

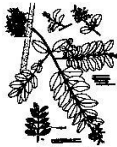
Invasive Species of the Piedmont: Shrubs, Trees, and Vines---

How You Can Help!

More information available at: http://www.ncwildflower.org/index.php/plant_galleries/invasives, <http://www.ncsu.edu/goingnative/index.html>, <http://www.ncbg.unc.edu> under Plants and Gardening, and <http://nc-ipc.weebly.com/>

- Invasive species outcompete native species and change forest structure to the disadvantage of the forest's plants and animals. They are sometimes "pretty", BUT...
- Invasive species are sometimes STILL available through garden centers and online...do not buy them and let businesses know why!
- Invasive species often spread by root and seed from adjoining areas, finding an "in" through a disturbed area (trail, tree blowdown, or seasonally flooded area) and spreading from there; some are spread by birds eating their fruit and depositing the seed elsewhere.

CONTROL: Small/isolated plants can be pulled up or the entire root mass can be dug up. Larger individuals and more extensive invasions of shrubs and trees can be controlled by cutting stems and painting JUST the cut woody stem with a 20% solution of glyphosate herbicide (not adjacent plants). If fruits are large and bird-dispersed (e.g., trifoliolate orange and Oregon grape), cut off fruits (and destroy them).



Chinese Privet (shrub): brown stems growing to large branched impenetrable shrubs, small opposite evergreen leaves with no teeth, spreads by bird-transported seed and underground roots. * **Don't treat look-alike coralberry!**



Multiflora Rose (shrub): green stems growing to large branched impenetrable shrubs, white many-petaled rose (May/June) with deciduous leaflets (7-9) alternating up stem and feathered base of leaflets, invades along trails/roads/pastures. * **Don't treat natives: Carolina and swamp rose!**



Autumn Olive (pictured), Russian Olive, Thorny Olive (shrub): brown stems growing to large branched impenetrable often spiny shrubs, alternate deciduous leaves with no teeth, small fleshy fruit with a stone in center. Autumn olive has silvery scales on bottom of leaf



Trifoliolate Orange (shrub): green shiny stems growing to large branched impenetrable shrubs, leaflets in threes and alternating, large thorns, orange-like but useless fruits (August); a relatively NEW INVASIVE IN NC...you won't find it yet on NC invasives websites, but it has spread in southeast, MD, and Chatham County, NC.



Leatherleaf Mahonia (shrub): whorls of branches supporting rows of large holly-shaped evergreen leaflets (9-13) with fruits (May-July) resembling upright clusters of chalky blue grapes



Tree-of-Heaven (tree): light tan bark with few furrows, leaflets (15-27), each leaflet has a little "boot" at its base and leaves smell like rotten peanuts when crushed, spreads by root sprouts, large sprays of greenish flowers (May-June). * **Don't treat hickories or walnuts!**

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Princess Tree (tree): brownish-gray lightly furrowed bark, large heart-shaped opposite deciduous leaves with no teeth, upright candelabra of purple flowers (April) before leaves, hinged brown nut-shaped seed capsules (May/June)



Mimosa (tree): feathery array of small deciduous leaflets (20 -40) opposite on stem, pink tufted flowers (May-August), bean-like fruits (July-November)



Bradford Pear (tree): ornamental evenly-shaped tree (height to 40 feet) with alternate shiny green leaves with a wavy margin, malodorous white flowers in spring before leaves emerge, apple-like fruits (< ½ inch) green to brown.



English Ivy (vine): evergreen lobed alternate leaves, spreads by underground runners, eventually climbs trees and (at this stage) flowers and fruits. Important to control or at least contain by consistent pulling/herbicide use and to keep it OUT of trees, since fruiting allows it to spread aggressively and can kill trees.



Wisteria (vine/shrub): array of deciduous leaflets (7-13) alternating up stem, large hanging clusters of light purple flowers and fruits. Spreads by underground runner, climbs trees, and tend to spread in place on forest edges.



Kudzu (vine): deciduous lobed leaflets in threes alternating up densely hairy stem, violet-purple pea-like flowers and bean-like fruits (July-October). Spreads by underground runner, climbs trees, often spreading in place on forest edges.



Japanese Honeysuckle (vine): evergreen opposite leaves without teeth on tough tan stem, eventually growing over other plants and produces irregular flared white, pink or orange-yellow flowers (April-June) at this stage.



Oriental Bittersweet (vine): deciduous alternate finely toothed egg-shaped leaves on many-branched vines growing over other plants, tiny yellow-green flower clusters (May-June), small green to yellow fruits (August-September)



Sweet Autumn Virgin's Bower (vine): deciduous to evergreen, opposite leaflets in 3s or 5s, entire (without teeth), tendrils wrap around branches, clustered flowers with 4 white sepals (August-September), dry brown seeds



Porcelain Berry (vine): deciduous, alternate leaves grape-like to more deeply lobed leaves, branched tendrils (grapes are unbranched), small white flowers in flat-topped clusters opposite leaves (June-August), small berries yellow to purple to blue

Invasive Species of the Piedmont: Herbs, Grasses, and Aquatics

---How You Can Help!

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CONTROL: Small/isolated plants can be pulled up or the entire root mass can be dug up. Herbaceous invasives often require repeated hand-pulling, taking care not to pull plants other than the invasive one. More extensive and very uniform invasions of herbaceous plants can be controlled by carefully spraying JUST the leaves of the invasive plant with an herbicide formulated for that plant. Invasive aquatics require special treatment formulated for aquatic systems. If you have invasive aquatics, please consult with a professional such as a cooperative extension agent.



