

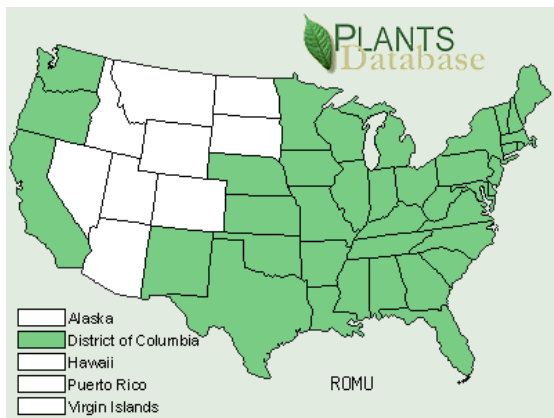


## MULTIFLORA ROSE

(*Rosa multiflora*)

### IN BRIEF

This thorny, sprawling perennial shrub has clusters of small, white flowers and can grow up to 15 feet tall. Once widely planted to stabilize soil and provide wildlife cover, multiflora rose is now invading streambanks, pastures, roadsides and disturbed areas as well as open woodlands.



Multiflora rose in full bloom



Branches have stiff, curved thorns

### DESCRIPTION

**Plant Habit.** Older plants of this multi-stemmed, spreading shrub can reach heights of 15 feet and form dense thickets.

**Stems.** Long, arching stems (canes) are flexible and green or reddish in color. The stiff, sharp, backward curved thorns have a wide base and usually occur in pairs.

**Leaves.** Multiflora rose leaves are alternate and compound



Base of leaf-stem is fringed.

(with a central stem and pairs of leaflets). Each leaf has 5 to 11 one-inch-long oval leaflets with toothed margins. The undersides of the leaflets have tiny hairs and are paler than the upper surface. The base of each leaf stalk has a characteristic stipule (green, leafy structure) with hairs or a comb-like fringe along its margins.

**Flowers.** As indicated by its scientific name *Rosa multiflora*, this plant has abundant, showy clusters of flowers which typically are white, though sometimes slightly pink. They are relatively small (1/2 to 1 inch wide) with 5 petals. It blossoms in May and June.

**Fruits/Seeds.** In summer, the flowers develop into small, hard, round fruits (called rose hips) that are ¼-inch in size. The red fruits become leathery and remain on the plant all winter. The seeds are yellowish in color and can remain viable in the soil up to 20 years.

**Roots.** Multiflora rose has a fibrous root system.

**Habitat.** It is found along stream banks, pastures, roadsides, savannas, forest edges and open woodlands. This plant thrives in sunny areas with well-drained soil but can tolerate a wide range of soil and environmental conditions. It is not found in extremely dry habitats or in standing water.



White flowers bloom in May-June



Small, hard fruits of multiflora rose

#### DISTINCTIVE FEATURES

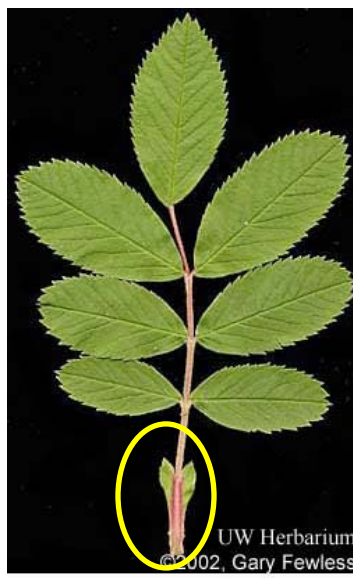
- Clusters of small, white flowers
- Hairy or fringed stipules at the base of each leaf stalk
- Long, arching stems (canes) on very large plants (up to 15' tall and wide)
- Backward-curved, very sharp thorns

#### LOOK-ALIKES

Pasture rose (*Rosa carolina*), prairie rose (*R. arkansana*) and smooth rose (*R. blanda*) are some of the many native roses of the region. Unlike multiflora rose, native roses have pink flowers, and lack the distinctively fringed stipules at the leaf bases.



