



INVASIVE SPECIES GUIDE FOR VOLUNTEERS

THE PROBLEM WITH INVASIVE PLANTS

Water Quality

When invasive plants dominate the groundcover, there is very little root structure to bind the soils. That's why large areas dominated by invasive plants are more likely to erode during flood events than areas with a diverse understory of trees and shrubs, which provide more root structure diversity.

Native plant roots extend deep into the soil, and many species have wide, branching fibrous root structures that bind the soils and reduce erosion. Erosion releases sediment to streams, increases stream turbidity, and impairs water quality.

Invasive plants provide less streamside cover and shade, which increases stream temperatures. Invasive plants can form monocultures (areas entirely dominated by one species) next to streams, which prevent tree establishment.

Biodiversity

Habitat loss and invasive plants are the leading cause of native biodiversity loss. Invasive plant species spread quickly and can displace native plants, prevent native plant growth, and create monocultures. A healthy plant community has a variety of herbs, shrubs, and trees. Invasive plants cause biological pollution by reducing plant species diversity. Changes in plant community diversity reduce the quality and quantity of fish and wildlife habitat.

Fish and Wildlife Habitat

Invasive plants are a leading cause of declines in native plant and animal numbers, and are a factor in Endangered Species Act listings. Invasive plants outcompete and displace native plants that many native wildlife species depend on for food and cover.

A variety of food and cover fosters more animal species and larger populations. In addition to displacing native species, invasive plant monocultures and simplified habitat often provide habitat for non-native wildlife. Non-native wildlife species can also displace similar native species because of overlap in habitat needs.

Tree Cover

Invasive plants can reduce the amount of tree cover by preventing trees from becoming established, causing them to fall down prematurely, or reducing their growth rate. A Harvard University study showed that garlic mustard reduces soil fungi and inhibits the establishment of tree seedlings.

Dense ivy can weight down trees making them more susceptible to blow downs and decreasing their growth rates by shading the leaves.

Fire Risk

Monocultures of invasive plants create fuel for wildfires. Ivy vines climb trees and can become a conduit for fire to reach the tree canopy, where it is more difficult to control and more likely to threaten nearby structures.

Identification and Removal Techniques

The following pages include resources to help you identify non-native invasive plants and learn what removal methods are recommended.

If you have questions, please contact:

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KUDZU (*Pueraria montana*)

Semi-woody, perennial, vine climbing from ground to canopy

ID

Alternate, 3 compound leaflets

Outer leaflets resemble mittens

Spotted hairy, green juvenile vine

Spotted, woody, brown mature vine

Purple flower clusters in late summer

Removal Techniques

Manual Pulling

Foliar Spray



MULTIFLORA ROSE (*Rosa multiflora*)

Perennial, arching and clump forming shrub in the rose family that can appear as climbing vine

ID

Alternate, dark green, serrated, oddly pinnate leaves with 5-9 leaflets

Long arching green/brown stems with curved thorns

Thorns absent at base

White flowers with 5 petals & yellow anthers in spring

Red clustered fruits in fall

Removal Techniques

Manual Pulling

Cut Stump



PAPER MULBERRY (*Broussonetia papyrifera*)

Deciduous tree/shrub growing up to 50 feet in disturbed areas and edges of the forest

ID

Alternate and sometimes opposite, whirled leaves

Oval or rounded sinused leaves

Bark light grey with pale orange to light tan stripes

Flowers are orange, bulbous, clustered

Fruit is purple clustered berry

Removal Techniques

Manual Pulling

Weed Wrench

Cut Stump



BUSH HONEYSUCKLE (*Lonicera maackii*)

Understory shrub, stems emerging from the ground either clustered or straight with arching branches

ID

Bright green, opposite leaves

Striated, lightly colored bark

Red berries (winter) white flowers (summer)

Removal Techniques

Manual Pulling

Weed Wrench

Cut Stump



ENGLISH IVY (*Hedera helix*)

Evergreen, woody, ground cover vine that climbs trees, reaches their canopy and other surfaces using clinging tendrils

ID

Dark green, waxy, 3 to 5 pointed lobe leaves

Prominent light green veins on leaves

Small, green yellow flower clusters (late summer)

Vine slender to woody and hairy

Dark blue to black berry clusters (winter) pale green (late summer)

Removal Techniques

Manual Pulling

Foliar Spray



WINTERCREEPER (*Euonymus fortunei*)

Evergreen, woody, ground cover vine that climbs trees and reaches their canopy preventing photosynthesis

ID

Dark green, opposite, waxy oval leaves

Hairless, light green ground vine

Dark green, woody, branching vine on tree trunk

Dangling, paired, pinkish to red berries (fall)

Removal Techniques

Manual Pulling

Raking???

