

Invasive Species Profile: Multiflora Rose (*Rosa multiflora*)

By Greg Sykes (greg@grsykes.com) – version 2 with updated historical information

Native Range: eastern China, Korea, and Japan

U.S. Introduction: at least 1811

Life Cycle: woody perennial

Means of Spreading: seeds

Commercially Available: yes

Control Method: hand-pull small specimens; mature bushes may need a Weed Wrench

Good Alternative Species: marsh rose (*R. palustris*), climbing rose (*R. setigera*), Carolina rose (*R. carolina*), prairie rose (*R. virginiana*)

Comments:

When folks first hear that a “rose” is on the Invasive Management Area (IMA) target list, they fear for their garden specimens. Relax. Tea roses, grandifloras, and the like may be non-native but they are on the “well-behaved” list since they struggle to survive the mid-Atlantic’s heat, humidity, and diseases. Tropicana, Peace, and other garden cultivars need all of the care they can get, posing little threat of escaping into the environment. To help delicate roses, the desirable specimens may be grafted onto a hardier rootstock species. Sometimes the grafting might not be immediately obvious until the upper portion dies or new growth from the rootstock overtakes the fancied variety. Gardeners may incorrectly refer to the rootstock species outshining the cultivar as the rose “reverting back to its wild state,” which is not how genetics works. The easiest way to identify multiflora rose is looking at the leaf area (Figure 1). On the petiole, between the elongated stipules and branch, multiflora rose has long, comb-like extensions which are absent in other roses.

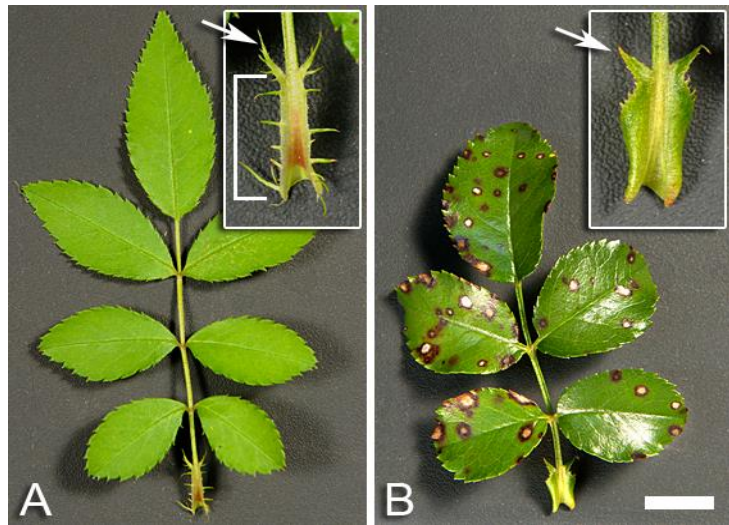


Figure 1. Multiflora rose’s leaves (A) distinguish it from other species. Typically, the compound leaves have seven serrated leaflets, though that number may vary. The petiole (a mini-stem between the leaf and woody branch) has two long stipules (arrow pointing to stipules in this figure). Between the stipules and branch, multiflora rose has comb-like fleshy protrusions (bracketed). In contrast, garden-variety rose leaves (B) have either smooth edges or tiny nubs (pictured) between the stipules and branch. Both specimens were untreated but fungal spots appear only on the sensitive garden cultivar. The scale bar is 1.0 cm.

Multiflora rose has been in the United States since at least 1811, when it appears in the Elgin Botanic Garden’s (New York City) catalogue of cultivated plants. By 1866, multiflora rose was used as a rose rootstock. Folks during the 1930s thought the multiflora rose’s tough root system useful for erosion control and planted the straight species for that purpose. As an added bonus, multiflora rose makes hedgerows, is easily grown, and thrives with minimal horticultural effort throughout the United States except the Rocky Mountains and the southeastern corner. The rosehips can be turned into jams and jellies. Some birds also consume these fruits.

As is the case with so many other non-natives that “started off as a good thing,” multiflora rose’s drawbacks exceeded its benefits. Limited animals eat and few diseases infect this plant (more on this topic later). This unfettered growth results in huge, tangled thickets covering acres of parkland and even reaching into trees. Thick brambles block native flora during middle to late spring when many plants do most of their growing; other non-native invasive weeds like oriental bittersweet, garlic mustard, and

English ivy might poke through the rose patch. Birds distribute the seeds which are capable of lasting 20 years in the soil before germinating. The root, which may be tough but is extremely simple, lacks the complex root matrix ideal for proper erosion control, and the rose's density prevents beneficial plants from reinforcing soil stability. Land values decrease when infested with this noxious weed since most large animals (including people) avoid the thorny barriers and rose removal is laborious and costly.