Courtesy of  
Dan Busemeyer, Illinois Natural History Survey



UW Herbarium  
©2002, Gary Fewless



VT Forestry Dept.



**LIFE HISTORY AND INVASIVE BEHAVIOR**

Multiflora rose reproduces by seed and suckering, as well as by branch tips that root upon contact with soil. Birds seek out the ripe fruits and are the primary dispersers of the seed. Mammals such as deer mice also feed on the fruits. Seed germination is enhanced from passing through animal digestive tracts. Large plants can produce 500,000 to 1 million seeds a year. Its vigorous growth and rapid spread inhibits development of native tree, shrub and groundlayer species by monopolizing light, moisture and nutrients. Native grassland, savanna and open woodland habitats are all threatened by this invasive. Because it alters habitat structure, it also negatively impacts the nesting of native birds. Livestock operations suffer economic loss due to diminished pasture forage and the impenetrable nature of multiflora rose thickets.

**IMPACT ON FORESTRY AND FORESTERS**

On Forestry: Multiflora rose readily invades forest edges, open woodlands and plantations especially where there has been land disturbance. It can form dense thickets, replace native vegetation and inhibit regeneration of trees.

On Foresters: This plant forms impenetrable, thorny thickets that make forestry work difficult and painful. The hooked thorns are known to puncture vehicle tires as well as inflict deep gashes in unprotected human skin.

**CONTROL METHODS**

	<b>Method</b>	<b>Timing</b>
<b>Manual / Mechanical</b>	Repeated cutting or mowing, 3 to 6 times per growing season for 2 to 4 years	Spring, summer, and fall
	Digging/Uprooting	Spring, summer, fall
	Prescribed fire	Spring, summer, fall
<b>Chemical</b>	Cut stump application (glyphosate, triclopyr)	Late summer, fall, winter
	Foliar application (glyphosate, fosamine)	Summer and fall
	Foliar application (metsulfuron-methyl)	Spring
	Basal bark application (triclopyr)	Fall, Winter
<b>Biological</b>	Rose-rosette disease (virus) and European rose chalcid (insect)	Not yet available; both organisms under study

Due to the heavy seed production and seed viability in soil for up to 20 years, any treatment measure requires monitoring and control for many years.



In heavily infested areas, large machinery may be a good option.

### **Mechanical Control**

Frequent, repeated cutting or mowing at the rate of three to six times per growing season, for two to four years, has been shown to be effective in achieving high mortality of multiflora rose. Plants also can be pulled with a weed-wrench, dug up or uprooted with a chain and tractor. The resulting soil disturbance invites germination of seeds in the seedbank, thus follow-up monitoring and control may be necessary for years. Since canes are capable of rooting, pulled plants must be monitored for regrowth or removed from the site and disposed of by burning or chipping.

Prescribed burns in sites with sufficient fuel can effectively suppress and even kill multiflora rose. Early spring burns are most successful when roses are actively sending energy to leaf growth, but fall burns also are effective.

### **Chemical**

In high quality natural communities, removal or treatment of individual plants is preferred to site mowing to minimize habitat disturbance. Cut stems can be treated with 20% active ingredient solution of glyphosate. Foliar spraying can also be effective, especially if done on previously burned or mowed resprouts. Foliar herbicides include glyphosate (1-2% active ingredient, summer/fall/winter), fosamine (2% active ingredient, July-September) and metsulfuron-methyl with surfactant (spring). Another effective treatment is basal bark application of triclopyr (12.5% active ingredient in a non-toxic bark-penetrating oil) in fall or winter. Plant growth regulators (*e.g.*, Dicamba) applied to cut stems or foliage have been used to control the spread of multiflora rose by preventing fruit set. 2,4-D, another growth regulator, is known to be relatively ineffective by itself in controlling multiflora rose, but can be useful as part of a combined herbicide 'cocktail.'

