VEGETATION MANAGEMENT GUIDELINE: Bush Honeysuckles — Tatarian, Morrow's, Belle, and Amur Honeysuckle (*Lonicera tatarica* L., L. morrowii Gray, L. x bella Zabel, and L. maackii [Rupr.] Maxim.)

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Bush honeysuckles can invade a wide variety of native habitats and have a broad tolerance to a variety of moisture regimes and habitats. Although individual species may have certain environmental tolerances (e.g., Tartarian in drier habitats, Morrow's in moister areas), most natural communities are susceptible to invasion by one or more of the species. Often the source of the invasion comes from a planting or from a highly disturbed successional community in which the honeysuckle has flourished. Wetland, prairie, and forested communities are all affected. Habitat disturbance appears to be a key to introduction of these species.

The spread of bush honeysuckle is generally accomplished by birds. Fruits are consumed readily upon ripening during summer. Bush honeysuckle plants commonly are found growing under tall shrubs or trees that act as perch areas for birds. Seeds appear to need a cold stratification period to break dormancy. Seedlings establish in areas of sparse herbaceous vegetation and can tolerate moderate shade. It is suspected that bush honeysuckle may produce allelopathic chemicals that enter the soil and inhibit the growth of other plants, preventing native plants from competing with the shrub. Shading by bush honeysuckle may also limit the growth of native species. Bush honeysuckles leaf out before many native species and hold their foliage until November.

218 Natural Areas Journal Volume 12 (4), 1992

Control measures may enlist one or more of the following techniques: prescribed burning, hand-pulling of seedlings, cutting, and herbicide treatments. A recently introduced pest, the European honeysuckle aphid, somewhat controls flower and fruit production in some of the bush honeysuckles. Heavy infestations cause tips of branches to form "witches brooms" or deformed twigs. This often greatly reduces fruit production. Native ladybug beetles, however, have been noted to control this aphid.

In high-quality natural communities that are fire-adapted, spring prescribed burning will kill seedlings and the tops of mature plants. Bush honeysuckles readily resprout, and repeated fires are necessary for adequate control. It may be necessary to burn annually or biennially for five years or more for effective control.

Seedlings may be hand pulled when soils are moist. All of the root should be removed or resprouting will occur. Physical removal by hand pulling smaller plants or grubbing out large plants should not be used in sensitive habitats. Open soil and remaining root stocks will result in rapid reinvasion or resprouting of honeysuckles and other exotics.

Bush honeysuckle stems can be cut at the base with brushcutters, chainsaws, or hand tools. To prevent resprouting, a 20% solution of glyphosate (available under the trade names Roundup and Rodeo) should be applied to the cut stump, either by spraying the stump with a low-pressure hand-held sprayer or by wiping the herbicide on the stump with a sponge applicator. While the Roundup and Rodeo labels recommend a 50-100% concentration of herbicide for stump treatment, a 20% concentration of Roundup has proven effective. It is not known if this lesser concentration is effective for Rodeo also. Rodeo can be used in wetlands and over open water, but Roundup is only labeled for use in nonwetlands. Herbicide should be applied to the cut stump immediately after cutting for best results. Application in late summer, early fall, or the dormant season has proven effective. Some resprouting may occur, making a follow-up treatment necessary. The wood of bush honeysuckles is very tough and easily dulls power-tool blades.

Methods given above for high-quality natural communities are also effective and preferred on buffer and disturbed sites. However, when a disturbed area with bush honeysuckles lacks sufficient fuel to carry a fire, herbicides may be necessary to obtain control. In dry upland areas, a foliar spray of 1% Roundup (glyphosate) will control seedlings. A 1.5% foliar spray of Roundup just after blooming in June will control mature shrubs. Application should occur from late June to just prior to leaf color changes in fall. The herbicide should be applied while backing away from treated areas so as not to walk through the wet herbicide.

In moist areas, a foliar spray of 1% Rodeo (glyphosate) with Ortho-X27 spreader will control seedlings. Application should occur from late June to just prior to changes in leaf color in the fall. Foliar application of a 1.5% solution of Rodeo (2 oz Rodeo/gal clean water) will kill mature plants if all foliage is sprayed. This control method usually requires less labor but more herbicide than mechanical control.

Krenite also controls bush honeysuckle when applied according to label instructions. The herbicide Garlon, however, does not control bush honeysuckles.

Treated areas should be checked in following years for reinvasion. Glyphosate is a nonselective herbicide and care should be taken to avoid contacting nontarget plants with herbicide. Do not spray so heavily that herbicide drips off the target species. By law, herbicides may be applied on public properties only according to label instructions and by licensed herbicide applicators or operators.

GENERAL REFERENCES

Converse, C.K. 1984. Element stewardship abstract, *Lonicera tatarica, L. morrowii, L. x. bella*. Unpublished report for The Nature Conservancy 8 p.

Kline, V. 1981. Control of honeysuckle and buckthorn in oak forests (Wisconsin). Restoration and Management Notes 1(1):18.

Todd, R. 1985. Honeysuckle controlled by hand pulling (Illinois). Restoration and Management Notes 3 (1):41.