Foliar Spray



JAPANESE WISTERIAS (*Wisteria floribunda*)

Deciduous, high climbing, woody vines up to 70 feet tall

ID

Alternate, odd pinnately compound leaves

Leaves oval or elliptic with wavy margins

Woody vines to 10 inches in diameter with hairy twigs

Pink to white, fragrant, pea-like flowers forming stalked clusters (spring)

Flattened legume pods with velvety hairs (fall)

Removal Techniques

Manual Pulling

Foliar Spray



CHINESE PRIVET (*Ligustrum sinense*)

Evergreen, thicket forming, understory shrub growing to resemble a small tree

ID

Dark green small clustered or opposite oval leaves

Grey, splotchy, smooth bark

Opposite, long, slender branching

Berry Clusters dark purple (winter) pale green (summer)

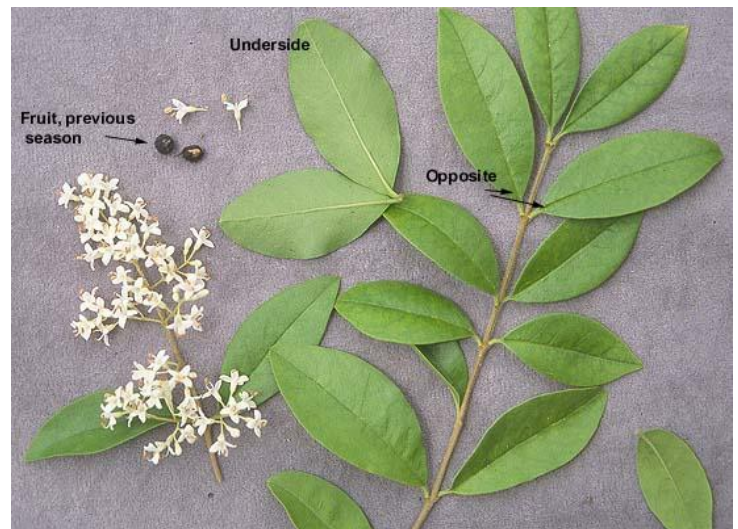
Small, white flower clusters (spring)

Removal Techniques

Manual Pulling

Weed Wrench

Cut Stump



MIMOSA (*Albizia julibrissin*)

Deciduous, medium sized, leguminous tree

ID

Alternate, pinnately compound leaves with 20-60 feathery leaflets

Glossy light brown to grey bark with raised corky dots or dashes, lime green twigs

Bright pink tuft like flowers with a white base in summer

Clustered legume seed pods

Removal Techniques

Weed Wrench

Manual Pulling

Cut Stump



TREE OF HEAVEN (*Ailanthus altissima*)

Deciduous, fast growing tree with a shallow root system, resembling sumac

ID

Alternate pinnately compounded leaves (odd or even) with 10-41 leaflets

Leaves on 1-3-foot reddish green stalk with swollen base, dark green with light green veins

Smooth pale grey bark with tan fissures with age

Clustered wing shaped pink seed pods

Removal Techniques

Manual Pulling

Weed Wrench

Cut Stump



CREEPING CHARLIE (*Glechoma hederacea*)

Aromatic, perennial, evergreen creeper of the mint family Lamiaceae

ID

Green vine whose leaves are round with scalloped edges

Has a small purple flower

Vine that grows close to the ground and will form a mat-like ground cover if allowed to

Removal Techniques

Manual Pulling

Raking



JAPANESE STILTGRASS (*Microstegium*)

Annual grass that is common in a variety of habitats and is well adapted to low light levels

ID

Pale green, lance-shaped leaves

Silvery stripe of reflective hairs along the midrib of the upper leaf surface

Leaves are alternate and range in length from 1 to 3 inches

Resembles bamboo, but its stems are thin and wiry, and can be green, purple, or brown

Removal Techniques*

Manual Pulling

*NEEDS TO BE BAGGED

