



Non-Native Invasive Plants of the City of Alexandria, Virginia

Non-native invasive plants have increasingly become a major threat to natural areas, parks, forests, and wetlands by displacing native species and wildlife and significantly degrading habitats. Today, they are considered the greatest threat to natural areas and global biodiversity, second only to habitat loss resulting from development and urbanization (Vitousek et al. 1996, Pimentel et al. 2005).

The Virginia Department of Conservation and Recreation has identified 90 non-native invasive plants that threaten natural areas and lands in Virginia (Heffernan et al. 2014) and Swearingen and Fulton (2022) include 92 plants from a list of over 600 non-native invasive plant species documented within the mid-Atlantic region. Largely overlapping with these and other regional lists are 154 species that were documented in the City of Alexandria, Virginia during vegetation surveys and natural resource assessments by the City of Alexandria Dept. of Recreation, Parks, and Cultural Activities (RPCA), Natural Lands Management.

This list is not regulatory but serves as an educational reference informing those with concerns about non-native invasive plants in the City of Alexandria and vicinity, including taking action to prevent the further spread of these species by not planting them and controlling them where they occur on private property.

Exotic species are those that are not native to a particular place or habitat as a result of human intervention. A non-native invasive plant is here defined as one that exhibits some degree of invasiveness, whether dominant and widespread in a particular habitat or landscape or much less common but long-lived and extremely persistent in places where it occurs. The presence of non-native invasive plants is largely the result of soil and habitat disturbance, though many of these species are capable of eventually spreading from degraded areas into relatively undisturbed sites, such as interior forest.

Hundreds of exotic plants growing in a variety of habitats occur in the City of Alexandria. Many of these are widespread, early spring-blooming annuals of lawns and open disturbed areas, such as Chickweeds (*Stellaria media*, *Cerastium* spp.), Speedwells (*Veronica* spp.), Purple Dead-nettle (*Lamium purpureum*), Hairy Bittercress (*Cardamine hirsuta*), and others. Some, like Mugwort (*Artemisia vulgaris*), Bermuda Grass (*Cynodon dactylon* var. *dactylon*), and Dandelion (*Taraxacum officinale*), are familiar, difficult to eradicate perennial weeds of lawn and garden. Many others are commonly visible along roadways, medians, cracks in pavement, industrial sites, and other highly disturbed places.

However, only exotic plants that are especially invasive, damaging, and persistent, including species that produce a pervasive seed bank and those that prevent natural succession by native plants, are included on the following list. Native species that are typically weedy in disturbed areas, such as Poison Ivy (*Toxicodendron radicans*), Black Locust (*Robinia pseudoacacia*), Black Cherry (*Prunus serotina*), Common Pokeweed (*Phytolacca americana*), and others are not included here because they are not non-native invasive species, they generally do not degrade natural areas, and they are important for native wildlife.

Non-native invasive plants occurring within the City of Alexandria are actively monitored by RPCA Natural Lands Management, which updates the list periodically as new data are collected and species are assessed for invasiveness.

Note: An asterisk (*) designates a species that is native to the eastern U.S. but not to the City of Alexandria that is now found naturalized in Alexandria outside of its natural range.

Herbaceous Plants

Carpet-bugle (*Ajuga reptans*)
Garlic Mustard (*Alliaria petiolata*)
Joint-head Grass (*Arthraxon hispidus* var. *hispidus*)
Italian Arum (*Arum italicum*)
Prickly Sedge (*Carex spicata*)
Fountain Grass (*Cenchrus purpurascens*) [= *Pennisetum alopecuroides*]
Knapweed (*Centaurea* spp.)
Canada Thistle (*Cirsium arvense*)
Common Thistle (*Cirsium vulgare*)
Poison Hemlock (*Conium maculatum*)
Woodland Crocus, Early Crocus (*Crocus tommasinianus*)
Variable Flatsedge (*Cyperus difformis*)
Asian Net-vein Holly Fern (*Cyrtomium falcatum*)
Cut-leaf Teasel (*Dipsacus laciniatus*)
Japanese Red Shield Fern (*Dryopteris erythrosora*)
Helleborine (*Epipactis helleborine*)
Weeping Lovegrass (*Eragrostis curvula*)
Mulberry-weed (*Fatoua villosa*)
Lesser Celandine (*Ficaria verna*) [= *Ranunculus ficaria*]
Ground-ivy (*Glechoma hederacea*)
Lenten-rose (*Helleborus orientalis*)
Orange Day-lily (*Hemerocallis fulva*)
Hydrilla (*Hydrilla verticillata*)
Yellow Iris (*Iris pseudacorus*)
Korean-clover (*Kummerowia stipulacea*)
Japanese-clover (*Kummerowia striata*)
Pasture Spikesedge (*Kyllinga gracillima*)

