

MILE-A-MINUTE VINE SPREADING RAPIDLY IN CONNECTICUT

*by Kathleen Nelson, Coordinator Mad Gardeners, Inc.,
Litchfield County Mile-A-Minute Vine Control Project*

Editor's Note: *Inland Wetland and Watercourse Commissions take note; Mile-a-Minute invasive plants thrive in wetland soils. While they do not like wet feet, their presence just above the water line adds to dispersal when seeds drop into the water.*

The invasive Asian Mile-a-Minute Vine, *Persicaria perfoliata*, AKA *Polygonum perfoliatum*, (MAM) is rapidly spreading into Connecticut from the south and west. MAM is a fast-growing annual that thrives almost anywhere except lawn, very deep shade, or with roots in water. Plants can grow as fast as 6 inches per day and climb 20 feet high. A single plant can blanket an area 30 feet in diameter during the growing season and produce over 2000 seeds. Within a very few seasons MAM forms monoculture stands, destroying wildlife habitat by shading and ultimately killing almost all vegetation except tall trees.

MAM is a serious threat to agriculture, the economy, and the environment. It is devastating to ecosystems. Early detection and rapid response may prevent spread of MAM to new areas. Reduction or elimination of MAM where it is currently found is essential for the survival of the native plants that form the backbone of healthy ecosystems.

MAM accidentally introduced into Pennsylvania reached Connecticut by 1997, when it was reported in Greenwich. The first Litchfield County population was reported in Bridgewater in 2004. By the end of the 2008 season MAM had been confirmed in Greenwich, Westport, Bridgewater, New Milford, Roxbury, Newtown, Lyme, Torrington, Weston, Monroe, Fairfield, Danbury and North Haven. That is just the known populations. There are many more, either not recognized, or lurking in places we don't go, places we avoid, such as fields of multiflora rose and woodlands full of barberry.

MAM seeds are spread by birds, other animals, soil and water. Landscaping materials - contaminated topsoil, mulch, and plant materials - may be the primary way that MAM is introduced to new areas.

Once there, seed-drop quickly results in dense stands. Seeds are spread to some extent by birds and other animals, but the scariest method of spread is by water: seeds carried by water expand populations with terrifying speed.

The large Newtown populations, not recognized until 2007, probably originated from seeds in topsoil used in landscaping. A Newtown official who walked the Pootatuck River corridor in 2004 saw no MAM plants, yet by 2007, MAM was found extending a mile or more along the river corridor covering several acres of floodplain. By the end of 2008, plants had been sighted 3 or 4 miles downstream. In another part of town plants were found covering a 50 acre hillside. A 30 acre downstream meadow with only a few plants in 2007 was heavily infested in 2008 and plants were found on many properties further downstream.

So far very little has been done in Connecticut to control MAM. Volunteer groups have attacked some of the populations. In New Milford, an ad hoc group pulled plants in 2005 and 2006, but made little headway. In 2007, the group became a Committee of Mad Gardeners, Inc., a 501 (c)(3), and raised money to hire workers, mostly college students. Paid workers and volunteers searched properties, pulled plants, and distributed information from mid-May to mid-October in 2007 and 2008. In addition, Weantinog Heritage Land Trust attacked a large dense stand of MAM on one of their properties and several adjacent privately-owned properties.

Each year the diameter of the search has expanded. Tiny patches of plants were found and attacked before they spread. Workers checked about 150 properties in 2008. The New Milford/Bridgewater population is now known to consist of large and small patches in an area about a mile in diameter. A separate population in southeastern New Milford is spread over a half-mile diameter area.

MAM seeds remain viable for several years. It is not known how long it will take to deplete a seed bank. There was no noticeable reduction in plant numbers

between 2007 and 2008 in large well-established areas, but some places that had a handful of plants in 2007 had none in 2008. Volume of seeding plants is one measure of success. Volunteers stuffed 150 contractors' bags with huge plants from a single half-acre hillside in 2006. In the next two years, almost all plants in known New Milford/Bridgewater MAM areas were pulled prior to seed set and left to wilt. In 2008 fewer than 40 half-full bags of plants in seed were collected from the entire 600 acre work area.

Identification: Mile-a-Minute Vine is very easy to recognize. Triangular leaves and vining stems with tiny barbs are about all you need for identification. The leaves, as small as half an inch on an edge or as large as three or more inches on an edge, are distinctly equilateral triangles, a shape easily noticed when scanning the landscape. Stems have tiny barbs. The only possible confusion is with two native wetland tearthumbs that have somewhat triangular (not equilateral) leaves. The petiole is attached to the edge of the leaf in native tearthumbs, distinguishing them from MAM, with petioles attached just under the edge of the leaf.

Other characteristics: Stems are weak and clamber over trees and shrubs, not twining, but growing upward, sticking to things with the tiny velcro-like barbs. The roots are puny and easy to pull except in very large plants. A cup-like leafy ocrea is present, more noticeable on smaller plants. Foliage is generally pale, easy to spot from a distance. The clusters of tiny flowers aren't showy. Small bright blue berries begin to ripen in late June or early July. Large plants can produce over 2000 seeds/plant. Plants stunted by shade or drought, with scrawny two-foot stems and half a dozen tiny leaves, produce seed as well, though only a few.

Control: Plants are easy to pull, preferably before they set seed. We pull right up to the time of killing frost on the assumption that removing these plants reduces the number of seeds available for birds



to spread. Special precautions are necessary for transporting and disposing of plants in seed. MAM is easily killed by herbicides, including some pre-emergent herbicides. Mowing at lawn height provides excellent control. Rough mowing is often necessary to provide access for pullers, but does not kill the plants. Since MAM hides beneath shrubby invasives such as multiflora rose, control of these plants is critical. A tiny weevil, one of a hundred insects that eat MAM

in Asia, is being studied by researchers at the University of Delaware. It has been tested in several states, but not yet in New York or Connecticut. Keep your fingers crossed - so far this is our best hope.

Education: The Mad Gardeners, Litchfield County Mile-a-Minute Control Project distributed 18,000 ID cards throughout the state in both 2007 and 2008. Posters were distributed to wetlands agencies, public works departments, libraries, nurseries, and other businesses in northern Fairfield and Litchfield Counties. They arranged for articles in newspapers and other publications, had exhibits at many events, and talked at many meetings. The college interns addressed an assembly of all the New Milford fourth-grade classes in 2007.

Funding: The Nature Conservancy, the Town of New Milford, and Weantinoge Heritage Land Trust will be partnering with Mad Gardeners, Inc. for MAM work in Litchfield County this year. The project costs about \$30,000 per year. Any suggestions for obtaining funding are appreciated.

More information, including a map and photographs, is available at www.madgardeners.com or from knelson151@sbcglobal.net.

What you can do: REPORT ALL SIGHTINGS to donna.ellis@uconn.edu or knelson151@sbcglobal.net.

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