



Cottonwood Trail Restoration Project

What is a Native Plant?

Native plants are species that grow naturally in an area without human intervention. In North America, that means species that were present before European settlers first arrived. Native plants are sometimes threatened by invasive plants that were introduced by people.

The Role of Native Plants

In wetland ecosystems, native plants provide natural flood control, produce rich organic soils, and create food and shelter for wildlife. During heavy rain and storms, runoff and flooding occurs when rain flows over roads, driveways, and parking lots instead of being absorbed by natural vegetation. Native plants act as a sponge



Swamp milkweed

and filter absorbing runoff into their roots and soil, which reduces flooding. These plants then enrich the soil with the nutrients (carbon, sulfur, phosphorus, nitrogen) absorbed by their roots. When invasive plants take over a wetland, they can change the balance of nutrients in the soil, threatening the growth of native plants. If a variety of native plants are lost then the biodiversity of plants and animals could be in danger. A variety of native plants in a wetland is an indicator that the habitat is doing well.

Wetland Restoration

Wetland management and restoration involves supporting native plant growth while stopping or slowing the spread of invasive species. Stark Parks manages our native plant populations throughout Stark County through careful study and planning. In 2015, staff and volunteers removed invasive plants, performed a controlled burn, and began reintroducing native plant species into the Cottonwood Wetlands. Before these efforts began, this wetland was out of balance and filled with invasive plants, but it will now have an opportunity to return to a healthy, balanced ecosystem with more habitat for wildlife.

To learn more or find out how you can help, visit
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Spatterdock and duckweed

Common Native Wetland Plants

Healthy wetlands support a wide variety of natives from common cattails and flowering duckweed to less commonly known species such as arrow arum and the sensitive fern. Stark Parks reestablished a variety of native plants commonly found in wetland environments during the restoration of the Cottonwood Wetlands. Common native plants you may observe include:

Common Name	Scientific Name
Fragrant water lily	<i>Nymphaea odorata</i>
Spatterdock	<i>Nuphar advena</i>
Greater duckweed	<i>Spirodela polyrhiza</i>
Common duckweed or lesser duckweed	<i>Lemna minor</i>
Arrow arum	<i>Peltandra virginica</i>
Common cattail	<i>Typha latifolia</i>
Duck potato or broadleaf arrowhead	<i>Sagittaria latifolia</i>
Bulrush	<i>Scirpus tabernaemontani</i>
Skunk cabbage	<i>Symphlocarpus foetidus</i>
Swamp milkweed	<i>Asclepias incarnata</i>
Marsh cinquefoil	<i>Potentilla palustris</i>
Marsh marigold	<i>Caltha palustris</i>
Marsh fern	<i>Thelypteris palustris</i>
Sensitive fern	<i>Onoclea sensibilis</i>



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The Importance of Wetlands

Wetlands are areas of land covered with shallow water or with water near the ground's surface throughout much of the year. Biologically diverse and naturally effective in controlling the flow of storm water, wetlands are an essential part of a healthy ecosystem and a valuable resource to people, plants, and wildlife.

Healthy wetlands are comparable to the rain forest in the number of species that these specialized habitats support.

Wetlands are sometimes called "nurseries of life" because of their biodiversity, the wide variety of plant and animal life that live in them. The abundant plant life and shallow water provides a home and hunting ground for many wildlife species.



Restored Cottonwood Wetlands

Like a natural sponge, healthy wetlands absorb and slow storm water flow after rainfalls. This reduces flooding, decreases erosion downstream, and allows underground water sources to refill. Wetland vegetation naturally filters excess nutrients from fertilizers, leaking septic tanks, manure, and other impurities. These are absorbed by wetland plants adapted to this environment and digested by microorganisms within the wetland.



Healthy wetland soil

Loss of Wetlands

Human activity is the single greatest threat to wetlands. An early federal law, the Swampland Act of 1850, encouraged states to fill in or drain wetlands to increase the agricultural and development potential of the land. The view of wetlands as "wasteful" space played a significant role in their degradation nationwide. State and federal protections enacted in the 1970s began to slow the loss of wetlands. Nearly 220 million acres of wetlands once dotted the continental United States, but today less than half of those remain. Ohio's once 5 million acres of wetlands now number less than 484,000 acres. That's a loss of 90%!

Cottonwood Wetlands Restoration

The restoration of a degraded wetland to its natural state is a complex process requiring planning, resources, expertise, and community support. Stark Parks is partnering with local experts from Kent State University, Walsh University, and Malone University to restore the 4.3 acre Cottonwood Wetlands. These wetlands act as a buffer zone between the surrounding land and water, enhancing conservation of the local area as a whole. The restoration of these wetlands also directly contributes to the health of the larger regional water system, the Muskingum River Watershed.

