

INVASIVES MGMT & ID GUIDE for TRAIL MAINTAINERS

This is a supplemental guide to invasive plants in our region that trail maintainers commonly encounter on our trail systems.

*Refer to the Invasive Species Management video for full guide to management techniques: <https://youtu.be/c6qL90WfczU>



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For questions/more info...

Contact Natural_Resource@patc.net
Visit lhprism.org

INVASIVE TREES

Tree of heaven (*Ailanthus altissima*)

- Large compound leaves composed of many paired leaflets oppositely arranged on leaf stalk
- Leaflets have a notch at base with gland
- Smooth bark – looks like cantaloupe rind!
- Crushed leaf smells like rancid peanut butter
- Fruits are winged seeds (unlike sumac)



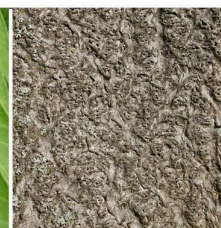
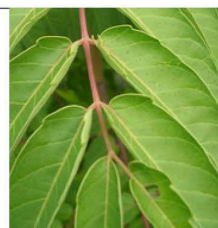
**Hand pull
if possible**



**Trim before
July**

Recommended Management Practice:

- Aggressive resprouting species – **cutting not recommended** Hand pull small individuals if possible
- Trim branches overhanging trail only; trim prior to fruiting in June/July



INVASIVE SHRUBS

Autumn Olive (*Elaeagnus umbellata*)

- Small tree or shrub (multi-stemmed), alternate branching
- Silvery leaves with silver dots on leaf & twig
- Leaves have wavy appearance
- Red fruits with silver scales in fall



**Hand pull
if possible**



**Cut before
September**

Recommended Management Practice:

- For small individuals, removal of entire shrub is recommended by hand pulling (grab by base), if possible
- Cut roots below root crown, remove base or (last option) lop prior to fruiting in Aug/Sept. Multiple years of treatment may be needed due to resprouting



Invasive Barberry (*Berberis thunbergii*)

- Shrub, alternate branching, arching branches
- Small, straight needle-like thorns
- Small, spoon-shaped leaves
- Red, oval-shaped, overwintering berries



**Hand pull
if possible**



**Cut before
September**

Recommended Management Practice:

- For small individuals, removal of entire shrub is recommended by hand pulling (grab by base), if possible
- Cut roots below root crown, remove base or (last option) lop prior to fruiting in September. Multiple years of treatment may be needed due to resprouting.



INVASIVE SHRUBS (cont'd)

Multiflora rose (*Rosa multiflora*)

- Shrub with arching branches
- Compound leaves with toothed edges
- Green stems
- Hooked thorns like dorsal fin on shark
- **Fringed stipule** at base of leaves- looks like little centipede with antenna at base of leaf (see photo)



**Hand pull
if possible**



**Cut before
September**

Recommended Management Practice:

- For small individuals, removal of entire shrub is recommended by hand pulling (grab by base), if possible
- Cut roots below root crown, remove base or (last option) lop prior to fruiting in September. Multiple years of treatment may be needed due to resprouting.



Wineberry (*Rubus phoenicolasius*)

- Shrub with arching branches
- Dense prickles all along stem- fine reddish hairs all along branch
- Compound leaves with 3 leaflets, fuzzy, white underneath



**Hand pull
if possible**



**Cut before
June**

Recommended Management Practice:

- Removal of entire shrub is recommended by hand pulling (grab at base), if possible
- Otherwise, **cut back to base** and/or lop (trim-only as last option) prior to fruiting in June*



Bush honeysuckle (*Lonicera spp.*)

- Shrub, opposite branching
- Oval leaves with smooth edges, oppositely attached on branch
- Flowers, fragrant, tubular, in pairs
- Fruit, juicy red berry, in pairs



**Hand pull
if possible**



**Trim before
June**

Recommended Management Practice:

- Aggressive resprouting species - Hand pull small individuals, if possible
- Cut roots below root crown, remove base, or (last option) lop prior to fruiting in June. Multiple years of treatment may be needed due to resprouting.



INVASIVE SHRUBS (cont'd)

Invasive privet (*Ligustrum spp.*)

- Large densely leaved shrubs
- Leaves arranged opposite of each other along branch and densely packed
- Many small, white, and fragrant flowers appear in April to June; flowers at tips of branches



**Hand pull
if possible**

Recommended Management Practice:

- For small individuals, removal of entire shrub is recommended by hand pulling (grab by base), if possible
- Cut roots below root crown, remove base or (last option) lop prior to fruiting in September. Multiple years of treatment may be needed due to resprouting.



