

Renovated Wetland Guide

To the Wetland on the Property of
Shepherd's Corner Ecology Center



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The Wetland at Shepherd's Corner

A wetland is vital to the health of an ecosystem. Firstly, wetlands are one of the most productive ecosystems on the planet, next to rainforests and coral reefs. This is because SO MANY different types of life are a part of it; microbes, plants, insects, amphibians, reptiles, birds, fish and mammals are all dependent on and beneficial to the ecosystem. For example, the bats that live in the bat houses over at Web of Life depend on the wetland to attract insects such as mosquitoes so that they can eat.

Wetlands also act as natural filters from the earth, removing toxins and sediments from the water. By removing sediment from the water that may contain harmful materials to plants or animals, the sediment becomes locked in the sediment layer. If this layer is left undisturbed, all pollutants contained in it will remain locked away, keeping plants and animals safe. However, wetlands must be maintained; biodiversity is crucial to a successful wetland - the more plant species, the better the wetland is as a filter. However, if invasive plants come in and out-compete native species, then it will impede water flow and the filtering capabilities of the wetland will be stunted.

Let's look at what some of those good and bad plants may be.

Buttonbush

Cephalanthus occidentalis

The buttonbush is a flowering plant that prefers wet soils, making it ideal for a wetland such as this one. For several weeks in the summer, white spherical flowers form all over the plant. This plant often grows anywhere from 6 to 12 feet. As well as being a native Ohio plant that benefits the biodiversity of the wetland, ducks and other aquatic birds also like to consume the seeds.



Redosier Dogwood

Cornus sericea

Redosier dogwood has red stems and small white flowers. This plant is also quite versatile, being able to grow in almost all conditions, including wet soil. This plant often grows to 7 to 9 feet. This plant creates a dense cover for wildlife while also providing food for birds in the form of its berries. Not only that, but this plant also is home to 115 species of *lepidoptera*, which is the order of insects that includes butterflies and moths.

Arrowwood Viburnum

Viburnum dentatum

Arrowwood is a multi-stemmed plant that produces flowers in the summer which turns into berries in the fall. Though this plant is beneficial to the wetland, it prefers to be in more well-drained soils a little further out from the wetland. This plant produces food, cover, and nesting sites for birds as well as larval food for butterflies and moths. Unlike other wetland plants, arrowwood viburnum's leaves change to red and orange colors in the fall.



Tussock Sedge

Carex stricta

There are many different types of sedges, but the one around this wetland is the tussock sedge. This plant is a type of grass. This plant, like many others in this book, prefers a wet environment. You will find this growing around the edges of the wetland. This plant is shorter than the other plants mentioned, growing only up to about 12-18 inches. This plant is also a great host for lepidoptera, hosting about 36 species.



Soft Rush

Juncus effusus

Very similar to the tussock sedge in purpose and environment, the soft rush is a grass-like plant that grows around the edges of wetlands. However, the soft rush has rounded stems as opposed to the blades of grass that tussock sedge grows. It can also get quite a bit higher, at around 4 feet. It also grows very small brownish-green flowers on the sides. This plant, like many others, attracts birds.

Cardinal Flower

Lobelia cardinalis

The cardinal flower is a bright red flower that blooms in late summer. This flower prefers moist soils and adds some color to the otherwise very green wetland. This plant is also a favorite of hummingbirds. It also hosts 4 different species of butterflies and moths. The flowers grow in spikes with 3 lower petals and 2 upper. This flower can grow up to about 4 feet with a spread of up to 2 feet.



Great Blue Lobelia

Lobelia siphilitica

This flower is similar to the cardinal flower, in appearance and in environment. An alternate name for this flower is actually the “blue cardinal flower.” This plant also prefers a wet environment, blooms in late summer, and grows in spikes. This plant is slightly shorter, growing only up to about 3 feet. This one is a favorite of butterflies and hummingbirds as well.



Beneficial Plants

All of the plants mentioned in the pages before are incredibly beneficial to the life of the wetland. These seven plants were recently introduced to the wetland to help the wetland survive and function as intended. As previously mentioned, the more plants in an ecosystem, the better. All of them have a different role in the ecosystem, whether that is providing cover, attracting insects, birds, e.t.c, or providing food for wildlife.



Harmful Plants

However, some things in the wetland are not supposed to be there and are actively harmful to the ecosystem. Many species of plants or animals are invasive, and block the wetland from doing what it needs to, in filtration and in wildlife sustenance. Recently, many of these plants were removed to make room for the plants mentioned above. Descriptions of 2 of those plants will be on the following pages.



Autumn Olive

Elaeagnus umbellata

This plant came over from Asia in the 1800s and started being more widely used in the 1950s for erosion control. This plant has wavy-edged greying-green leaves. This plant also grows a reddish fruit. It also has bell shaped yellow-white flowers. This plant is incredibly resilient and hard to kill and will take over any and all native plants. This is incredibly dangerous to a wetland, because



as previously mentioned, biodiversity is vital to the health of a wetland. If autumn olive takes over all beneficial native plants, then there will only be one plant species around the wetland. When removing these plants, they were cut at the base, removed by the roots, covered in plastic, e.t.c. However, in the spring, they were still growing back from the removal sites. It also changes the soil around it, which is harmful to the wetland.



Various Invasive Honeysuckle Species

Lonicera

Honeysuckle are upright shrubs that grow anywhere from 6 to 20 feet tall. Similar to the Autumn olive, these plants were moved from Asia and Europe in the 1800s for a purpose. These plants were initially used for erosion control and food and cover for wildlife. These plants are incredibly durable, which makes them very dangerous to native plants who may not be as durable. These plants also grow quickly, growing dense thickets of plants. The most dangerous part of these plants, however, is the reproduction. These plants also grow berries, which are eaten by birds. This means that the bird will then spread them everywhere. These berries, however,

have little nutritional value for the birds and they do not allow them to migrate. These plants are spreading quickly and disturbing the natural plant populations as well as disrupting natural bird migration patterns. All around, these plants are harmful to the natural environment.

Closing Remarks

All wetlands, like the one here at Shepherd's Corner ecology center, are incredibly important to a healthy world ecosystem. This is because of all of the benefits to the ecosystem, such as food and shelter for wildlife, being a natural filter for the earth, and providing oxygen comparable to coral reefs and rainforests. However, they must be cared for. Making sure that the right plants and animals are a part of the wetland of the ecosystem is incredibly important. Native plants can be easily outcompeted by invasive plants that can have incredibly harmful effects on the ecosystem. We have to take care of our home planet; after all, we only have one.

About Me

Hello! My name is Bradley Teynor, and I am a Boy Scout of Troop 826 in Reynoldsburg, OH. This booklet is a part of my Eagle Scout Service Project. To earn the rank of Eagle Scout, you must do a service project that benefits your community. I have always had a passion for conservation, so I knew that for my project I had to do something related to that. I contacted Shepherd's Corner, and we discussed various possibilities for a conservation related service project. We landed on the renovation of the wetland along the meditation trail, as well as building 4 new benches to place on the same trail and 2 bat houses to place at a nearby station. In doing this project, I learned a lot about the wetland ecosystem, things that I had never thought of. I decided that for the last part of my Eagle Scout Service Project, I wanted to educate other people on the wetland ecosystem. That is what this booklet is! I planted 2-6 of each type of beneficial plant around the wetland and removed as much of the invasive plants as possible. I hope that you have learned something from this booklet, or have even been inspired to take action to promote conservation yourself!