Yellow Archangel (*Lamium galeobdolon*) [= *Lamiastrum galeobdolon*]
 Chinese Lespedeza (*Lespedeza cuneata*)
 Big Blue Lilyturf (*Liriope muscari*)
 Creeping Lilyturf (*Liriope spicata*)
 Floating Primrose-willow (*Ludwigia peploides* var. *glabrescens*)
 Annual Honesty, Money Plant (*Lunaria annua*)
 Purple Loosestrife (*Lythrum salicaria*)
 Japanese Mazus (*Mazus pumilus*)
 Japanese Stiltgrass (*Microstegium vimineum*)
 Chinese Silvergrass, Eulalia (*Miscanthus sinensis*)
 Marsh Dewflower (*Murdannia keisak*) [= *Aneilema keisak*]
 Parrot Feather (*Myriophyllum aquaticum*)
 Eurasian Water-milfoil (*Myriophyllum spicatum*)
 Daffodil (*Narcissus* spp.)
 Java Dropwort (*Oenanthe javanica*)
 Common Star-of-Bethlehem (*Ornithogalum umbellatum*)
 Dallis Grass (*Paspalum dilatatum*)
 Beefsteak Plant (*Perilla frutescens*)
 Japanese Jumpseed (*Persicaria filiformis*) [= *Persicaria virginiana* var. *filiformis*, misapplied; see
 Simmons et al. 2020]
 Long-bristled Smartweed (*Persicaria longiseta*) [= *Polygonum cespitosum*]
 Lady's-thumb (*Persicaria maculosa*)
 Common Reed (*Phragmites australis* ssp. *australis*)
 Japanese Knotweed (*Reynoutria japonica*) [= *Polygonum cuspidatum*]
 Giant Knotweed (*Reynoutria sachalinensis*) [= *Polygonum sachalinense*]
 Curly Dock (*Rumex crispus* ssp. *crispus*)
 Bitter Dock (*Rumex obtusifolius*)
 Crown Vetch (*Securigera varia*) [= *Coronilla varia*]
 Yellow Foxtail (*Setaria pumila* ssp. *pumila*)
 Green Foxtail (*Setaria viridis* var. *viridis*)
 Johnson Grass (*Sorghum halepense*)
 Spreading Hedge Parsley (*Torilis arvensis* ssp. *arvensis*)
 Japanese Hedge Parsley (*Torilis japonica*)
 Vetch (*Vicia* spp.) [Only *Vicia* spp. native to the Old World are considered invasive.]
 Oriental False Hawksbeard (*Youngia japonica*) [= *Crepis japonica*]

Vines

Five-leaf Akebia (*Akebia quinata*)
 Porcelain-berry (*Ampelopsis brevipedunculata*)
 Oriental Bittersweet (*Celastrus orbiculatus*)
 Sweet Autumn Clematis (*Clematis terniflora*)
 Chinese Yam (*Dioscorea polystachya*) [= *Dioscorea batatas*]
 Winter Creeper (*Euonymus fortunei*)

English Ivy (*Hedera helix*) [Recent morphological and flow cytometry studies of *Hedera* spp. in the greater D.C. area have shown diploid *H. helix* to be by far the most common naturalized *Hedera* species in the region, with rare occurrences of tetraploid *H. hibernica* present (McAllister and Simmons, in prep.). Flow cytometry studies by Alan Whittemore and Jun Wen have also found triploids in areas where *H. helix* and *H. hibernica* grow together (Alan Whittemore, pers. comm.)]

Japanese Honeysuckle (*Lonicera japonica*)

Boston-ivy (*Parthenocissus tricuspidata*)

Mile-a-minute Weed (*Persicaria perfoliata*) [= *Polygonum perfoliatum*]

Kudzu (*Pueraria montana*)

Greater Periwinkle (*Vinca major*)

Common Periwinkle (*Vinca minor*)

Japanese Wisteria (*Wisteria floribunda*)

Chinese Wisteria (*Wisteria sinensis*) [“Some of our material may represent *Wisteria* x *formosa* Rehder, a complex series of hybrids and backcrosses between *W. floribunda* and *W. sinensis*.” (VBA 2023)]

Shrubs

Leatherleaf Mahonia (*Berberis bealei*) [= *Mahonia bealei*]

Japanese Barberry (*Berberis thunbergii*)

Butterfly-bush (*Buddleia davidii*)

Hardy Orange (*Citrus trifoliata*) [= *Poncirus trifoliata*]

