



Witherle Memorial Library  
**Native Landscape Design | Heather McCargo**  
 October 2023 (revised June 2024)  
 Scale 1/4" = 1'-0"

The effects of unstable weather along with increased heat and resulting drought negatively impact insect pollinators, bird populations, biodiversity and water supply. These problems can be addressed when people take the positive action to restore the native vegetation that is the foundation of our local ecosystems. The library's new landscape will inspire a corridor of native species that improves the health of the town's plant and animal communities.

We have many species of native trees, shrubs, vines and herbaceous groundcovers that can be substituted for the common horticultural plants that make a very beautiful and dynamic landscape filled with flowers, fruits, green leaves and woody branches that radiate life and vitality. As the library is situated by the historic Town Common, the renovated landscape will serve as a model for using native plants in a formal setting. The result will be both beautiful and environmentally beneficial.

Native plants, from the canopy trees to the understory shrubs and groundcovers, have extensive root systems that hold the soil together, nourishing the extensive microbiome of the soil which is critical for healthy plants, just as the microbiome in our bodies is critical to human health. Native plants are the base of our terrestrial food webs and are critical for creating the habitat for our local fauna, including pollinating insects, birds, fungi and all other creatures that make up our local ecosystem.

## 2) Temperature

*"Temperatures in Maine have risen almost 3.5°F since the beginning of the 20th century... The number of very cold nights in winter has been below average since the late 1990s, but the number of hot summer days has not increased. To an extent, therefore, there has been more winter warming than summer warming. The growing season has also lengthened. Note that by 2050 the mid-point of the temperature range for Maine under the lower emissions model is approximately 2 degrees higher than the 2022 mid-point and almost 5 degrees higher under the higher emissions model."* (Climate Change pp. 161)

Native plants create a protective covering for the earth, which help buffer against temperature extremes, all the while removing carbon from the atmosphere capturing and storing it in plant tissue and deep in the soil. Adapted to our region, they use water efficiently, and their root systems are able to effectively filter off excess water. Native shade trees offer respite during hot days.

## 3) Water Quality

*"To ensure water quality is protected in marine watersheds through standards that consider storm*

*water runoff, extent of impervious surfaces, and other non-point sources of pollution."* (Marine Resources pg 108)

A dense covering of native plants protects local water supply by 1) capturing and storing rainwater, and 2) slowing the flow of the rain and then filtering the water before it gets to our oceans and streams. As these plant species co-evolved, plant communities/native plant species do not require chemicals and petroleum-based fertilizers to ensure their success, resulting in lower chemical runoff into Castine's sewers.

## The Team

**Heather McCargo** is the founder and former executive director (2014-2021) of Wild Seed Project. A former head plant propagator at the New England Wild Flower Society's (now Native Plant Trust) Garden in the Woods during the 1990s, Heather has also worked at several landscape architecture/planning firms specializing in ecological design, and has contributed to research projects with USAID, the National Gardening Association, and MOFGA. She has lectured nationally and is widely published in journals and magazines such as Brooklyn Botanical Garden's "Growing from Seed," Horticulture, American Nurseryman, Ecological Landscape Alliance, and was recently featured in *Downeast* magazine, January 2023. Heather was a guest speaker for the Castine Garden Club in 2019 and a speaker at an *In Conversation* in Emerson Hall in 2023.

**Julia Frederick** is a landscape architect who lives in Freeport. A passionate advocate for gardening with native plants, she previously served on the Board of Wild Seed Project. She enjoys experimenting in her home landscape and cherishes time spent among the flowers with her daughter, her dog, the birds and the bees.

**Jared Grant** is a Certified Professional Dry Stone Waller through the DSWA (Dry Stone Walling Association of Great Britain), and is a Certified Instructor in dry stone building techniques, also through the DSWA and The Stone Trust. He is also a member of the Maine Stoneworkers Guild. Certified by Maine DEP in erosion control practices and shoreland construction.

**Ron Forest & Sons Fence Company** has created fencing and garden accessories from northern white cedar for more than 45 years. They sort their own wood and offer a variety of services that include fence design, including reproductions of old garden accessories and fences, and installation.



WITHERLE  
MEMORIAL  
LIBRARY

# Botanical Garden

Designed with Maine Native Plants for a Historic Setting

*The Witherle Memorial Library Botanical Garden extends the legacy of the Witherle Family's commitment to preserving and enjoying the natural environment and addresses issues resulting from climate change. The garden, a landscape featuring native plants, includes materials grown, produced, and quarried in Maine which exemplify our State's geological and botanical history.*

## Why a New Landscape

The library's grounds are enjoyed seasonally by patrons and visitors. In season, four Adirondack chairs are used throughout the day, and, since 2020, a 20 x 10-foot tent is in place from May through October. The stairs offer seating during Town Band performances and holiday and school parades. The north end of the library property has some invasive plants and is now the location for the library's new generator and electrical mechanicals. The lawn is difficult to maintain particularly during high-traffic months. There are a few plantings: two Kousa dogwoods on the South side and a pair of holly bushes to either side of the main entrance stairs.

To refurbish its landscape, the library sought a solution that would be 1) lower maintenance, 2) add significant aesthetic value to the historic district, and 3) further promote the library's commitment to protecting and educating people about Maine's native species.

## The Garden Design

The plan includes a few canopy trees for shade, small flowering trees and shrubs for spring and summer fruits, and their woody branches create year-round above-ground structure and habitat. On the ground, herbaceous wildflowers that thrive in sunny dry areas will grow on the south facing slopes and edges of paths, and shade-loving woodland wildflowers and ferns in the spots shaded by the trees and buildings. Stone walls and paths will terrace the steep slopes allowing people to meander and creating many opportunities for learning as well as and enjoying the beauty of the garden. Visitors will access the garden by either stone stairs or a graded handicap-accessible path. The two legacy dogwoods, while not native, will be incorporated.

The tent will be placed over a brick terrace to protect visitors from sun and rain, and a lattice fence will separate the back and side yard from the neighbors. The landscape design removes the need for a lawn while providing areas for sitting and enjoying the view of the Common from the library property.

## Impact

The landscape design addresses issues and/or goals identified in the *Castine Comprehensive Plan 2024*, excerpts from which are quoted below.

### 1) Climate Change

*"We need to identify vulnerable infrastructure, agriculture and forestry resources, and architectural treasures and create plans to upgrade and protect them. In addition, we need to plan to protect our residents during extreme weather events."* (Vision Statement pp. 9)

*"The various manifestations of climate change create a need to assess its direct and indirect impacts on existing plant and animal species in Castine. Fortunately, there are regional, state, and nonprofit partners with whom Castine citizens and officials can coordinate in undertaking such an assessment. In general, as discussed in the Natural Resources chapter, the stresses on plants and animals associated with climate change makes the need to maintain habitat connectivity that much more important."* (Climate Change pp. 171)

*"Castine is a part of the Bagaduce River Focus Area. The purpose of the mapping of (this) area is to help build regional awareness and draw attention to the exceptional natural landscape conditions that result in a convergence of multiple resource occurrences. It is hoped that this will lead to local, regional, private, and non-profit conservation initiatives."* (Natural Resources pg 103)

An architectural treasure in its own right, the library is committed to providing current and historical information regarding Maine's ecology in support of statewide efforts to protect our natural resources in the face of climate change. We introduced a new book collection, The Witherle Collection, in honor of our namesake and renowned naturalist George Witherle, which has over 60 (and growing) titles on Maine's geology, waters, flora and fauna. The garden itself is an extension of this collection.

*(Continued on back page.)*