though New Hampshire and Maine are home to several large populations with fifty to five hundred individuals. Virginia and North Carolina also have a few large populations.



Diana Dee Tyler

Conservation

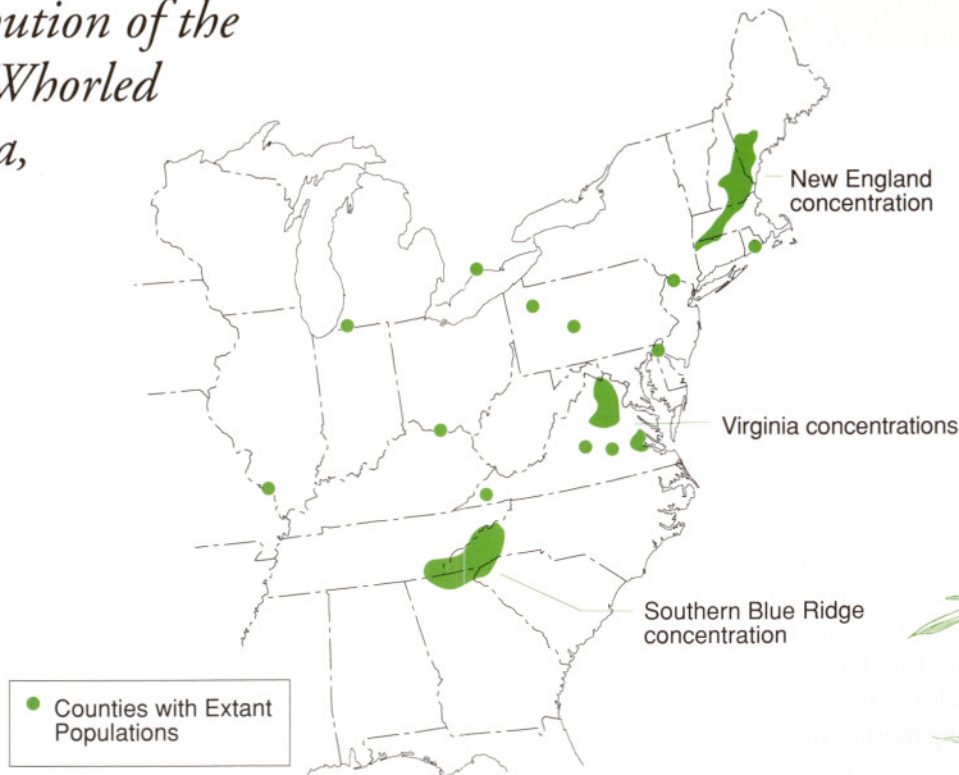
During the last fifteen years federal and state governments, non-profit organizations and private citizens have worked hard to protect this species by conducting detailed biological studies, searching for new populations, and informing landowners. Several important populations are now protected through voluntary easement or acquisition. Most populations are on private land, and landowner awareness and involvement is critical. The primary impact continues to be the destruction of habitat by converting the forest to other uses. Numerous former small whorled pogonia sites are now housing developments, shopping centers, or golf courses. Digging up the plants is a very real threat as well. Small whorled pogonia plants need to be left in the wild; they do not survive long after being transplanted.

If You Find Small Whorled Pogonia

Private landowners with small whorled pogonia on their property can help by preventing people from picking or digging the orchid and by leaving the sites forested. Interested citizens can help by being alert for small whorled pogonia when walking through the woods, and by becoming involved in volunteer plant conservation activities.

If you find plants that appear to be the small whorled pogonia, carefully note their location and if possible photograph the plant. Please do not pick the plant! Notify your state's natural areas program or natural heritage program, or the nearest U.S. Fish and Wildlife Service office.

Distribution of the Small Whorled Pogonia, 1994



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