*Midwestern Roughleaf Dogwood (*Cornus drummondii*)

Thorny Olive (*Elaeagnus pungens*)

Autumn Olive (*Elaeagnus umbellata*)

Burning Bush (*Euonymus alatus*)

Rose-of-Sharon (*Hibiscus syriacus*)

Chinese Holly (*Ilex cornuta*)

Japanese Holly (*Ilex crenata*)

Privet (*Ligustrum* spp.) [Japanese Privet (*Ligustrum japonicum*), Border Privet (*Ligustrum obtusifolium* var. *obtusifolium*), California Privet (*Ligustrum ovalifolium*), Chinese Privet (*Ligustrum sinense*), and Common Privet (*Ligustrum vulgare*) all occur in Alexandria, as well as likely others.]

Amur Honeysuckle (*Lonicera maackii*)

Nandina (*Nandina domestica*)

Holly Osmanthus (*Osmanthus heterophyllus*)

Golden Bamboo (*Phyllostachys aurea*)

Yellow Groove Bamboo (*Phyllostachys aureosulcata*) [Yellow Groove Bamboo is frequently confused with Golden Bamboo (*Phyllostachys aurea*), when in fact Yellow Groove Bamboo is far more common in northern Virginia and the Washington, D.C. region.]

Bisset’s Bamboo, Hardy Bamboo (*Phyllostachys bissetii*)

Cherry Laurel (*Prunus laurocerasus*)

Arrow Bamboo (*Pseudosasa japonica*)

Multiflora Rose (*Rosa multiflora*)

Himalayan Blackberry (*Rubus bifrons*) [Flora Europaea (Heslop-Harrison 1968) considers *Rubus discolor* Weihe & Nees synonymous with *R. procerus* P.J. Mueller, *R. armeniacus* Focke, and others - but

not *R. bifrons* Vest. Edees and Newton (1988) state that *R. ulmifolius* is probably the only variable sexual species in subgenus *Rubus*. *R. discolor* and *R. armeniacus* are given as synonyms of *R. procerus*, *Ronces Vosg.* 7 (1864), with the comment that it is probably a widespread species native to Europe with $2n=28$ (so tetraploid and apomictic), which was probably sent from Germany to the U.S. nurseries where it was given the name 'Himalayan Giant' and exported back to Europe (Hugh McAllister, pers. comm.). According to Edees and Newton, *R. procerus/discolor* “is readily bird-sown and quickly forms dense patches of very robust plants” and is “usually distinguished from related species without difficulty by its large size.” The VBA (2023) regards *Rubus discolor* as a misapplied name for *Rubus pascuus* L.H. Bailey, which “it is similar to and has been confused with.” I suggest that we are dealing with one tetraploid, apomictic taxon in our area (Virginia and mid-Atlantic), regardless of whatever the best name for the taxon is. Because of this, I don’t think any keys will be of much help in separating the two entities that are probably just one taxon. “Is hybridization going on or are most plants totally apomictic, giving identical plants over wide areas? (Hugh McAllister, pers. comm.)]

Wineberry (*Rubus phoenicolasius*)

English Yew (*Taxus baccata*)

Linden Arrow-wood (*Viburnum dilatatum*)

Guelder-rose Viburnum (*Viburnum opulus* var. *opulus*)

Tea Viburnum (*Viburnum setigerum*)

Trees

Amur Maple (*Acer ginnala*)

Japanese Maple (*Acer palmatum*)

Norway Maple (*Acer platanoides*)

*Red Buckeye (*Aesculus pavia* var. *pavia*)

Tree-of-Heaven (*Ailanthus altissima*)

Mimosa, Silk Tree (*Albizia julibrissin*)

Paper Mulberry (*Broussonetia papyrifera*)

Chinese Chestnut (*Castanea mollissima*)

*Northern Catalpa (*Catalpa speciosa*)

Golden Rain Tree (*Koelreuteria paniculata*)

*Southern Magnolia (*Magnolia grandiflora*)

Siberian Crabapple (*Malus baccata*) [Includes the likely many hybrids and backcrosses between *M. baccata* and *M. floribunda* and other exotic *Malus* species.]

Japanese Flowering Crabapple (*Malus floribunda*)

Plumleaf Crabapple (*Malus prunifolia*)

Siebold’s Crabapple (*Malus sieboldii*)

White Mulberry (*Morus alba*)

Princess Tree (*Paulownia tomentosa*)

Sweet Cherry (*Prunus avium*)

Higan Cherry (*Prunus subhirtella*)

Callery Pear, Bradford Pear (*Pyrus calleryana*) [Includes all named varieties and cultivars of *P.*

calleryana, such as “Aristocrat”, “Autumn Blaze”, “Chanticleer”, “Cleveland Select”, “Redspire”, “Whitehouse”, etc.]

