



PROTECTING A MUCH BELOVED STREAM IN

WADSWORTH FALLS STATE PARK

BY KATHLEEN GROLL CONNOLLY

At first glance, Laurel Brook appears unremarkable. It flows between grassy banks just beyond the crowded parking lot at Wadsworth Falls State Park in Middletown. One might expect visitors to ignore it as they cross the covered footbridge on their way to the scenic waterfalls, ravines, and a swimming pond.

But many children spend hours exploring in the little brook. It's a natural playground. They dance across the narrow banks, skipping stones and tossing balls with their families and playmates. They gather crayfish and watch snakes. Dog walkers, handholding couples, and big families visit the stream in all kinds of weather. Laurel Brook is a resilient, year-round stream that has suffered a bit from all this attention. But this brook, a small tributary of the Coginchaug River watershed, is on a list of impaired waterways because of high bacteria counts.

A landscape designer meets Laurel Brook

The Coginchaug watershed drains an area of 40 square miles. The Coginchaug is one of the few rivers in Connecticut that flows north, beginning in Guilford at Meyerhuber Pond, flowing through Durham and Middlefield,

then ending in Middletown. The Coginchaug River empties into the Mattabeset River, which flows into the Connecticut River, which ends in Long Island Sound.

In 2015, I was hired by a conservation team to choose and place plants for a riparian buffer along the banks of Laurel Brook. Streams and brooks are tremendous nurseries for plant communities ranging from wetland-adapted plants to upland species. These communities are full of variety, including everything from mosses to grasses and sedges, flowering plants, shrubs, and trees. As much as the water sustains the plants, the plants help keep the water clean and contained within its banks. Riparian plants slow the impact of storm water and surface flow. They absorb nutrients that can create imbalances in



Top, saplings and young plants establish themselves shortly after planting, April 2015.

Above, Kathy Connolly visits the brook, now surrounded by plants, July, 2016.

Opposite page, Laurel Brook runs unprotected between two close-cropped grassy banks, April 2015.

OPPOSITE AND TOP PHOTOS BY KATHY CONNOLLY. PHOTO ABOVE BY CHRISTINE WOODSIDE.

water chemistry and filter pollutants. Trees and shrubs create shade, which keeps the water cool and hospitable to aquatic life.

Over eight months in 2015, we learned how resilient Laurel Brook is. We saw it in all weather and conditions. When we first visited the site that February, Laurel Brook cut a 10-foot wide canyon through 3 feet of ice and snow. Eight months later, on a 94-degree September day, we arrived to plant. Remarkably, Laurel Brook was still flowing, even as many other ponds and streams in the area had dried up. At some times of the year, the brook overflows its banks, encroaching on the surrounding picnic groves and even, on occasion, the parking lot.

The plantings along Laurel Brook are working to protect this tributary stream of the Coginchaug River, one small part of a much larger picture.

According to Jane Brawerman, executive director at the Connecticut River Coastal Conservation District, the Coginchaug River was added to the state's list of impaired water bodies in 1996 because of high levels of E. coli bacteria and is still not considered to support aquatic life. The conservation district has been coordinating a long-term project to improve the water quality of the Coginchaug River, collaborating with multiple local and regional partners and watershed landowners. Activities have included water-quality monitoring, outreach and education, and on-the-ground restoration projects. Although much has been done over the years to identify and address sources of pollution, the Coginchaug remains impaired.

"There are many possible sources of pollution to the Coginchaug River, and small tributaries such as Laurel Brook are a good place to start implementing





The plant list is shown here:

SHRUBS:

- Canadian serviceberry (*Amelanchier canadensis*)
- Buttonbush (*Cephalanthus occidentalis*)
- Sweet pepperbush (*Clethra alnifolia*)
- Sweet fern (*Comptonia peregrina*)
- Redtwig dogwood (*Cornus sericea*)
- Winterberry holly (*Ilex verticillata*)
- Swamp azalea (*Rhododendron viscosum*)
- Pussy willow (*Salix discolor*)
- Elderberry (*Sambucus canadensis*)

