

Chautauqua Watershed Notes
From the Chautauqua Watershed Conservancy
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Invasive Species Threaten Our Spring Ephemerals
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SUNY Fredonia interns Alicia Farmer and Lindsey Calalesina monitor a garlic mustard population that threatens spring ephemerals at Jamestown Audubon's Bentley Sanctuary. (Photo by Jonathan Titus.)

and fauna. In the Chautauqua Lake watershed, concerns are frequently voiced over species such as the invasive zebra mussel, which cause disruptions in natural food chains and damage to pipes, docks, and harbors. Most have heard about non-native aquatic plants, such as Eurasian milfoil, that cause enormous health and aesthetic concerns and create clogged waterways and impede boaters, swimmers and recreationists. But we usually think of invasive species that colonize disturbed or open areas. Those invasive species that are able to colonize and thrive in forested habitats are perhaps fewer in number but of great concern due to their potential detrimental impacts to spring ephemerals. Several of these are described below.

Ahh, spring at last. Although as I was writing this, it felt like we had skipped spring and launched straight from winter into summer. In our region, this is normally the time of year when the sun has just begun to warm the earth's surface. The buds on the trees are mounting their swell before bursting into leaves, and the sun is still able to reach the forest floor. This is when the spring ephemeral species abound.

By spring ephemeral, I am referring to woodland plants with a quick life cycle that allows them to emerge, bloom and produce seed during spring of each year before entering dormancy until the following year. This is a common adaptation in deciduous forests that allows herbaceous plants to snatch a few weeks of sunlight before the forest floor is shaded by the overstory trees. Examples of spring ephemerals that occur in our forests include trillium, toothwort, springbeauty, trout lily and may-apple.

By now, most people have at least heard mention of the threats that non-native and invasive species pose to our native flora

The name bush honeysuckle is used to describe any of the five invasive shrub honeysuckle species that were introduced from Eurasia for their ornamental qualities. Unfortunately, each of these species rapidly invades forests and forms a dense shrub layer that shades out native plant species. Although bird enthusiasts have noted that the berries attract songbirds, recent studies have shown that bush honeysuckle berries are nutritionally inferior to those of native berries and do not offer neotropical migrants the high-fat, nutrient-rich food sources needed to complete annual migration routes.

Garlic mustard is a seemingly innocent looking plant introduced from Europe as a potherb. This biennial produces rosettes of edible green leaves during its first year and produces a tall spike of white flowers the following year that will produce hundreds of seeds per plant. The seeds can remain viable in the soil for more than five years. Of particular concern is the ability of garlic mustard to interfere with normal relationships between plants and fungus in which microscopic fungal hyphae supply necessary nutrients to plants in return for sugar that the plants supply to the fungus. Garlic mustard is able to inhibit these relationships and thus aggressively compete with native species through competition for nutrients, water and light.

Both day lily and periwinkle are ornamental species that escape from the yards of well-meaning homeowners that likely don't realize the consequences of introducing these species to the area. Both species form an almost impenetrable blanket of growth that eliminates virtually every other species in their path, and both are extremely difficult to remove once established. If these species are planted near watercourses, small fragments can break off and be washed downstream and, in this way, can colonize entire watersheds.

In addition to the loss of native species, invasive species degrade wildlife habitat, alter ecosystem processes and are costly to economies that depend on resources and services provided by healthy ecosystems. For these reasons, when considering additions to your yard, please think of selecting a species that is native to the region, or at least ensure that a species that you select is not invasive. For more information on invasive species in NY State visit:

<http://www.nysgextension.org/glhabitat/epacd/pages/plants/invasives.htm>

To learn more about native species, you might consider attending this upcoming event. The Chautauqua Watershed Conservancy will be holding its Spring Wildflower Tour, featuring JCC botanist Becky Nystrom at 1:30 PM, Sunday, May 17th in the Spann woods at the mouth of Chautauqua Creek, on Route 5, one-quarter mile west of Route 394 at Barcelona. The CWC is a local 501(c)(3) not-for-profit, public benefit corporation supported primarily by membership donations. Its mission is to preserve, and enhance the water quality, scenic beauty and ecological health of the lakes, streams and watersheds of the Chautauqua region. To register for the tour, for more information, or to support these efforts, please call 664-2166.