

Threatened and Endangered Plants of Ohio

There are roughly **1,800** plant species in Ohio. How many do you think are considered rare? The answer is over **600** species! That is at least a third of Ohio's plant species. As of the end of 2018, **608** are state listed as **extirpated, endangered, threatened, or potentially threatened**. These plants can be rare for several reasons and each species' case is unique. Some of the reasons these species may be so scarce could be **habitat loss or fragmentation, pollution**, climate change, and **invasive species**. When a species is officially listed by the federal or state government, they are then given certain protections in order to help prevent their **extirpation or extinction**.

Definitions:

Extirpation- a local extinction, when a species or population no longer exists within a certain geographical location but continues to exist in populations located elsewhere

Extant- still in existence

Extinction- the dying out of a species

Endangered- a species that is in danger of extinction throughout all or a significant portion of its range

Threatened- a species that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range

Habitat Loss- when habitat is altered to the point it can no longer support its native species

Fragmentation- the division of larger, continuous ecosystems and habitats into smaller isolated parcels.

Pollution- harmful substances deposited in the air, water, or land leading to a state of dirtiness, impurity, or unhealthiness

Invasive species- a plant or animal, typically not native to an ecosystem and whose introduction causes harm to the economy, environment, or human health

Range- the geographical area where a species can be found

To learn more about rare listed plant species in Ohio and how a species' classification is determined, check out <http://naturepreserves.ohiodnr.gov/rareplants>. Every two years, the **Ohio Department of Natural Resources Division of Natural Areas and Preserves** revises the rare native Ohio plants list. On their website you can find all the listed species and information about them.

Of the **608** plant species listed in Ohio, six of them are also federally listed. This means that their existence in all the United States is in danger. Five of the six plants are federally threatened, and one is federally endangered, **Running Buffalo Clover**. The federal list of endangered species is regulated by the U.S. Fish and Wildlife Service.

The factors that may lead a species to become federally listed include:

- The present or threatened destruction, modification, or curtailment of its habitat or range
- Overutilization for commercial, recreational, scientific, or educational purposes
- Disease or predation
- The inadequacy of existing regulatory mechanisms
- Other natural or manmade factors affecting its survival

Species of animals and plants in Ohio that are federally listed can be found at <https://www.fws.gov/midwest/endangered/lists/ohio-spp.html>

The following is information about the six Ohio plant species federally threatened or endangered.

For an activity related to rare species, check out PLT's **Life on the Edge**.

Eastern Prairie Fringed Orchid (*Platanthera leucophaea*)



Ohio: Threatened

U.S.: Threatened

Appearance: 8 to 14 inches tall with an upright leafy stem with a flower cluster called an inflorescence. Each plant has one single flower spike of 5 to 40 creamy white flowers. Each flower has a three-part fringed lip and a tube-like structure.

Range: IA, IL, IN, ME, MI, MO, NY, OH OK, PA,VA, WI, CAN: ON

Habitat: It occurs in a wide variety of habitats from prairie to wetlands. It requires full sun and a grassy habitat with little or no woody plants. It has a symbiotic relationship with soil fungus called mycorrhizae which it needs to establish seedlings. It also relies on a specific pollinator: night flying hawkmoths.

Why is it threatened? Its initial threat was elimination of its habitat which was cleared and drained for agricultural use. Additional threats include the succession of woody plants and invasive species.

Lakeside Daisy (*Hymenoxys herbacea*)



Ohio: Endangered

U.S.: Threatened

Appearance: This bright yellow daisy is a long-lived perennial. Each plant has leaves growing in a circle at the base of a stem 6 to 11 inches tall. Each stem produces a single flower on top. All individuals tend to bloom at the

same time and the flower heads follow the sun across the sky.

Range: It is likely the Lakeside Daisy used to be in prairie habitats throughout the Midwest. It is endemic to the Great Lakes area. It is currently still present in Ohio, Illinois, and the Upper Peninsula of Michigan. It also has populations on Manitoulin islands of and the Bruce peninsula of Ontario, Canada. It is named after Lakeside, OH one of its best-known sites.

Habitat: This flower grows in dry, rocky prairie grassland or cliffs with underlain limestone. They need open sites with full sun.

Why is it threatened? Limestone quarrying destroys its native habitat. Fires suppression has also threatened the daisy because natural fires that would maintain prairies have been prevented causing a loss of prairie habitat. The lack of fire allows woody plants to continue growing in areas that used to be prairies. Shoreline development also threatens the Lakeside Daisy's habitat.

Running Buffalo Clover (*Trifolium stoloniferum*)



Ohio: Endangered

U.S.: Endangered

Appearance: *Running* buffalo clover produces runners that extend from the base of stems and run along the surface of the ground. The runners can grow roots expanding the size of small clumps of clover into larger ones. The white flower heads are about 1 inch wide and grow on stems 2-8 inches long.

Range: IN, KY, MO, OH, WV. It has been extirpated from AR, IL, and KA. It is found in the southwest corner of Ohio.

Habitat: This species requires periodic disturbance and somewhat open habitat, not full sun or full shade. It historically was found in the areas between prairie and forest where bison would roam. Now it is found in partially shaded woodlots, mowed

areas, and along streams and trails.

Why is it threatened? This clover species may have been depended on the bison to disturb areas, create habitat, and disperse seeds. Agriculture and development have also caused habitat loss and fragmentation. Competition from non-native invasive plants such as white clover, garlic mustard, and Japanese honeysuckle also threaten running buffalo clover.

