

Armed and Dangerous Invasive MULTIFLORA ROSE

Invades Fields and Forests, Creates Impenetrable Thickets, Destroys Habitat



Multiflora rose occupies the understory in this young forest and is suppressing regeneration and biodiversity

The Culprit

As is the case with most nonnative, invasive plants, multiflora rose (*Rosa multiflora*) arrived by seemingly innocent means. In 1886, this brambly shrub was imported to the East Coast from Japan as a rootstock for garden roses. In the 1930's, the U.S. Soil



Multiflora rose clammers up trees at the sunny edge between a garden and a woodland.

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et-producing nature and spreading root system for erosion control. Well into the 1960's, many state conservation departments distributed rooted cuttings of this thorny beast to landowners, especially in the Midwest and Mid-Atlantic, to use as living fences and windbreaks. Wildlife personnel also recommended it as a cover and winter food source for birds, quail, pheasants, and rabbits.

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Known Hangouts

Because multiflora rose tolerates a wide range of soil and light conditions and produces bird-attracting fruits, it infests many types of habitat. It smothers vegetation in fields, pastures, and roadsides, as well as in woodland edges and successional forests. In mature forests, it favors tree-fall gaps and stream-banks. It can clamber high into tree tops by using its thorns to "climb." The only places you will not find multiflora rose are in areas with constantly wet soil or dense shade. This thorny beast is a serious pest up and down the East Coast, throughout the Midwest, and in the Pacific Northwest. Many states declare it a noxious weed and require its control.

Modus Operandi

Multiflora rose forms dense thickets by three methods: rooting at the tips of its long, arching canes, forming new crowns and canes from its spreading root system, and producing abundant fruits. Migrating and wintering birds eat the berry-like fruits (rosehips) and spread them far and wide, and large quantities of uneaten rosehips drop to the ground where they readily sprout into new plants. A large multiflora rose produces thousands of seeds each year and they can be viable for 10 to 20 years.



Left: Multiflora rose flowers form large clusters. Middle: Rose hips ripen in autumn and remain on green branches well into winter. Right: Paired hooked thorns and fringe at the leaf bases help identify this troublesome weed.

Positive Identification

This invasive rose is a multi-stemmed, spreading shrub that sometimes loosely twines and climbs high into trees. It has branched, arching stems (canes). Young stems have green bark and are slender and flexible with sharp thorns. With age, canes become stout and sturdy with rough, brown bark and large thorns. The thorns of this rose are distinctively curved with a wide base, resembling a cat's claws, and they usually occur in pairs. Leaves alternate along the stems and are made up of five to eleven, 1-inch-long, oval leaflets with toothed margins. A small, green leafy structure (stipule) grows at the base of each leaf, and it sports a comb-like fringe along its margins – this is an important identifying characteristic. Showy clusters of ½ to 1-inch-wide, white, yellow-centered flowers bloom in May and

June. By mid-summer, small, hard, green fruits (rosehips) develop from the spent flowers. These ripen to red in fall. Fruits not eaten by birds become leathery and remain on the branches all winter. Dormant leaf buds also are usually red, causing the green-stemmed, red-fruited plant to stand out in winter.



Left: Leaves of native swamp rose lack a fringe at their bases and its thorns are straight. Right: Carolina rose, a native, has short bristles interspersed between long straight thorns. Both have pink, not white, flowers.

Mistaken Identity

Do not confuse multiflora rose with native roses. These can be distinguished by the presence of a fringed stipule at the leaf bases of the invasive. The native roses have stipules that are not fringed; they also have pink, not white, blossoms. The thorns of native roses differ from the hooked, paired thorns of multiflora rose. The native roses have straight thorns and may have small, bristly spines along the stems between larger thorns. The native pasture or Carolina rose (*Rosa carolina*) grows in sunny to partly shady areas. Swamp rose (*Rosa palustris*) grows in sunny, wet areas. Both roses are smaller and less vigorous species than multiflora rose. In winter, native greenbriars (*Smilax sp.*) might be mistaken for multiflora rose because they too have slender, green, thorny stems that clamber up tree trunks and form thickets. You can tell them apart by the thorns: those on greenbriars are not curved and paired. Fruits of greenbriars are blue-black, not red, and last on the stems into winter, offering nutritious food for birds.

Search and Destroy

Because the stems are so thorny and the seedbank so long-lived, there are no easy solutions to controlling multiflora rose. The longer an infestation has been present, the more difficult it will be to control. Combining several control methods and repeating them for two to three or more years work best. For instance, you might mow or weed-whack the shrubs and then apply a foliar spray to the regrowth.

Manual & Mechanical: Pulling or grubbing individual, shrubby plants from the soil works only if all roots are removed, otherwise the roots will sprout new plants. Where multiflora rose infests fields, roadsides or fencerows, mowing three to six times a year for at least two years may kill or greatly reduce the plants. Where mowing would destroy a desirable native plant community, cut the stems to the ground three or more times a year and repeat for several years to exhaust the plants. When hand-cutting multiflora rose, wear heavy leather gloves with long cuffs and protective clothing on legs, arms, and eyes. One technique to avoid the thorns is to stomp on the canes near the

crown, bending them downward and away from your face and body. Use long-handled pruners or hand-held clippers to cut every cane about a foot or less from the ground. Sometimes a second person can be helpful by corralling the canes and bending them away from the shrub's crown so the other person can cut unimpeded. A weed-whacker with a metal disc also works well in cutting through thickets.

Grazing: Goats can effectively control multiflora rose if grazed in the spring and early summer for several consecutive years. Keep in mind, however, that goats will eat desirable plants as well.

Foliar Spray: Multiflora rose is susceptible to several different foliar herbicides but you should use them cautiously, especially during the growing season in high-quality natural areas, because non-target species may be killed by spray drift. Add surfactant if it is not already in the product.

Cut Stump: Multiflora rose shrubs and lengthy vines that climb into trees are best controlled in high-quality forests and fields by cut stumping. This method lessens the chance of harming desirable plants. Cut stems about a foot from the ground (see *Mechanical & Manual*) and paint or spray a recommended concentrated herbicide immediately on the cut stump. Do not pull severed, vining multiflora roses from trees, which could break branches and be dangerous. Leave them to die in place.

For currently approved herbicide recommendations, check the Virginia Department of Forestry chart *Non-Native Invasive Plant Species Control Treatments*, which you can download from the Blue Ridge PRISM website.

Biological Control: RRD (rose rosette disease) is a virus that kills some garden roses as well as multiflora rose; it also infects and kills commercially important plants in the rose family, such as apples, plums, and raspberries. Mites that feed on the leaves



This multiflora rose branch exhibits stunted deformed reddish growth, symptoms of rose rosette disease.

carry the virus from plant to plant. This disease spreads naturally and to date has killed large populations of multiflora rose in the Midwest. RRD occurs in Virginia, although it is not yet found widely enough to conquer the invasive rose. Roses infected with RRD become deformed: leaves are stunted and reddish, stems elongated, bright red and thorny. An infected

plant dies in a few years. If RRD occurs in your area, you can encourage succulent growth to attract mites, and hopefully spread the virus, by cutting or mowing multiflora in early summer.

No matter which control method you use, you'll need to follow up for several years to eradicate this nasty plant. Where infestations are heavy, effective control measures carried out for a number of years are needed to deplete the seed bank. This is especially true where the soil is disturbed after control begins.