### **Biological**

Biological controls are not yet available for managing multiflora rose. However, researchers are investigating several options, including a native viral pathogen (rose-rosette disease) which is spread by a tiny native mite, and a seed-infesting wasp, the European rose chalcid. Rose-rosette disease, native to the western U.S., has been spreading eastward at a slow pace and is thought to hold the potential for eliminating multiflora rose in areas where it grows in dense patches. A drawback to both the rose rosette disease and the European rose chalcid is their potential impact to other rose species and cultivars.

***NOTICE:** Use pesticides wisely. Always read the product label carefully. Follow all mixing and application instructions and wear all recommended protective gear and clothing. Contact your state department of agriculture for any pesticide use requirements, restrictions or recommendations. Many states require individuals involved in the application of pesticides be certified and licensed. Mention of pesticide brands on this website does not constitute endorsement of any products.*

[Click here](#) for further information on the use of pesticides.

## **HISTORY AND LORE**

Multiflora rose was brought to North America from Japan in 1866 to be used as root stock for ornamental roses. In the 1930s, this plant was promoted by the U.S. Soil Conservation Service for erosion control and as 'living fences' to confine livestock. The plant also was promoted and planted by state conservation departments in the 1960s as valuable wildlife cover for bobwhite quail, pheasants and cottontail rabbits as well as a food source for songbirds. Rooted cuttings were distributed to landowners free of charge to encourage widespread planting. This species has been planted along highway medians to serve as crash barriers and to reduce automobile headlight glare. The ability of this plant to escape to new areas and its negative effects on cattle-grazing have caused it to become recognized as a serious problem. Multiflora rose is now classified as a noxious weed in several states, including Indiana, Iowa, and Missouri.

As with all members of the rose family, multiflora rose has edible fruits that can be gathered in fall or winter. Flower petals add color and flavor to a salad, plus the fruits, petals and leaves can be brewed as an herbal tea.

## **LINKS AND REFERENCES**

### **Websites**

Weeds Gone Wild -- Alien Plant Invaders of Natural Areas, Multiflora rose fact sheet  
<http://www.nps.gov/plants/alien/fact/romu1.htm>

Wisconsin DNR -- Multiflora rose Factsheet  
<http://dnr.wi.gov/invasives/fact/rose.htm>

Native American Technology & Art – Multiflora rose facts  
<http://www.nativetech.org/plantgath/rose.htm>

Ohio State University Extension – Multiflora rose control  
<http://ohioline.osu.edu/b857/pdf/b857.pdf>

Purdue University Extension – Multiflora rose control  
<http://www.fnr.purdue.edu/inwood/past%20issues/multiflora%20rose%20control.htm>

USDA Species Profiles – Many links to Multiflora rose websites  
<http://www.invasivespeciesinfo.gov/plants/multiflorarose.shtml>

Wisconsin State Herbarium – Vascular plant species (search for Rosa multiflora)  
<http://www.botany.wisc.edu/wisflora/search.asp>

The Forest Biology and Dendrology Educational Sites at Virginia Tech  
<http://www.cnr.vt.edu/dendro/dendrology/syllabus/factsheet.cfm?ID=151>

### **Books / Field guides**

Forest Invasive Plants Resource Center - <http://www.na.fs.fed.us/spfo/invasiveplants/>

Invasive Plants Field & Reference Guide: An Ecological Perspective of Plant Invaders of Forests and Woodlands, by Cynthia D. Huebner, U.S. Forest Service, 2005.

(Also online -- <http://www.fs.fed.us/r9/wildlife/nis/invasive-species-field-guide.pdf>)

Invasive Plants of the Upper Midwest: An Illustrated Guide to their Identification and Control, by Elizabeth J. Czarapata, University of Wisconsin Press, 2005.