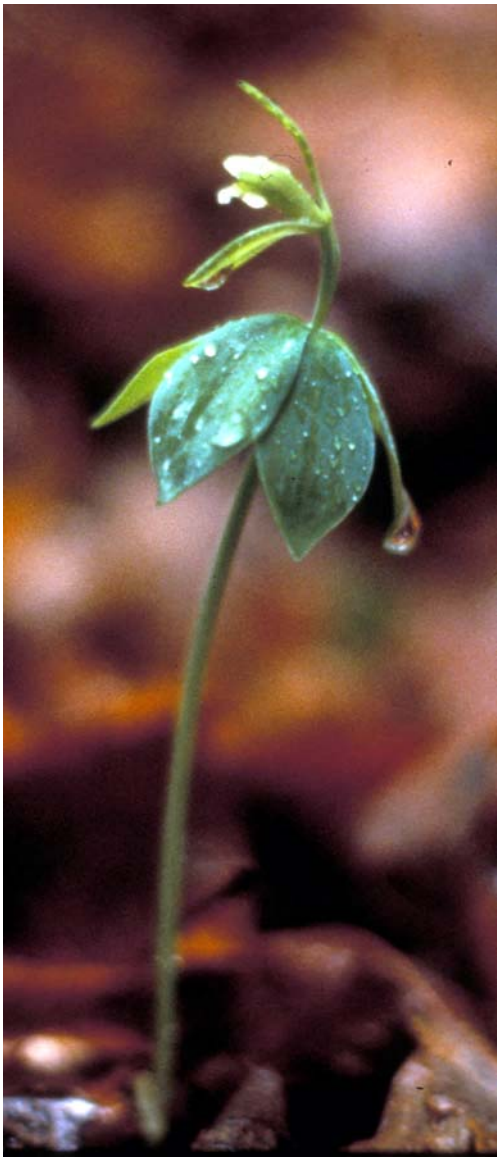
U.S. Fish & Wildlife Service

Small Whorled Pogonia



The federal Endangered Species Act
The Endangered Species Act of 1973, as amended (Act), recognizes that many of our nation's valuable plant and wildlife resources have been lost and that other species are close to extinction. The Act provides a means to help preserve these species and their habitats for future generations. The U.S. Fish and Wildlife Service added small whorled pogonia to the *Federal List of Endangered and Threatened Wildlife and Plants* as and endangered species on October 12, 1992.

Description, habitat, and biology
Small whorled pogonia is probably the rarest orchid in North America. Uncommon across its range, it has been found from Maine, west to Illinois, and South to Georgia, with population concentrations in the Southern Appalachians, Virginia, and New England. It has a greenish white stem that grows from 3 to 13 inches tall. It gets its common name from the five or six grayish green leaves that are displayed in a circular whorl-type pattern. When the leaves are well developed, a single flower (or sometimes a pair) rises from the center of the circle of leaves. The flowers are yellowish-green with a greenish-white lip. Each flower has three sepals of equal length that spread outward. The flowers are scentless, lack nectar, and are primarily self-pollinating. The plant produces fruit that ripens in the fall. The seeds contain very little food reserves and therefore need to fall on soil that contains mycorrhizal fungi in order for the seeds to germinate and for the seedlings to become established. An over-wintering vegetative bud may form in late August or September. Occasionally small whorled pogonia will reproduce vegetatively, without the use of seeds.

Small whorled pogonia can be limited by shade. The species seems to require small light gaps, or canopy breaks, and generally grows in areas with sparse to moderate ground cover. Too many plants in an area can be harmful to the plant. This orchid prefers to live under canopies that are relatively open or near features that create long-persisting breaks in the forest canopy, such as a road or a stream. It grows in mixed-deciduous or mixed-deciduous/coniferous forests that are generally in second- or third-growth successional stages. The soils in which it lives are usually acidic, moist, and have very few nutrients.