**Cut before
September**



INVASIVE VINES

Mile-a-minute (*Persicaria perfoliata*)

- Triangular leaves
- Curved prickles along the stem & leaf stalks
- Mint green color
- Fruit: blue berry ripening in July
- Stems have round leaf-like stipule- looks like saucer for a teacup



**Hand pull
roots before
July**

Recommended Management Practice:

- Annual species- pull vines (using gloves) and dispose of properly prior to fruiting in July*



Invasive bittersweet (*Celastrus orbiculatus*)

- Vine, twines around other plants like a corkscrew
- Leaves alternate, rounded and toothed
- Leaves feel smooth, waxy
- Fruit is hard berries – orange to red when ripe
- Additional check: has orange root



**Hand pull
roots**

Recommended Management Practice:

- For large vines, cut at base and again at eye height prior to fruiting in September* If possible, then hand pull ground stem and orange roots, cut roots
- **Do not pull off entire large vines from tree;** leave large vines after cutting *
- Small vines - hand pull
- Aggressive resprouter, multiple year treatment is necessary



**Cut before
September**



Invasive honeysuckle vine (*Lonicera japonica*)

- Vine, trails along ground or twines around other plants
- Thin stems with pairs of leaves arranged opposite of each other along branch (looks like string with bow ties or airplane propellers)
- Leaves oval, rounded, smooth edges
- Has fruit in pairs, juicy red berry



**Hand pull
roots before
September**

Recommended Management Practice:

- Pull vines and roots and dispose of properly prior to fruiting in September*



INVASIVE HERBACEOUS PLANTS

Garlic mustard (*Alliaria petiolata*)

- Biennial plant- Year 1, shorter rosettes that are kidney shaped; 2nd year bolts upright with more triangular leaves
- Dead skeletons- stalk-like left behind once leaves fall off mid-summer
- White flowers, long narrow seed pods on stalk
- Crushed leaf has garlic smell

Recommended Management Practice:

- Pull out the second-year growth by roots just prior to fruiting in April*
- Pull out first-year growth any time of year



Hand pull roots until fruiting in April



Wavyleaf Basketgrass (*Oplismenus undulatifolius*)

Perennial plant - leaves 0.5-1" wide with distinct "ripples" across blade; leaves are pubescent with hairs on stems and leaf sheaths
Shade tolerant, spreads aggressively via creeping runners (called stolons)
In late summer, produces many seeds with sticky awns (long pointed bristles)



Hand pull roots

Recommended Management Practice:

Carefully pull as much of the root system as possible. If flowers or seeds present, bag remains and dispose
New and extremely troublesome invasive. Report location to your land management partner.



Japanese Stiltgrass (*Microstegium vimineum*)

Annual plant - soft leaves (1-3" long) with smooth leaf margins, silvery, slightly off-center mid-rib runs length of each leaf
Shade tolerant, spreads only by prolific seed production



Hand pull roots

Recommended Management Practice:

Pull plants before seed production (usually mid-August)
Large patches can be weed whacked right before seed production (mid to late August). When weed wacking **ALWAYS** try to protect native plants in area



Weed whack before seed production



****** IMPORTANT CONSIDERATIONS BEFORE BEGINING INVASIVE MANAGEMENT ******

As noted throughout this guide, it is important to begin management before fruits set - especially before fruit ripens, if at all possible. In some cases, immature fruit may ripen on cut vegetation. Management, after fruits appear, may spread the species. Also, note that some species will not fruit at expected times. In this guide, we have listed the most common fruiting periods for our region but it will vary slightly from year to year and from north to south within the PATC region.

WORK WITH YOUR LAND MANAGEMENT PARTNER. They may be able to assist with the work. And they will likely want to know about your activity in order to coordinate any park efforts with your work.

Correct identification of the targeted invasive plant is essential. If you are not sure of identification, **DO NOT REMOVE PLANT.**

Problematic invasive plants are not problems because they are easy to get rid of. Unless the entire plant can be removed, **RESPROUTING IS LIKELY**. Repeated visits to the same area are often necessary to ensure success. For a number of invasive plants, chemical control can be very effective. Use of herbicides can only be performed under the supervision of state certified personnel **AND** with the approval of your land management partner. Some partners have state certified staff that you may be able to work with to treat problematic invasives if requested.