Northern Monkshood (*Aconitum noveboracense*)



Ohio: Endangered

U.S.: Threatened

Appearance: Noted for its distinct blue hood-shaped flowers, they are about one inch in length. One stem will grow 1 to 4 feet tall and may have many flowers. It blooms between June and September and are pollinated by bumblebees.

Range: Iowa, Wisconsin, Ohio, and New York. In Ohio, Northern Monkshood is found in Hocking County and Portage and Summit counties in the northeast.

Habitat: This species prefers shaded to partially shaded cliffs and ravines near cool running water and a rare ecosystem called algific talus slopes. Algific (cold air) Talus (loose rock) slopes have sinkholes containing frozen groundwater. These sinkholes cause

cool conditions year-round. Northern Monkshood grows in areas like this with cool soil conditions, cold air, or cold groundwater flowage.

Why is it threatened? This native perennial flower is threatened by habitat loss and degradation from the filling of sinkholes. Its habitat is also threatened by grazing by livestock, human foot traffic, logging, quarrying, road building, and maintenance of highways and powerlines.

Virginia Spiraea (*Spiraea virginiana*)



Ohio: Endangered

U.S. Threatened

Appearance: This perennial shrub grows up to 10 feet tall. The leaves are lighter underneath and darker on top. Its yellowish green to pale white flowers area in tightly packed bunches. The plant has a clonal root system so it can fragment and create new plants.

Range: This Southern Appalachian species is found in isolated populations in Alabama, Georgia, Kentucky, North Carolina, Ohio, Tennessee, Virginia, and West

Virginia. It no longer occurs in Pennsylvania.

Habitat: Virginia spiraea grows along rivers and streams and needs periodic disturbances, like flooding, which eliminate competition from trees and other woody vegetation.

Why is it threatened? Due to its specific habitat requirements, changes in stream flow threaten the plant. These changes can be caused by several activities such as road construction, unmanaged recreational use of rivers, and industrial development or river corridors. It is also threatened by competition from non-native invasive plants.

Small whorled Pogonia (*Isotria medeoloides*)



Ohio: Endangered

U.S.: Threatened

Appearance: This flower has a greenish-whitish stem that grow three to 13 inches tall. It has five or six grayish-green leaves that are displayed in a single whorl around the stem. From the center of the whorl of leaves, one or two greenish-yellow flowers form with a greenish white lip.

Range: The small whorled pogonia is widely distributed, present in 18 eastern states. However, it is a rare plant and is typically found in small populations of only 20 plants or less. In Ohio, its been found in Hocking and Scioto counties.

Habitat: It grows under forest canopies where there are gaps letting sunlight reach the forest floor. It is typically found in areas with little other ground cover, so will not grow in dense areas. It usually grows in soils that are acidic, moist, and have very few nutrients.

Why is it threatened? Small whorled pogonia's primary threat is habitat destruction. This has been the result of commercial and residential development. Development has also reduced the habitat available for deer, causing their populations to become more dense and increasing deer herbivory on plants such as this one. The plant also struggles from low rates of seedlings establishment which means new plants do not replace old ones as they die.

Sources:

The Ohio Department of Natural Resources Division of Natural Areas and Preserves has Fact Sheets on rare plant species of Ohio available for download at <http://naturepreserves.ohiodnr.gov/rareplants>

- ***Aconitum noveboracense*. Northern Monkshood**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Aconitum_noveboracense.pdf
- ***Tetaneuris herbacea*. Lakeside Daisy**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Tetaneuris_herbacea.pdf
- ***Platanthera leucophaea*. Eastern Prairie Fringed Orchid.**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Platanthera_leucophaea.pdf
- ***Trifolium stoloniferum*. Running Buffalo Clover.**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Trifolium_stoloniferum.pdf
- ***Spiraea virginiana*. Virginia Spiraea.**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Spiraea_virginiana.pdf
- ***Isotria medeoloides*. Small Whorled Pogonia.**
http://naturepreserves.ohiodnr.gov/portals/dnap/pdf/Rare_Plant_Abstracts/Isotria_medeoloides.pdf

U.S. Fish & Wildlife Service also has fact sheets available in an online format or downloadable PDFs for federally listed species.

U.S. Fish & Wildlife Service. March 25, 2019. Small-whorled pogonia. Southeast region. Department of the Interior. Accessed from <https://www.fws.gov/southeast/wildlife/plants/small-whorled-pogonia/>

U.S. Fish & Wildlife Service. May 29, 2019. Lakeside Daisy. Midwest Region Endangered Species. Department of the Interior. Accessed from <https://www.fws.gov/midwest/endangered/plants/lakesidedaisy/index.html>

U.S. Fish & Wildlife Service. January 2, 2020. Lakeside Daisy. Midwest region – Ohio Ecological Services. Department of the Interior. Accessed from <https://www.fws.gov/midwest/ohio/EndangeredSpecies/LakesideDaisy.html>

U.S. Fish & Wildlife Service. March 25, 2019. Virginia spiraea. Southeast region. Department of the Interior. Accessed from <https://www.fws.gov/southeast/wildlife/plants/virginia-spiraea/>

U.S. Fish & Wildlife Service. November 2007. Midwest Region Endangered Species. Northern Monkshood Fact Sheet. Accessed from <https://www.fws.gov/midwest/endangered/plants/monkshoo.html>

U.S. Fish & Wildlife Service. August 3, 2015. Driftless Area. National Wildlife Refuge. Iowa and Wisconsin. Department of the Interior. Accessed from https://www.fws.gov/refuge/Driftless_Area/wildlife_and_habitat/index.html