Why is small whorled pogonia so rare?
Habitat destruction is the primary threat to small whorled pogonia. Commercial and residential developments have encroached on populations and eliminated what once was productive habitat. Development decreases the amount of available habitat for deer, concentrating their numbers. This, in turn, increases pressure on the plants. Herbivory by white-tailed deer threatens some of the remaining populations.

Why should we be concerned about the loss of species?
Extinction is a natural process that has been occurring since long before the appearance of humans. Normally, new species develop (through a process known as speciation) at about the same rate as other species become extinct. However, because of air and water pollution, forest clearing, loss of wetlands, and other human-induced environmental changes, extinctions are now occurring at a rate that far exceeds the speciation rate. Since the Pilgrims landed at Plymouth Rock in 1620, more than 500 species, subspecies, and varieties of our nation's plants and animals have become extinct. By contrast, during the 3,000 years of the Pleistocene Ice Age, all of North America lost only about 90 species.

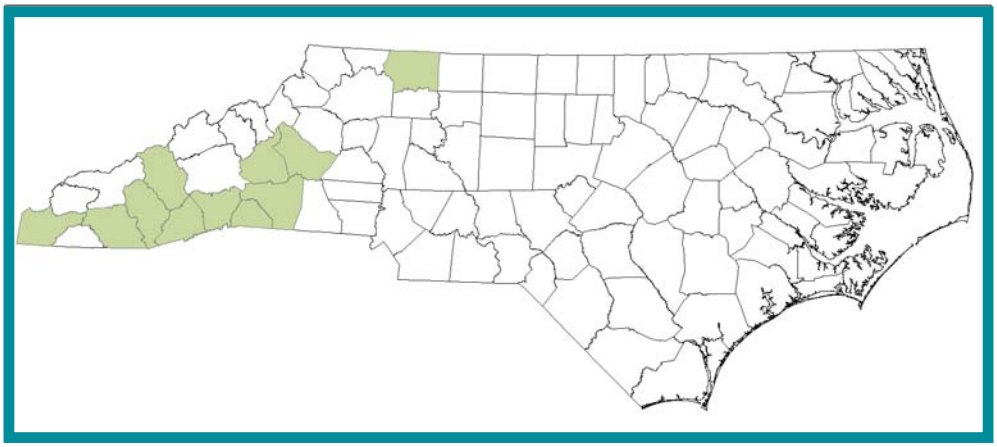
All living things are part of a complex and interconnected network. The removal of a single species can set off a chain reaction that could affect many other species. For example, the loss of a single plant species can result in the disappearance of up to 30 other species of animals and plants. Each plant and animal extinction diminishes the diversity and complexity of life on earth.

Furthermore, wild plants and animals are important to the development of new and improved medicines, agricultural crops, and other industrial products. One fourth of all the prescriptions written in the United States today contain chemicals that were originally discovered in plants and animals. Industry and agriculture are increasingly making use of wild plants, seeking out the remaining wild strains of many common crops, such as wheat and corn, to produce hybrids that are more resistant to disease, pests, and marginal climatic conditions. If these organisms had been destroyed before their values were known, their secrets would have died with them. When a species is lost, the benefits it might have provided are gone forever.

What you can do to help

- Tread lightly, and stay on designated trails. On some popular mountains, the vegetation has been virtually destroyed by human trampling.
- Do not disturb or touch small whorled pogonia plants. The salts on your hands may attract slugs, which are serious pests for this orchid.
- Visit arboretums, botanical gardens, and parks to learn all you can about endangered plants and the causes of their decline.
- Don't collect or buy plants that have been gathered from wild populations.
- Participate in the protection of our remaining wild land and the restoration of damaged ecosystems.
- Be careful with the use and disposal of pesticides and other chemicals, especially near sensitive habitats.
- Recycle as much as you can. As landfills become full, new ones are often placed in uninhabited areas, causing the destruction of hundreds of acres of wild habitat.

Wild land and the plant and animal life that inhabit unique natural places are now dependent on us for survival. These natural places, with their diversity of life, can be enjoyed by and benefit all of us; with our help, they can be there for future generations.



Small whorled pogonia county distribution in North Carolina

Prepared by:
U.S. Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801
828/258-3939