Bushy Lespedeza and Sericea Lespedeza (perennial herb): Leaflets in 3s and without teeth, alternating up stem. There are native/non-invasive lespedeza species, so refer to invasives web site for identification.



Gill-O'er-the-Ground (perennial herb): spreading ground cover with square stems and opposite heart-shaped scalloped leaves, paired lavender flowers with irregular flared indented lip (March-July)



Common Chickweed (annual herb): prostrate to erect, forming dense mats, bright green entire (untoothed) opposite oval leaves, small white flowers are 5-petalled but appear 10-petalled due to division (March-July)



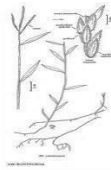
Beefsteak Plant (annual herb): erect, with square short-haired stems, opposite oval toothed leaves, minty odor, small bell-shaped purple and white flowers on a spike (July). **Can be confused with other native mints!**



Periwinkle (perennial herb): spreading ground cover with evergreen opposite leaves with 5-petalled (flared and of equal size) purplish blue flowers (March-April)



Purple Loosestrife (perennial herb): erect and tall, grows in wet soils, with short-haired square stems, opposite untoothed lance-shaped leaves, spike of 1-inch 6-petaled purple flowers with yellow centers (July)



Japanese Stilt Grass (annual grass): weak-stemmed and spreading (2-3 feet), light green lance-shaped alternate untoothed leaves (3 inches long), sets seed in the fall. Important to hand-pull any time BEFORE it sets seed in September. A high-impact invasive with very dense coverage in floodplains and uplands



Johnsongrass (perennial grass): erect (3-10 feet) and clumped, alternate smooth lance-shaped leaves (12-30 inches long and ½-1 inch wide) with white midrib, flower in a reddish open panicle of spikelets at upper end of plant (June-August)



Cogongrass (perennial grass): erect (1-4 feet) and clumped, alternate lance-shaped leaves (12-30 inches long and ½-1 inch wide), leaf edges rough to touch due to saw edge and whitish midrib of the leaf off-center, fluffy white plume-like seed head (May-June)



Golden Bamboo (perennial grass): reed-like plant with hollow woody stems (16-40 feet), alternate leaves (3-10 inches long and about ½ inch or less wide), flowers rarely (1x/7-12 years), forms dense single-species thickets



Hydrilla (submersed aquatic plant): usually rooted in shallow water, up to 18 feet in length, 2-8 branches come off each point along the central stem, tiny dark green fleshy prominently toothed leaves in whorls of 3-6 (usually 5), forms dense surface mats (July-August)



Parrot Feather (aquatic plant): submersed or floating, stout stems, feather-like leaves in whorls of 5 with untoothed edges, flowers/fruits (not frequently present) from place where leaf joins the stem



Brazilian Waterweed (aquatic plant): submersed, finely toothed leaves under 1 inch in whorls of 3-6, often confused with hydrilla (but has smooth midrib on bottom of leaf...hydrilla has toothed midrib), flowers with 3 petals



Crested Floating Heart (aquatic plant): floating, heart-shaped large untoothed leaves with short leaf stem, flowers with 5 white petals summer to fall

APPENDIX OF SCIENTIFIC NAMES FOR “INVASIVE SPECIES OF THE PIEDMONT”
(Eno River Association, 2016)

COMMON NAME	SCIENTIFIC NAME
SHRUBS, TREES, AND VINES	
Chinese Privet	<u>Ligustrum sinense</u>
Multiflora Rose	<u>Rosa multiflora</u>
Autumn Olive	<u>Elaeagnus umbellata</u>
Trifoliolate Orange	<u>Poncirus trifoliata</u>
Leatherleaf Mahonia	<u>Berberis (Mahonia) bealei</u>
Tree-of-Heaven	<u>Ailanthus altissima</u>
Princess Tree	<u>Paulownia tomentosa</u>
Mimosa	<u>Albizzia julibrissin</u>
Bradford Pear	<u>Pyrus calleryana</u>
English Ivy	<u>Hedera helix</u>
Wisteria	<u>Wisteria sinensis</u>
Kudzu	<u>Pueraria lobata</u>
Japanese Honeysuckle	<u>Lonicera japonica</u>
Oriental Bittersweet	<u>Celastrus orbiculatus</u>
Sweet Autumn Virgin’s Bower	<u>Clematis terniflora</u>
Porcelain Berry	<u>Ampelopsis glandulosa (brevipedunculata)</u>
HERBS, GRASSES, AND AQUATICS	
Bushy Lespedeza and Sericea Lespedeza	<u>Lespedeza bicolor</u> , <u>Lespedeza cuneata</u>
Gill-O’er-the-Ground	<u>Glechoma hederacea</u>
Common Chickweed	<u>Stellaria media</u>
Beefsteak Plant	<u>Perilla frutescens</u>
Periwinkle	<u>Vinca minor</u>
Purple Loosestrife	<u>Lythrum salicaria</u>
Japanese Stilt Grass	<u>Microstegium vimineum</u>
Johnsongrass	<u>Sorghum halepense</u>
Cogongrass	<u>Imperata cylindrica</u>
Golden Bamboo	<u>Phyllostachys aurea</u>
Hydrilla	<u>Hydrilla verticillata</u>
Parrot Feather	<u>Myriophyllum aquaticum</u>
Brazilian Waterweed	<u>Egeria densa</u>
Crested Floating Heart	<u>Nymphoides cristata</u>