Sawtooth Oak (*Quercus acutissima*)

Crack Willow (*Salix x fragilis*) [= *Salix x rubens*; following the lectotypification of *Salix fragilis* L. and the description of *Salix euxina* I. Belyaeva, plants formerly treated as *Salix fragilis* are now recognized as *Salix euxina*, and plants formerly known as *Salix x rubens* Schrank (pro sp.) are now referred to *Salix x fragilis* L. – a fertile hybrid complex between *Salix alba* L. x *S. euxina* (Argus 2010, Simmons et al. 2020). The distribution of *S. euxina* in North America is unknown, but it is not expected outside of cultivation in the mid-Atlantic region (Irina V. Belyaeva-Chamberlain, pers. comm.)]

Pagoda Tree (*Styphnolobium japonicum*) [= *Sophora japonica*]

Littleleaf Linden (*Tilia cordata*)

Chinese Elm (*Ulmus parvifolia*)

Siberian Elm (*Ulmus pumila*)

Japanese Zelkova (*Zelkova serrata*)

Invasive Watchlist

Sycamore Maple (*Acer pseudoplatanus*)

Japanese Sweetflag (*Acorus gramineus*) [Includes the cultivars ‘Ogon’, ‘Variegatus’, and ‘Minimus Aureus’ that are common in the landscape industry.]

*Big Bluestem (*Andropogon gerardii*) [Frequently planted in our region as a component of generic native meadow seed mixes, or as an accidental contaminant in mixes. In northeastern Virginia it is localized and native only to riverside prairies and outcrops of the Potomac Gorge in Fairfax County.]

*Meadow Sedge (*Carex flaccosperma*) [This taxon is not native to anywhere near Alexandria; “in the eastern U.S., it ranges as far north as the southeastern portion of Virginia” (Rob Naczi, pers. comm.). It is commonly available through the nursery industry and is popular for its bluish-green foliage.]

*Alternate-leaf Dogwood (*Cornus alternifolia*)

*Male Fern (*Dryopteris filix-mas*) [This species is native to the northeastern U.S., among other places outside the mid-Atlantic region, but the origin of the material that is becoming naturalized in our area is unknown; see Simmons et al. 2020.]

European Spindle Tree (*Euonymus europaeus*)

Spreading Euonymus (*Euonymus kiautschovicus*) [i.e., ‘Manhattan’ cultivar]

*Oakleaf Hydrangea (*Hydrangea quercifolia*)

Castor Aralia (*Kalopanax septemlobus*)

Common Crapemyrtle (*Lagerstroemia indica*)

Summer Snowflake (*Leucojum aestivum*)

Pachysandra (*Pachysandra terminalis*)

East Asian Smartweed (*Persicaria extremiorientalis*)

Oriental Lady’s-thumb (*Persicaria posumbu*)

Sweet Mock Orange (*Philadelphus coronarius*)

*Choke Cherry (*Prunus virginiana* var. *virginiana*)

Jetbead (*Rhodotypos scandens*)

Ravenna-grass (*Tripidium ravennae*) [= *Saccharum ravennae*; *Erianthus ravennae*]
Purpletop Vervain (*Verbena bonariensis*)
Japanese Snowball (*Viburnum plicatum*)
Viburnum x rhytidophylloides Sur. 'Alleghany' [U.S. National Arboretum hybrid between *V. lantana* L.
'Mohican' and *V. rhytidophyllum* Hemsl.]
Leatherleaf Viburnum (*Viburnum rhytidophyllum*)
Tall False Hawksbeard (*Youngia thunbergiana*)

Non-native invasive plants that are acceptable for planting in Old Town

[The following species are not necessarily recommended but are acceptable for planting in Old Town, except in and around waterways and natural habitats, because they are not likely to spread outside of cultivation from this area. The area of Old Town herein delineated is the Capital Beltway (495) north to Pendleton Street and Payne Street east to Union Street.]

*Red Buckeye (*Aesculus pavia* var. *pavia*)
*Northern Catalpa (*Catalpa speciosa*)
Orange Day-lily (*Hemerocallis fulva*)
Japanese Holly (*Ilex crenata*)
*Southern Magnolia (*Magnolia grandiflora*)
Daffodil (*Narcissus* spp.)
Pachysandra (*Pachysandra terminalis*)
Cherry Laurel (*Prunus laurocerasus*)
English Yew (*Taxus baccata*)
Greater Periwinkle (*Vinca major*)
Common Periwinkle (*Vinca minor*)

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