Several biological controls help dent multiflora rose's population. *Megastigmus aculeatus* is a wasp whose larvae eat the seeds as they develop in rosehips (preferably dried); this method reduces future rose generations but does nothing to kill the parent plant. The rose stem girdler (*Agilus aurichalceus*) is a beetle with larvae boring into the stems. The rose rosette disease is an incurable virus spread by a mite (*Phyllocoptes fructiphilus*). Unfortunately, none of the biological controls exclusively target *Rosa multiflora*. When these control organisms jump to ornamental and agricultural crops, they become the "pests."

Without widespread bio-controls, programs like IMA recruit volunteers to manually remove the rose. After cutting back tangles of vine-like branches, any pieces bearing rosehips are bagged for the landfill or incinerator. The remaining stump may be extracted by hand-pulling or with a Weed Wrench. At some sites, volunteers need to remove the rose before attacking the other, previously mentioned target weeds. If you would like to help with this eradication and learn more about the natural world, send an e-mail to me asking to be on the IMA Volunteer list. The next time you shop for roses, consider a beautiful, low maintenance native like marsh rose (*R. palustris*) or prairie rose (*R. virginiana*).

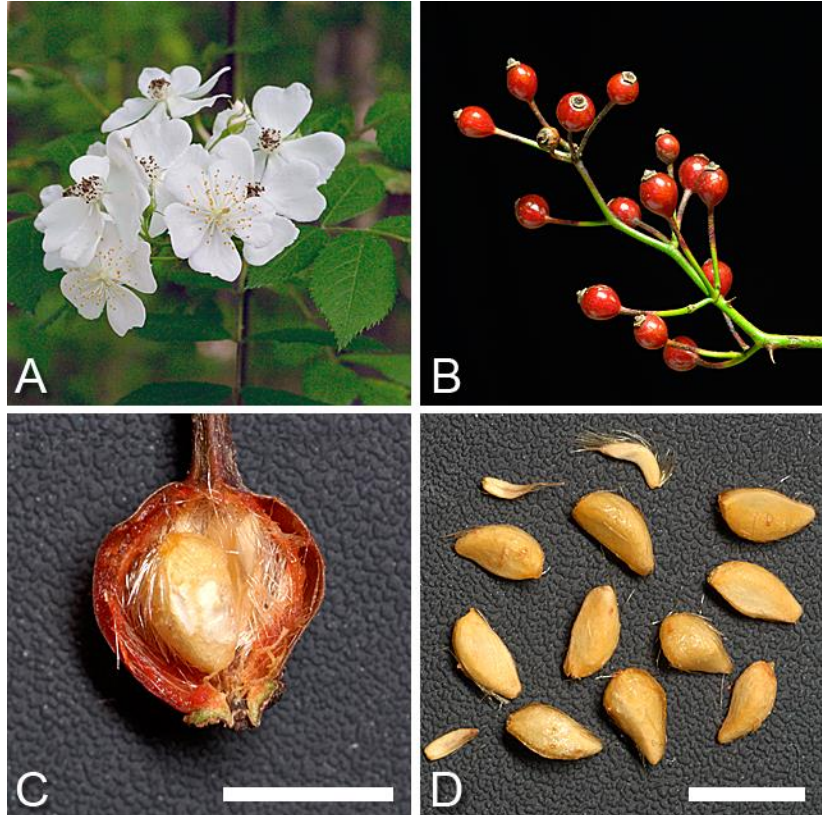


Figure 2. In May, fragrant white or light pink blossoms open on multiflora roses (A). The fruits mature over the summer and ripen by winter (B). Both flowers and fruits remind some folks of those from apple trees; apples and roses belong to the same family. Seeds pack tightly with little flesh (C)—scale bar is 0.5 cm. In this example (D), a single fruit produced ten viable seeds and three smaller, unfertilized seeds. This scale bar is 0.25 cm.

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Figure 3. Once people learn about multiflora rose, they often confuse it with other thorny plants. This image features stems of three species both lengthwise and cross sectioned. Blackberries or brambles (*Rubus* sp.) have thin spines and are either round or have five-sided walls (A, B). Perpendicular, triangular, leather-piercing thorns jut from round stems of the native common greenbrier (*Smilax rotundifolia*, C, D). Multiflora rose also sports round stems but its beige thorns hook down (E, F). The top scale bar is 1.0 cm; scale bar for the insets is 0.25 cm.

For more information on multiflora rose:

<https://www.fs.fed.us/database/feis/plants/shrub/rosmul/all.html>

<https://www.invasivespeciesinfo.gov/plants/multiflorarose.shtml>

<https://www.invasive.org/browse/subinfo.cfm?sub=3071>

<https://mdc.mo.gov/trees-plants/problem-plant-control/invasive-plants/multiflora-rose-control>

<http://www.inhs.illinois.edu/research/vmg/mrose>

Hosack, David. 1811. *Hortus Elginensis: or a Catalogue of Plants, Indigenous and Exotic, Cultivated in the Elgin Botanic Garden, in the Vicinity of the City of New-York* Second Edition Enlarged. T&J Swords, New York. pp. 66.

<http://www.biodiversitylibrary.org/item/196047#page/8/mode/1up>

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