

Muck or Magic?

What is the Great Wenham Swamp?

The Great Wenham Swamp (GWS) is called "great" for a reason. It is the largest freshwater marsh in the North Shore area, spanning over 2,500 acres in Topsfield, Wenham and Hamilton- most of which falls within the boundaries of the Ipswich River Wildlife Sanctuary. It's forests are especially rare because most of them were cleared for farmland in the 1700s and 1800s, since the moist soil is so fertile. This fertility is caused by the constant shifting of soil due to seasonal flooding. Water that covers the floodplain often comes from the upstream Ipswich River, which contains sediment that is rich in minerals and nutrients. This nourishing, alluvial soil is carried into the floodplain during the flood and is deposited when the water recedes, leaving a perfect bed of fertilizer for new plants and saplings to thrive in.

Trees



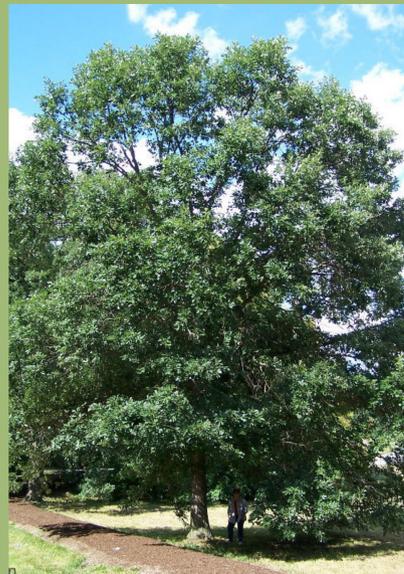
Silver Maple

The Silver Maple makes up the majority of the deciduous foliage in the GWS floodplain forests. It requires more sunlight than other tree species while being highly adaptable and can thrive in the constant moisture of the floodplain. It is also very resistant to ecological disasters, and can re-grow very quickly after forest fires or heavy storms.



White Pine

The White Pine is the most commonly found coniferous tree in the GWS, and is generally a blue-green color with narrow cones. It is almost always the tallest tree in the forest, and can survive in most environments, including the boggy terrain of the GWS.



Swamp White Oak

The Swamp White Oak grows best in the hydromorphic soil offered by the GWS, although it does not survive well in soil that is flooded all year long. Its autumn colors are less vibrant than the Silver or Red Maple, but it is almost as common.

Invasive Species



European Buckthorn Shrub

European Buckthorn Shrubs usually appear on banks along which canoeists travel. This is because the seeds often float in the water and are then dragged up onto the bank when they attach to the sides of a canoe.



Phragmites (Common Reed)

Often seen along the highway, Phragmites kills native species in the GWS as well, since it thrives in the damp soil. It is thought to have originated in the American south, but it appeared here after a drought in the late 1990s.



Purple Loosestrife

A pretty species, Purple Loosestrife began killing native species so quickly that preservationists introduced an exotic beetle to eat it. Currently, the two populations cyclically fluctuate in accordance with each other, since the beetles prefer the Loosestrife fairly exclusively.

Words to Know:

- **Alluvial** - Regarding sediment deposited by flowing water, as in a riverbed, flood plain, or delta.
- **Biome** - An environment determined by temperature and precipitation, i.e. forest, desert, tundra.
- **Coniferous** - A type of tree that has narrow "needles" that stay on the trees through the winter.
- **Deciduous** - A type of tree that has broad leaves that turn color and fall off at the end of autumn.
- **Ecotone** - The "blurred" portion between two distinct biomes, i.e. the transition between forest and grassland.
- **Exotic** - In this case, a species that comes from a different environment than the one it currently resides in.
- **Floodplain forest** - Wetlands characterized by peat bogs and plentiful, thriving foliage. They are seasonally flooded and the ground is covered in water for a few months every year. This allows many types of foliage to grow in the moist, nutrient-rich soil.
- **Hydromorphic soil** - Soil that usually carries an excess of water. This is a key characteristic of the floodplain forest.
- **Native** - In this case, a species that originated in the environment that it currently resides in.

An invasive species is any plant, animal, or other living thing that is not native to the environment it is currently surviving in. Unfortunately, invasive species are often better adapted to the environment than the native species are, and are successful in outcompeting them. Examples of invasive species are plants that either take up space without providing food or effectively strangle other species fighting for the same light source. Although such plants are harmful to the ecological stability of the environment, it is very difficult to remove them once they have infiltrated. Preservationists are currently using careful application of pesticides and predatory species (see *Purple Loosestrife*).

Did You Know?

- Almost all of the GWS falls within the boundaries of the Ipswich River Wild life Sanctuary. Luckily, the small portion that is outside of these boundaries falls into Bradley Palmer State Park, which also works to protect it.
- Water in the GWS is actually some of the cleanest in the area, because the cattails and other marsh plants are able to soak up and break down pollutants and toxins.
- In 1999, the water level in the river and the GWS was so low that all of the water in nearby Bunker Meadows dried up, causing a feeding frenzy among Great Blue Herons trying to get at the fish and frogs that were dying. This drought also brought about the invasion of phragmites (see invasive species).
- In 1917, the Salem Beverly Waterway Canal (also known as the Great Wenham Canal) was built through the swamp in order to bring water to nearby residents and restore the Wenham Lake, which had deteriorated from pollution and overuse.

Birds

The diverse and rich habitat provided by the Great Wenham Swamp is crucial to the survival of many birds in the area, as well as other birds that pass over the area during migration. In particular, the GWS has been named an Important Bird Area (IBA) by the National Audubon Society, which means that it is responsible for the identification and conservation of the birds that pass through. The GWS is part of a combination of habitats that forms the 7,229 acre Eastern Essex County Interior Forest IBA.

Marsh Wren

Marsh Wrens are weavers, which means that they make intricate, basket-like nests in which to breed. Usually males make the nests out of cattails, and an impressed female will then line it with the cattail "fuzz". A skilled male can make multiple nests in order to attract multiple mates at a time.



Eastern Bluebird

Bluebirds have in recent years become more and more difficult to find in the wild- without a man-made 'bluebird house'. However, the vast resources and diverse environment of the GWS attract Bluebirds naturally.



Wood Duck

The GWS is most likely the best habitat for Wood Ducks in the entire state, since they need both open water and trees in which to nest in. (It is one of the few North American ducks that nest in trees.)



Great Blue Heron

The Great Blue Heron is the largest heron in North America, with a wingspan of up to six feet. The GWS floodplains are perfect for nesting, since the moist soil makes for easy nest building, and the lack of human disruption encourages mating and brood health.



Brown-headed Cowbird

The Cowbird lays up to three dozen eggs in various host nests. Often the cowbird chicks outcompete the chicks native to the nest, so that the native chicks sometimes starve and die.

