

# Multiflora Rose (*Rosa multiflora* Thunb. ex Murr.)

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Fig. 1. Multiflora rose flowers in clusters with five petals on each flower.



Fig. 2. Multiflora rose plants have odd-pinnate leaves.



Fig. 3. A flowering multiflora rose plant grows on a Mississippi roadside.

## Introduction

### Problems Caused

Multiflora rose or Japanese rose (*Rosa multiflora* Thunb. ex Murr.) [Syn. *Rosa cathayensis* (Rehd. & Wilson) Bailey] is a shrub native to Japan and Korea. It was introduced into cultivation in 1868 and escaped. It has been used for 'living fences' and wildlife habitat. It can be problematic in all Midsouth states, especially in pastures. The presence of prickles on stems and leaves are most likely a deterrent for grazing livestock. It is still used as a rootstock for certain cultivated roses and apparently resistant to certain diseases such as black spot. However, it is a host to some viral diseases which can be vectored to cultivated roses.

### Regulations

It is Noxious in Alabama, Iowa, Kentucky, Missouri, Pennsylvania, and West Virginia. It is Banned in Connecticut and Prohibited in Massachusetts and New Hampshire. A permit is required in Indiana and it is Regulated as a non-native plant species in South Dakota and a Nuisance weed in Wisconsin.

## Description

### Vegetative Growth

Multiflora rose is an erect, arching, deciduous shrub. Stems and leaves have short, recurved prickles, except in the cultivar 'Inermis'. Shrubs may reach 15 feet high by 15 feet wide, but are generally much smaller. Leaves are alternate and odd-pinnate with 7 to 9 leaflets (Figure 2). The stem (rachis) is glabrous above and pubescent beneath. Each leaflet is obovate to elliptic and 0.5 to 2 inches long by 0.5 to just over 1 inch wide. Margins are generally serrate. Stipules pectinate; fused to petiole for about 0.1 to 0.6 inches then free about 0.1 to 0.3 inches.

### Flowering

Flowers are clustered (Figure 1) in a bracteate raceme-like corymb or panicle with bracts (leaflike structures) promptly deciduous. Flowering occurs in spring from May to June and then sparingly from September to October. There are five sepals which are glabrous to pubescent and lanceolate, 1.5 to 2.5 inches long. The five petals are typically white (pink in *Rosa multiflora* var. *cathayensis* and *R. multiflora* 'Platyphylla'); 0.4 to 0.6 inches long (Figure 1). The hypanthium, sometimes called the 'fruit' or 'hip', at first green then maturing red; ellipsoid to ovoid in shape, 0.2 to 0.3 inches long. The hips occur in clusters. Inside the hips are approximately 7 achenes (true fruit which contain a seed) which are about 0.1 inches long and densely pubescent.

### Dispersal

Individual plants may produce up to 500,000 seeds (or achenes) per year. Most seedlings will emerge near the parent plant. However, many species of birds and mammals feed on the hips, widely dispersing the seeds. Despite this dispersal mechanism, wildlife food value is considered low to minor. Stems that come into contact with the soil can root. The impact of its use as a rootstock for cultivated roses upon its spread in the United States is not clear. Its use for ornament, wildlife, and hedges has most likely lead to invasions in certain areas of the United States.

### Spread By

Multiflora rose is spread primarily by birds, mammals, and humans.

## Habitat

Multiflora rose is a problem in pastures, fence rows, prairies, forest and roadside margins, and open woodlands (Figure 3). It can form dense thickets, replacing the surrounding native vegetation. Although these thickets may provide habitat for certain wildlife, they are a difficult barrier for human activity.

## Distribution

### US

Multiflora rose is widespread in the United States, but apparently not escaped in some western plains and Rocky Mountain states. It occurs in states along the west coast and from Minnesota to New Mexico east. In the right habitat it occurs in eastern states.

### Mid-South

Multiflora rose has escaped in all Mid-South states.

## Control Methods

### Biological

Although multiflora rose is susceptible to certain diseases, no widespread use of biological controls is practiced.

