

Concord River Greenway: Plant Life

A Green-Way...

A walk along the Concord River **GREENWAY** provides a particular view of Lowell. The term “greenway” perfectly describes this urban **natural resource**, because the path, meandering as it does beside the river, is lined with many different plants, including grasses, wildflowers, vines, shrubs, and trees.



Plants like this wildflower provide many benefits to the river, wildlife, and people.

There are many benefits to having a river lined with plants. As **producers** plants make food for **consumers** (animals). Plants help to hold sand and soil in place protecting the riverbanks from excess **erosion**. They also help to filter contaminated water **runoff**, which keeps the Concord River healthy and clean for people and wildlife alike.

Lowell Parks & Conservation Trust

By- Brian Cutler, LP&CT Project Specialist

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Trees line much of the Concord River, including this section near Rogers Street.

A plant is a living **organism**, which produces its own food through the process of **photosynthesis**. During **photosynthesis**, plants gather energy from the sun and nutrients through their leaves and roots. They put it all together to make sugars used to help themselves grow. During this process, and through the process of plant reproduction, plants **produce** food for wildlife. As a byproduct of their growth process, plants release oxygen gas and water vapor into the air.

Plants are a key component of the oxygen, water, nutrient, phosphorus, nitrogen, and carbon **cycles**.

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When we refer to plants, we are referring to all trees, shrubs, flowers, grasses, vines, mosses, ferns, algae, "seaweed" and so on.

Anything commonly associated with a river or stream is a **riparian** zone. These zones provide habitat for various plants and animals. Notable riparian plant species found along the Concord River include swamp rose mallow, *silver maple*, and *river birch*.



Swamp rose mallow seeds drift down the river until they become caught in debris or in crevices of rocks where they can take root.

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River birches and silver maples have roots that are strong and stand up well to fast-flowing, high water levels.



Here we see the unique leaves of a silver maple tree.

Native Vs. Invasive: A “growing” problem

Before the Europeans settled in North America, the forests, meadows, and rivers offered a mix of **native** plants. These plants were important to wildlife as sources of food, water, and shelter. **Native** plants are vegetation, which have always been in North America.

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Unfortunately, native plants have been increasingly threatened by **non-native, invasive** plants. Some of these plants were first brought by English settlers in the 1600's. Over time, more **non-native and invasive** species also came from other parts of Europe, Asia, and distant parts of North America.

We say **non-native** meaning that the plant is originally from another continent or another part of North America and is now growing locally in the wild. An **invasive** plant is usually characterized as being **non-native** and harmful to **native** populations. **Invasive** plants “invade” habitats needed by **native** plants.

Invasive plants are hearty and grow very strong, which makes it difficult and sometimes impossible for **native** plants compete with them.



This jumbled mess is a mix of three major invasive plant species. Common reeds grow in the middle, while oriental bittersweet and black swallow-wort are wrapped around each other and the reeds.

After a forest is cut down and the ground is dug up or stripped of its soil and root structure, we refer to it as “disturbed.” If it is not tended to it is like a wound open to erosion and the infection of **invasive** plant colonies.

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Invasive plants cause many problems including:

- Habitat loss.
- Shading and choking out of **native** plant species.
- Creation of poor water quality due to **eutrophication** (excess nutrients), elevated water temperatures, low oxygen levels
- Poor diets for wildlife.
- Economic for local governments and organizations
- Hindered recreational activities
- Unsightly landscapes.

Some **non-native** plants have very effective means of dispersing their seeds and can easily escape from gardens. Oriental bittersweet, for example, is a popular garden vine and decorative plant often used for making fall wreaths. It often finds its way into the wild when animals eat the seeds and deliver them to new locations where bittersweet can take root. This is called **seed dispersal**.

Invasive Aquatic Plants



*These kids found the seed of a highly **invasive aquatic** plant, the water chestnut, above the Wamesit Falls, near the beginning of the Greenway.*

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*The water chestnut take over the habitat of water lilies and other **native** plants in areas along the Concord River.*

Invasive plants overtake over thousands if not millions of acres of natural habitat every year and are altering our landscapes and **ecosystems** far faster than we can even think about controlling them. Although some **native** species of wildlife are able to adjust to these changes, the negative effects on local **ecosystems** are growing out of control. Your help is needed...

Take action:

- Educate your friends and family about **invasive** plants.
- Identify concentrations of **invasive** plants and notifying local environmental agencies.
- Support and get involved with local groups to eradicate **invasive** plants.
- Learn more about the future of **invasive** plants and perhaps even accept them (as some would suggest).

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Gallerucella beetles live in the same habitat as purple loosestrife, a wide spread **invasive** plant. The beetles are now raised and released to feed on the loosestrife, working as a safe biological method of control.



Milkweed is easily identified in winter, because it often stands taller than the snow and has large, empty seed pods.

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In the summer milkweed is an important source of food for monarch butterflies, red milkweed beetles, and milkweed bugs. Monarchs prefer to lay their eggs on milkweed.



Black swallow-wort during winter months.

Black swallow-wort is an **invasive** vine in the milkweed family, which climbs, chokes, and shades out **native** plants and even other **invasive** plants. If a monarch butterfly mistakes this for **native** milkweed, their young will not likely be able to metamorphose (change) into their adult stage.

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Silver maple bark.

Like milkweed, common mullein is often visible above winter snow. Although the wildflower is dead then, it still holds thousands of seeds which thrive in barren, disturbed soils. Later, in summer, new plants grow thick leaves soft to the touch.



Common mullein stalk in winter.

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Mullein leaves in summer.



*Garlic mustard is often the first green showing when the snow cover melts away. It looks small and non-threatening after sprouting, but this **invasive** will grow in a hurry during early spring.*

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*Oriental bittersweet, as seen here in winter, has bright red berries, often seen with yellow shells. Although it looks beautiful and may produce food for wildlife, it is highly **invasive** and can easily choke out **native** plants.*



Evening primrose in winter.

Evening primrose is a yellow wildflower native to the prairie, which stands tall over the snow. It often holds onto some of its seed through the winter.

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White oak leaves in winter.

White oak trees are common along the mid-sections of the Greenway. This **native** tree can be spotted easily from afar during winter months, because it is one of the few trees to hold on to its old brown leaves until spring arrives. Notice the rounded leaf tips. Sometimes these leaves serve squirrels as material for making their homes (squirrel dreys).