GRASSES AND SEDGES:

- Sideoats grama (*Bouteloua curtipendula*)
- Appalachian sedge (*Carex appalachica*)
- Plantainleaf sedge (*Carex plantaginea*)
- Fox sedge (*Carex vulpinoidea*)

FLOWERING PERENNIALS:

- Swamp milkweed (*Asclepias incarnata*)
- Turtlehead (*Chelone glabra*)
- Joe Pye weed (*Eutrochium dubium*) 'baby joe'
- Fall Helen's flower (*Helenium autumnale*)
- Perennial hibiscus rosemallow (*Hibiscus moscheutos*)
- Short-tooth mountainmint (*Pycnanthemum muticum*)
- Slender mountainmint (*Pycnanthemum tenuifolium*)

TREES:

- River birch (*Betula nigra*)
- Chestnut (Connecticut Agricultural Experiment Station) (*Castanea dentata*)
- Blackgum (*Nyssa sylvatica*)
- Princeton gray elm (*Ulmus americana*) 'Princeton'



IN TOTAL, 27 LARGE TREES, 50 TREE SEEDLINGS, 72 SHRUBS, AND 378 GRASS, SEDGE, AND FLOWERING PERENNIAL PLANTS, WERE PLANTED IN KEY PLACES. AS TIME GOES ON, THOSE THAT SURVIVE WILL INCREASE THE STABILITY OF THE STREAM BANK, FILTER RUNOFF, AND RESTORE NATURAL HABITAT.

water-quality improvements,” Ms. Brawerman said. She said that a vegetated buffer along Laurel Brook will help filter runoff from the parking lot and the grassed area between the brook and the pond. The plants also will prevent stream bank erosion and improve habitat for animals and fish.

Because Laurel Brook is so visible to the public, it’s a great demonstration site.

Ms. Brawerman’s organization worked with the Connecticut Department of Energy and Environmental Protection, using funds from a U.S. Environmental Protection Agency Clean Water Act grant. Connecticut State Park Supervisor Alex Sokolow represented the park system during the design process, emphasizing the need to keep the brook area open and friendly for children.

In total, 27 large trees, 50 tree seedlings, 72 shrubs, and 378 grass, sedge, and flowering perennial plants, were planted in key places. As time goes on, those that survive will increase the stability of the stream bank, filter runoff, and restore natural habitat.

As for plant survival, it is important to be realistic. It is always hard to predict what happens to

*Opposite page:
Top and center, more scenes of the brook in July 2016. Bottom, Kathy Connolly checked the progress of plants. Some were doing well; others struggled in spots where children played.*

PHOTOS ON OPPOSITE PAGE BY CHRISTINE WOODSIDE.

Left, a curious girl’s exploration in 2015, before the new plants went in, illustrates the fascination young people hold for Laurel Brook.

PHOTO ABOVE BY KATHY CONNOLLY.

plants in busy public spaces. Although we planted only native species, even the toughest plants are vulnerable to foot traffic, hot sun, and dry periods. The turtlehead—we planted many—is hard to spot among the otherwise abundant vegetation. Then there’s the case of the missing pussy willows, upwards of 20. Did a pussy willow fancier make off with them? (I hope those plants are growing happily somewhere.)

As for the children, they’re still dashing through the brook. Another bonus: trees shade some of the park’s many picnic tables for the first time in a while.

The project includes a 24- x 18-inch outdoor educational sign with information about the Coginchaug River watershed, human impacts on rivers, and ways to protect water quality, including the benefits of waterside vegetated buffers.

Maintenance of the buffer will be the responsibility of park staff.

There are those who say, “Don’t sweat the small stuff.” Standard advice aside, little Laurel Brook may be on its way to bigger things.

Kathleen Groll Connolly is a landscape designer from Old Saybrook who specializes in wildscaping, native plants, and organic techniques. She presents about 20 seminars per year on a variety of horticultural and landscape topics, including meadow-making classes for Connecticut Forest & Park Association. Kathy is a longtime CFPA member. Reach her at Kathy@SpeakingofLandscapes.com.