Invasive Plant Fact Sheet

Asiatic Bittersweet Asiatic Bittersweet Celastrus orbiculatus Thunb. Staff Tree Family (Celastraceae)

Status: Common and invasive in Connecticut.

Description: Asiatic bittersweet is a non-native woody vine with yellow fruits which split to reveal showy bright red seeds. It is also commonly referred to as Oriental bittersweet. This highly invasive species entwines its round, brown stems about other plants and structures, climbing as high as sixty feet. Approximately two weeks after autumn foliage's peak, the leaves turn golden-yellow and are easily sighted.

Habitat: In its native Asia, this species dominates lowland slopes and thickets. Here in North America, Asiatic bittersweet is extremely successful in almost any habitat type, such as disturbed edges, abandoned fields, along coast, and the edge of salt marshes. It prefers utility corridors, fence rows, railroads, and roadways (for example, it is prolific along the Merritt Parkway).

Seasonal cycle: Asiatic bittersweet is a deciduous perennial plant. There are typically separate male and female plants, which bloom in May and June. Bees aid in pollination. The fruit (on the female plant) ripens by September and remains on the vine through winter. Numerous bird species, such as black-capped chickadee, northern mockingbird, European starling (non-native), and blue jay, small mammals, and human activity (such as composting ornamental cuttings) widely disperse the Asiatic bittersweet's seeds. Rootsuckering, the ability to send up shoots from the roots, contributes to the vine's high density once established at a site.

Distribution: Asiatic bittersweet is native to temperate East Asia (Japan, Korea, and China). Introduced to North America in the mid-nineteenth century, it quickly became established from Louisiana to Maine. Asiatic bittersweet reached Connecticut as early as 1916 as an ornamental and is now found throughout the state.

Control: Due to its high reproductive rate, long-range seed dispersal, and rootsuckering abilities, Asiatic bittersweet can quickly disperse through an entire area, threatening upland meadows, thickets, young forests, and beaches alike. Growth of native vegetation is extremely limited beneath bittersweet's dense shade, and it tends to strangle small trees and shrubs by growing around their stems, constricting the flow of the plant's fluids. Many supporting plants also succumb to wind and ice storms with the added weight of the vine. Asiatic bittersweet also has the capacity to hybridize with American bittersweet (Celastrus scandens), cross-pollinating to the extent of modifying the genetic differences between the two species. The Connecticut College Arboretum, Connecticut Department of Transportation, and The Nature Conservancy are working to improve the control and management of Asiatic bittersweet. Low patches can be removed by cutting the vine and applying triclopyer herbicide (the active ingredient in Ortho's Brush-B-Gone¨) to the regrowth a month later. For taller patches, the main stems can be cut

and triclopyer herbicide applied immediately to the cut stem and to any subsequent regrowth. Care must be taken to protect the remnant native plant species when cutting to ensure that they revegetate the area. Asiatic bittersweet has a substantial seed bank, and successful removal of the species requires perseverance through two or three years. The Nature Conservancy Connecticut Chapter currently manages Asiatic bittersweet at its Griswold Point Preserve. Other points of interest: Asiatic bittersweet is similar in appearance to the native species American bittersweet. Asiatic bittersweet is distinguished from American bittersweet by the fact that its fruit and flowers are located in clusters of three to seven in the axil of the leaves (between the leaf and the stem). American bittersweet's fruit and flowers are located at the branch tips only. It is very important for land managers, naturalists, and gardeners to distinguish between the native species and the invasive species in any control efforts. Asiatic bittersweet was planted for wildlife food and cover, cultivated to use the fruit-covered vines for decorations, and employed in soil erosion control. Additional information sources: Gray's Manual of Botany. Eighth edition, corrected printing. M. Fernald. D. Van Nostrand Company, New York 1970. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. Second edition. H. Gleason and A. Cronquist. The New York Botanical Garden, Bronx 1991. Diagnostic information: Roots: outer surface is characteristically bright orange. Stem and branches: round and brown. Flowers: small, greenish-yellow, with 5 sepals and 5 petals, clustered in the axil of the leaves. Fruit: 1/4" diameter, change from green to bright yellow as mature, bright scarlet arils. Leaves: 3/4" to 4-3/4" long and 5/8" to 3-1/4" wide, margin is crenate to serrate, base is cuneate to obtuse, tip is acute to rounded, change from green to golden-yellow as mature.

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