



Common Name: Multiflora Rose

Scientific Name: *Rosa multiflora* (Thunb. ex Murr.)

Multiflora rose was introduced more than 40 years ago for high quality wildlife cover, living farm fences, and windbreaks. In some states, multiflora rose was used as a crash barrier along highways. Multiflora rose spreads rapidly into adjacent fields and undisturbed areas, often forming monotypic thickets. Many states list it as a noxious weed. It belongs to the Rosaceae (Rose) family.

Height: Multiflora rose grows to 4 m (13 ft). The first 1.5-2.0 m (5.0-6.5 ft) of the stem are typically erect with the tips arching back to the ground.

Leaves: Pinnately compound leaves are divided into 7-9 leaflets. Leaflets are less than 4.0 cm (1.5 in) long, obovate to elliptic, glabrous, and finely serrate.

Stems: Stems are glabrous, erect, and arching with curved, flattened, broad-based thorns.

Flowers: Flowers are white to pinkish-white with 1.0-1.5 cm (0.4-0.6 in) long petals. The five sepals are lanceolate and glabrous to puberulent. Blooms May - July.

Fruit: Rose hips are red, 6-9 mm (0.2-0.4 in) long, ovoid, and fleshy. Eventually they become firm and remain on the plant into the winter months. A medium-sized bush is capable of producing 500,000 to 1,000,000 seeds. Fruit matures September-October.



Life History

Multiflora rose reproduces by seed, root sprouts, and layering (rooting from the tips of arching branches). Flowers emerge from May to July and the fruits (rose hips) develop in September through October. Its prolific seeds are eaten and spread by birds and other animals. Seeds may remain viable in the soil for 10-20 years. Seedlings develop within 60 days at soil temperatures above freezing. Plants grow slowly for the first one or two years followed by rapid expansion through layering and root sprouts.

Origin and Distribution

Multiflora rose was introduced from Japan, Korea, and



Photo by James R. Allison

eastern China in 1886 as rootstock for ornamental roses. In the 1930s it was widely promoted as a "living fence" for soil conservation and in wildlife programs. Present distribution is throughout the United States with the exception of the southeastern coastal plains, Rocky Mountains, and western desert areas. In Tennessee, multiflora rose occurs throughout the state along fence rows, successional fields, and pastures. It may invade natural areas, especially fields, flood plains, and light gaps in forests.

Similar Species

There are three native roses that resemble multiflora rose: prairie rose (*Rosa setigera* Michx.), swamp rose (*Rosa palustris* Marsh.), and Arkansas rose (*Rosa arkansana* Porter.). Prairie rose is distinguished from multiflora rose by longer, trailing, and arching stems, larger (2-3 cm; 0.8-1.2 in) white flowers in a pyramidal inflorescence, and smaller fruit. Swamp rose is distinguished from multiflora rose by having a shorter overall height (2 m; 79 in) and solitary flowers. Arkansas rose stems are densely covered by slender, straight thorns and shorter overall stature (rarely over 1 m or 39 in).

Habitat

Multiflora rose will tolerate a wide range of edaphic and environmental conditions. It grows well in full sun or shade, loamy soils to eroded clay pans, and on moist to dry sites. Once established, multiflora rose grows rapidly forming dense, impenetrable thickets.



Photo by James H. Miller



Photo by James H. Miller



Photo by James H. Miller

Management Recommendations

Mechanical Controls

Mowing/Cutting: This method is appropriate for small initial populations or environmentally sensitive areas where herbicides cannot be used. Repeated mowing or cutting will control the spread of multiflora rose, but will not eradicate it. Stems should be cut at least once per growing season as close to ground level as possible. Hand cutting of established clumps is difficult and time consuming due to the long arching stems and prolific thorns.

Biological Controls

Rose Rosette Disease (RRD): Rose rosette disease is an endemic disease in the Mid-western states and effects several species of roses. The pathogen appears to be a virus or mycoplasma-like organism spread by the eriophyid mite (*Phyllocoptes fructiphilus* Keifer). Once infected, most plants die within one or two years with large plants surviving up to four years. Although multiflora rose seems to be the primary host, native and ornamental roses are susceptible. Current research indicates that commercially important relatives such as apples, plums, cherries, etc. are not susceptible to rose rosette disease.

RRD has spread into west and middle Tennessee and is likely to reach the eastern portion of the state in the foreseeable future. Its use as a biological control is not feasible until further research verifies the causal agent and some reliable protection is available for native and cultivated rose species.

Rose Seed Chalcid (*Megastigmus aculeatus* var. *nigroflavus* [Hoffmeyer]): The rose seed chalcid was imported from Japan with multiflora rose seed in 1917. The wasp deposits its eggs into the developing rose ovule just after petal-fall. The larvae develop in the ovules, consuming the contents of the seeds and killing them. Surveys conducted in West Virginia found 50% of viable seed infested with chalcid oviposits. Dispersal is by movement of seed by birds, which may explain the relatively low colonization rate. It is estimated that 90% of the multiflora rose in West Virginia and surrounding states will be infested by this wasp in the next 20 years or more.

Herbicidal Controls

Foliar Spray Method: This method should be considered for large thickets of multi-flora rose where risk to non-target species is minimal. Air temperature should be above 65°F to ensure absorption of herbicides.

Glyphosate: Apply a 2% solution of glyphosate and water plus a 0.5% non-ionic surfactant thoroughly wetting all leaves. Use a low pressure and coarse spray pattern to reduce spray drift damage to non-target species. Glyphosate is a non-selective systemic herbicide that may kill non-target partially-sprayed plants.

Triclopyr: Apply a 2% solution of triclopyr and water plus a 0.5% non-ionic surfactant to thoroughly wet all leaves. Use a low pressure and coarse spray pattern to reduce spray-drift damage to non-target species. Triclopyr is a selective herbicide for broadleaf species. In areas where desirable grasses are growing under or around multiflora rose, triclopyr can be used without non-target damage.

Cut Stump Method: This control method should be considered when treating individual bushes or where the presence of desirable species preclude foliar application. This treatment remains effective at low temperatures as long as the ground is not frozen.

Glyphosate: Horizontally cut multiflora rose stems at or near ground level. Immediately apply a 25% solution of glyphosate and water to the cut stump making sure to cover the entire surface.

Triclopyr: Horizontally cut multiflora rose stems at or near ground level. Immediately apply a 25% solution of triclopyr and water to the cut stump making sure the entire surface is covered.

Basal Bark Method: This method is effective throughout the year as long as the ground is not frozen. Apply a mixture of 25% triclopyr and 75% horticultural oil to the basal parts of the shrub to a height of 30-38 cm (12-15 in) from the ground. Thorough wetting is necessary for good control; spray until run-off is noticeable at the ground line.

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