

Multiflora rose
Rosa multiflora Thunb.
Rose Family (Rosaceae)



multiflora rose in flower

DESCRIPTION

Multiflora rose is a vigorous, prickly shrub with green or reddish, arching branches. In late May–June it is covered with clusters of small white (or slightly pinkish) flowers. The fringed stipules at the base of the leaf stalk are the best characteristic to use to distinguish multiflora rose from other species. No other rose species that occurs in our region has both an upright-arching growth form and fringed stipules.

Height - Vigorous plants can grow to 8–9 feet high and up to twice as wide.

Stem - The stems are green or reddish and bear stout prickles that curve downward. In the open, stems often arch down to touch the ground, or

they can extend even higher than 9 feet when supported by the branches of adjacent trees or shrubs.

Leaves - Leaves are pinnately compound with 5–11 toothed leaflets; they are alternate on the stem. The stipules, leaf-like strips along both sides of the leaf stalk near the base, are prominently fringed. The leaves begin to emerge very early in the spring, well before any native woody plants.

Flowers - Flowers are white, or slightly pinkish, individually they are $\frac{1}{2}$ – $\frac{3}{4}$ inch wide. They appear in large, showy clusters at the ends of the branches in late May or early June.

Fruit and seed - The flowers are followed by numerous small red fruits (hips) that persist into the winter and are eaten by birds and small mammals. A single plant can produce as many as a million seeds. Seed germination is high; seeds can also remain viable in the soil for as long as 20 years.

Roots - Roots are wide-ranging and capable of resprouting. In addition, stem tips that contact the soil surface are capable of rooting, through a



fringed stipule

process known as layering, to form new plants. Extensive thickets are formed in this way.

DISTRIBUTION AND HABITAT

Multiflora rose is native to Japan, Korea, and eastern China, it was brought to the United States originally in the 1800s for use as rootstock for grafted ornamental roses. In the 1930s through the 1950s it was promoted by the United States Department of Agriculture as a "living fence". Millions of seedlings were distributed to farmers and planted throughout the East and Midwest. Natural resource agencies such as the Pennsylvania Game Commission and the Pennsylvania Bureau of Forestry also included the plant in their revegetation and wildlife enhancement programs until the 1960s.

Multiflora quickly established itself as part of the naturalized flora. Today it is estimated to infest 45 million acres nationally, and is classified as a noxious weed by many states including Pennsylvania. It is found throughout the state in old fields, roadsides, pastures, open woods, forest edges, and riparian areas. While it grows most vigorously in full sun, it can grow in the shade too, and will persist for many years under a tree canopy although it may not flower or fruit very heavily.

EFFECTS OF INVASION

Multiflora rose forms such dense stands that it can interfere with establishment of other woody species in old-field succession. It also replaces native vegetation in forest edges and riparian areas. However, once trees break through the dense thickets of rose and begin to shade it, the multiflora loses vigor.

REPRODUCTION AND METHODS OF DISPERSAL

Most spread of multiflora rose is by seed, but there is also some vegetative spread through layering (rooting at the tips of stems that touch the ground), to form large clumps or thickets. Multiflora rose is so common in many areas of Pennsylvania that any open habitat such as lawn, meadow, pasture, or prairie is vulnerable to infestation due to the constant "seed rain" from birds. Regular monitoring of such areas is recommended so invading plants can be pulled while they are still in the seedling stage.



CONTROL

Mechanical - Seedlings can be pulled by hand. Small plants can be dug out or larger ones can be pulled using a chain or cable and a tractor, but care needs to be taken to remove roots also. Dense thickets may need to be attacked using a bulldozer. Repeated mowing for 2–4 years can be effective.

Chemical - Perhaps the most effective strategy is to cut the stems and immediately treat them with an herbicide such as glyphosate or triclopyr. The same chemicals can be employed as a foliar spray.

Biological - Rose rosette disease was first found in the western U.S.; it subsequently spread to the Great Plains where it caused a fatal epidemic in multiflora rose. First reported in 1941, this virus-like pathogen is spread by an eriophyid mite (*Phyllocoptes fructiphilus*), which is dispersed by the wind. In 1989 it was discovered in West Virginia and by 1994 it had spread to Maryland, Pennsylvania, and Ohio. Rose rosette disease is currently present throughout Pennsylvania, and is killing multiflora rose in many areas. Plants affected by rose rosette disease develop witches'-brooms and small reddish leaves and shoots. Infected canes are subsequently winter-killed. The disease can kill plants in two years.

NATIVE ALTERNATIVES FOR LANDSCAPE USE

The native rose species, pasture rose (*Rosa carolina*), wild rose (*R. virginiana*), and swamp rose (*R. palustris*) are preferred landscape alternatives.

REFERENCES

Van Driesche, R., R. Reardon, B. Blossey, S. Lyon, and M. Hoddle. 2002. Biological Control of Invasive Plants in the Eastern United States. FHTET-2002-04. United States Department of Agriculture, Forest Service, Morgantown, WV.

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Internet resources – <http://www.paf flora.org>, <http://www.invasivespecies.gov>



Multiflora rose infected with rose rosette disease

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updated November 2011