The goals of the Cottonwood Trail Restoration Project are to:

- Retain sufficient water on site to support the wetland ecosystem while reducing area flooding by slowing excess storm water created during heavy rains;
- Create high quality plant and animal habitats by reducing non-native and invasive plant species and encouraging increased native plant and animal diversity;
- Enhance educational opportunities for students and the public;
- Leave an improved natural resource for future generations of Stark County residents.

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What is an Invasive Species?

An invasive species is an exotic, non-native species that is harmful to the ecosystem, economy, or environment. There are over 70 species of invasive plants in Ohio—including garlic mustard, Japanese honeysuckle, multi-flora rose, autumn olive, and shiny buckthorn—and over 5,000 nation-wide. These invasive plants deplete groundwater resources and crowd out native plants. They decrease biodiversity by creating a monoculture so that where many species of plants used to grow, now there is only one. This disrupts the ecosystem and threatens native wildlife, especially birds and amphibians, by displacing the native plants those animals rely on for food or shelter. Approximately 42% of endangered species in the United States are listed due to competition with invasive species.



Autumn olive

What makes a plant invasive?

Several factors allow invasive plants to grow, multiply, and spread quickly. They have high seed and fruit production and efficient seed dispersal, so they can reproduce many new plants quickly. Their seedlings then germinate quickly, allowing the plant to grow and access important resources such as nutrients and sunlight at a much faster rate than native plant species. Invasive plants are not found naturally in their new habitats and therefore have no natural predators in their new homes. Native animals do not recognize them or use them as a food source, so the invasive plants grow unchecked. For all these reasons, invasive plants are often able to out-compete native plants and alter the natural balance of ecosystems that they invade.

How Did They Get Here?

Invasive species were introduced by humans for a variety of reasons. Some species, such as purple loosestrife, were introduced because people liked the appearance of these plants and planted them in their gardens. Others were introduced for their usefulness in erosion control, medicine, or as a source of food. The people who

brought these plants to the United States were unprepared for their rapid growth and reproduction, and these introduced plants rapidly took over the landscape.

What Can Be Done?

It is very difficult to control the growth of invasive plant species. Typically, invasive plants must be controlled by physically removing individual plants. Some success has been had in using commercial weed killer products, and in introducing insects found in the plants' native homes that use these plants as food source.

In 2015 Stark Parks cleared 4.3 acres of invasive species from the Cottonwood Wetlands, performed a controlled burn, and reintroduced native plants to the wetland. Continued monitoring and maintenance will encourage these native plants to thrive, and over time the ecosystem will return to balance and displaced native wildlife will return to the restored habitat.

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Controlled burn



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Wetlands are for Wildlife

Healthy wetland habitats are essential to the survival of many wildlife species. More than half of threatened or endangered species in the United States rely on wetlands for their survival at some point in their life cycles. Over one-third of threatened and endangered species live only in wetlands. Many species that depend on wetlands are declining as their habitat is lost. The Cottonwood Trail Wetland Restoration Project aims to restore habitat and support wildlife diversity.

Reptiles

Numerous species of reptiles rely on wetlands for a safe habitat and food supply. In the Cottonwood Wetlands you may see snapping turtles and painted turtles basking on logs in the water. The diversity of wildlife



Eastern painted turtles

also provides an ample food supply for snakes, such as garter snakes and fox snakes, that hunt small animals.

Amphibians

Amphibians depend on wetlands for reproduction. As the snow melts in the spring, many of these species arrive at wetlands to breed. Young amphibians remain in the water and eat wetland insects, plants, and macroinvertebrates. In healthy or restored wetlands, many species of amphibians will thrive, including spotted salamanders, common toads, bullfrogs, spring peepers, green frogs, and wood frogs. In the Cottonwood Wetlands, you are likely to hear a chorus of frogs and may even be lucky enough to see one before it jumps into the water!

Insects

Many species of insects can only survive in wetland habitats, and healthy wetlands have a wide diversity of insects. The flowers of native wetland plants attract many pollinators such as butterflies, moths, and both wild and domestic honeybees. In the Cottonwood Wetlands you might see water striders gliding across the water, jewel colored dragonflies and damselflies flying through the air, as well as diving beetles and other aquatic insects.

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Mink

Birds

Wetlands are important stopover points for migratory birds to rest, feed, and recover from their travels. Many migratory birds also use wetlands as breeding grounds and nesting sites. During the spring, the calls of many migratory bird species fill the air. Common wetland bird species include great blue herons, green herons, and wood ducks in addition to seasonal migratory waterfowl, shorebirds, and songbirds.

Mammals

The biodiversity of wetlands make them ideal habitats with food sources for many types of mammals. Herbivorous mammals, such as muskrats dine on the roots and shoots of aquatic plants. Carnivorous mammals, such as the mink (a semi-aquatic member of the weasel family) hunt frogs, crayfish, birds, and small mammals. Bats, insectivorous mammals, fly over the wetlands at night hunting insects.