

# U.S. National Early Detection and Rapid Response System for Invasive Plants

## EDRR Fact Sheet

Randy G. Westbrooks, U.S. Geological Survey. Whiteville, North Carolina. USA.

**Common Name:** Mile-a-Minute Vine, Asiatic Tear Thumb

**Scientific Name:** *Persicaria perfoliata* (L.) H. Gross

**Family:** Polygonaceae

**Synonyms:** *Polygonum perfoliatum* L., *Ampelygonum perfoliatum* (L.) Roberty & Vautier

**Description:** An herbaceous, annual, trailing vine. **Stems** narrow, delicate, highly branched, armed with recurved barbs, also present on the underside of the leaf blades. **Stem nodes** surrounded by distinctive circular, cup-shaped leafy structures called **ocreae** (formed by the fusion of two stipules at the base of a leaf stalk). **Leaves** light green, shaped like an equilateral triangle, alternate. **Flowers** small, white and inconspicuous, emerging from within the ocreae. **Fruit** berry-like, deep blue, in clusters at terminals, mid-July – first frost. **Seed** a glossy, black or reddish-black achene, persisting in the soil for at least six years.



**Habitat:** Mile-a-minute grows in open and disturbed areas, forest edges, moist thickets, wetlands, streambanks and roadsides. Like kudzu, it does especially well on forested sites that have been clear cut. It tolerates some shade, but climbs up over other plants to reach areas of higher sunlight. It prefers sites with high soil moisture and abundance of leaf litter, but can survive in low moisture conditions.

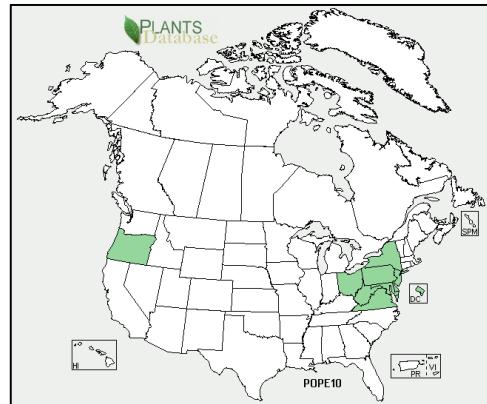
**Native Range:** Eastern Asia and the Philippines.

**Pathways of Introduction and Spread:** Mile-a-minute vine was first collected in the U.S. in Portland, Oregon (1890), and Beltsville, Maryland (1937). Both populations were eliminated, or did not survive. Current infestations of the plant in the Mid-Atlantic Region of the U.S. can be traced to an infested shipment of Holly seeds that was imported from Japan by a plant nursery in York County, Pennsylvania, in the late 1930s. At first, the owner of the nursery was interested in the new plants that germinated along with the holly plants – *so he allowed it to reproduce*. Later attempts to eradicate the plant failed and it began to spread. Mile-a-minute vine is spread by water, animals, and as a contaminant of nursery stock. The fruits are buoyant for 7-9 days and thus can be transported for great distances in streams and river. The fruits are also spread long distances by birds. The seeds bear an **elaiosome\*** that encourages short distance spread by ants. Chipmunks, squirrels, and deer have also been observed eating the fruits (viable seeds have been found in deer scat). The seeds will survive in the soil for at least six years.

\***Elaiosomes** are fleshy structures attached to the seeds of many plant species that are rich in lipids and proteins. Plants have elaiosomes to attract ants, which take them to their nest and feed them to their larvae. After this, the seeds are taken to their waste disposal area, where the seeds germinate.

## **U.S. and Canada Distribution:**

**Ecological and Economic Impacts:** The rapid growth of Mile-a-minute vine allows it to totally cover native vegetation, blocking sunlight, potentially killing plants below, and preventing the establishment of new vegetation. This reduces their ability to photosynthesize, which weakens and eventually kills them. The heavy mass of vines also makes large trees top heavy, and thus susceptible to uprooting in windstorms and breakage during ice and snowstorms. Left unchecked, large infestations can greatly reduce biodiversity of native plants – and associated wildlife in an area. It also interferes with reforestation of pine plantations and regeneration of logged forests.



**Cultural Control Methods:** A number of steps can be taken to discourage the introduction of Mile-a-minute vine into an area. This includes avoiding the creation of gaps or openings in existing vegetation. Vegetative buffers should also be maintained along streams and forest edges to help shade out and prevent the establishment of the weed.

**Manual and Mechanical Control:** Manual removal of vines may be conducted throughout the summer if tough gloves and protective clothing are used to protect the skin. However, hand pulling of seedlings is best done on young stems and leaves – before the recurved barbs harden. Mowing or trimming is also a good way to prevent further seed production.

**Chemical Control:** A number of pre-emergence herbicides are effective in controlling Mile-a-minute vine, including sulfometuron methyl ([Oust](#)), hexazinone ([Velpar L](#)), imazapyr ([Arsenal](#)), atrazine ([Aatrex](#)), and imazethapyr ([Pursuit](#)). Effective post-emergence herbicides include glyphosate (Roundup) and imazapyr ([Arsenal](#)).

**Biological Control:** A number of potential biological control agents for Mile-a-minute vine have been identified in China. The weevil *Rhinoncomimus latipes* Korotyaev is regarded as the most promising agent. It was approved for field release by USDA APHIS in 2004.

**Regulatory Status:** Mile-a-minute is regulated as a state noxious weed in [Alabama](#), [Connecticut](#), [Massachusetts](#), [North Carolina](#), [Ohio](#), [Pennsylvania](#), [South Carolina](#).

### **Online Resources:**

Mile-a-minute Vine Fact Sheet – Plant Conservation Alliance.  
URL: <http://www.nps.gov/plants/alien/fact/pepe1.htm>

Mile-a-minute Vine Images - U-GA Bugwood Image Gallery.  
URL: <http://www.invasive.org/species/subject.cfm?sub=3065>

Mile-a-minute Vine Profile – ISSG Global Invasive Species Database.  
URL: <http://www.issg.org/database/species/ecology.asp?si=582&fr=1&sts=&lang=EN>

Mile-a-minute Vine Profile - USDA Plants Database.  
URL: <http://plants.usda.gov/java/profile?symbol=POPE10>