### Physical

Multiflora rose tolerates a wide range of conditions, thus physical controls are generally not practiced.

### Mechanical

Roses are generally shallow rooted and can be mechanically uprooted. Precaution should be taken to avoid prickles during handling and mechanized equipment may be safer when working with large plants.

### Chemical

There are several chemical control options for multiflora rose (Table 1). Most are low-volume foliar applications, but basal spray, soil, or cut stem applications options are also available. Herbicide treatments should be applied during favorable conditions for plant growth. For best results, roses should not be treated within 12 months of mowing or burning. Foliar treatments should be applied after leaves have fully expanded, but before new growth has completely hardened.

Herbicide	Method	Rate
Arsenal (imazapyr)	Low volume/soil	2 to 6 pt/A
	Low volume	1% solution
Banvel (dicamba)	Soil treatment (dormant plants)	2.25 oz (6 to 8 in. of crown)
	Foliar spray	4 pt/A
CimarronMax (metsulfuron+dicamba+2,4-D)	Low volume (plants 3 ft tall)	0.5 oz part A + 1 qt part B/A
Escort/Cimarron (metsulfuron)	Low volume	1 to 3 oz/A
	Low volume	1 oz per 100 gal spray
Garlon/Remedy (triclopyr)	Low volume	4 pints/A
	Basal spray/cut stem	30% solution in oil
Grazon P+D/Tordon 101 (picloram+2,4-D)	Foliar spray (plants at least 3 ft tall)	1 gal/A
	Low volume	2% solution
OneStep (imazapyr+glyphosate)	Low volume	5 to 16 pints/A
	Low volume	5 to 10% solution
Pasturegard (triclopyr+fluroxypyr)	Low volume	2% solution
	Basal spray/cut stem	50% solution with oil carrier
Surmount (picloram +fluroxypyr)	Low volume	3 qt/A
	Spot treatment	1.5% solution
Tordon (picloram)	Low volume	2 qt/A
Velpar (hexazinone)	Low volume	broadcast 2 to 4 gal/A
	Spot treatment	2-4 ml per 3 ft of canopy width
Weedmaster (dicamba+2,4-D)	Low volume, foliar spray	2.5%+10% diesel fuel
	Basal spray	2.5% + 15% diesel fuel

Chemical methods of control for multiflora rose.

## References

- Dirr, Michael A. 1998. Manual of woody landscape plants: Their identification, ornamental characteristics, culture, propagation, and uses, 5th ed. Stipes Publishing LLC., Champaign, IL.
- Miller, James H. 2003. Nonnative invasive plants of southern forests: A field guide for identification and control. Southern Research Station, Asheville, NC.
- USDA, NRCS. 2007. The PLANTS Database (<http://plants.usda.gov>, 6 August 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

## More Information

The Genus *Rosa* belongs to the Rose (Rosaceae) Family. A few rose species are native to the Mid-South, but some are introduced. Native rose species, like *Rosa carolina* L., have pink flowers, but most non-native roses have white. Four of the more common escaped roses include Cherokee rose (*Rosa laevigata* Michx.), Macartney Rose (*Rosa bracteata* Wendland), memorial rose (*Rosa wichuraiana* Crepin), and multiflora rose. In flower or fruit, these roses are not difficult to distinguish. Cherokee and Macartney roses have solitary (not clustered) white flowers solitary with five petals. Memorial and multiflora roses are both in clusters (Fig. 1), but the memorial rose is pinkish and typically double petaled (many petals) while the typical multiflora rose is white and single petaled (Fig. 1). Some cultivated multiflora rose variants are similar to the memorial rose in flower. *Rosa multiflora* var. *cathayensis* Reyd. & Wils. is pink and cultivar 'Platyphylla' is double pink. But they can be distinguished by form since multiflora rose is an upright, arching shrub and the memorial rose is trailing. *Rosa multiflora* 'Inermis' is thornless. These variants of multiflora rose are uncommon. *Rosa watsoniana* [*Rosa multiflora* Thunb. ex Murr. f. *watsoniana* (Crep.) Matsum] probably does not occur in the southeastern U.S.

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