

A pressing problem

Recognition of the problem of invasive plants is growing, at the same time as threats to native ecosystems are mounting. Identifying invasive plants and understanding the potential damage they can cause is essential to limiting their spread and protecting native ecosystems. Recent publications discussing invasive plant control and a good field guide can help identify invasive plants. By increasing awareness of invasive plants, they can be easily recognized and their spread across the Commonwealth can be slowed.

For more information

PA DCNR Invasive Plants Page, www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx

PA Department of Agriculture, www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/NIPPP/Pages/default.aspx

PA DCNR Invasive Plant Management for Land Managers, http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20033074.pdf

Invasive Plant Identification, https://www.nybg.org/files/scientists/rmaczi/Mistaken_Identity_Final.pdf

Contact local experts

Penn State University Cooperative Extension Office Directory, www.extension.psu.edu/extmap.html

PA DCNR Service Foresters, <http://www.dcnr.pa.gov/Conservation/ForestsAndTrees/ManagingYourWoods/Pages/default.aspx>

Invasive plant maps

iMap Invasives: <https://www.imapinvasives.org/>

EDDMaps Mid-Atlantic Early Detection Network: <http://www.eddmaps.org/midatlantic/>

Effects of Invasive Plants

Invasives out-compete native plants for growing space, light, and nutrients and are a major factor in the decline of native plant communities. Some invasive plants also secrete chemicals into the ground making soils inhospitable to native plants.

Endangered, rare and threatened native plants are especially at risk because they often occur in small populations making them particularly vulnerable to competition. Plants like kudzu, purple loosestrife, and garlic mustard are displacing native plants and degrading habitat for native insects, birds and animals. While wildlife often forage on invasive plant fruit and seed, it rarely provides adequate nutrition.

Avoid Using Invasive Plants

Some invasive plants came to our area by accident but others were brought here and planted in gardens or landscaping. Invasive plants, even when grown in a cultivated yard, can spread, escape into native ecosystems, and cause landscape maintenance weeding problems for years to come. In urban and suburban areas, there is a good chance that the worst weeds on your property are escaped invasives like Japanese honeysuckle, multiflora rose, Japanese knotweed, and oriental bittersweet. Even in yards, gardens, fields, and parks these plants are very expensive to control.

The best insurance against future problems is to avoid the use of known invasive plants and educate others about the use of invasive plants in landscaping. This brochure lists many of the plants that are invasive in Pennsylvania. Plants on this list should be avoided because they can escape cultivation and aggressively move into surrounding ecosystems.

What is an invasive plant?

“**Invasive**” is a name for plant species that are not native to the state, grow aggressively, spread quickly, and displace native vegetation. Invasive plants are generally undesirable because they are difficult and costly to control and can dominate entire habitats, making them environmentally destructive in certain situations. Some invasive plants have been found to pose extremely high risk to ecosystems throughout the Commonwealth and are deemed “noxious weeds” by the PA Department of Agriculture, whom can then mandate control of these particular species.

Most invasive plants were transported from other continents either intentionally or by accident and are often referred to as “exotic,” “introduced,” or “non-native” invasives. These non-native species typically have no co-adapted pests or diseases present in our ecosystems, further aiding their ability to out-compete native vegetation.

This brochure lists the most troublesome invasive plants that occur in Pennsylvania and impact native plant communities. These plants have been observed acting aggressively on DCNR lands or are classified as invasive in bordering states. DCNR has grouped these species in three categories based on their perceived ecological threat.

Characteristics of invasive plants

Invasive plants can be trees, shrubs, vines, grasses, or flowers. They typically can reproduce rapidly by roots, seeds, shoots, or all three.

Invasive plants tend to:

- not be native to North America
- mature quickly
- spread rapidly by roots or shoots
- produce seeds that disperse and sprout easily
- exploit and colonize disturbed ground
- be generalists that can grow in a variety of habitat conditions

www.dcnr.pa.gov

What can I do?

Minimize landscape disturbance. Invasive plants thrive on bare soil and disturbed ground where the native plant community has been displaced. The key to controlling invasives is to protect and preserve healthy native plant communities.

Scout your property annually for invasives or other problems. Annual checkups on your own property help you recognize changes that make be taking place—such as the introduction of a new invasive plant—before they become problematic. Effective scouting or monitoring ensures problems are found while they are still small and easily controlled. Invasive plant populations can be reported to state-wide mapping services like EDDMaps and iMapInvasives.



Replace invasive plants with native species. One way to avoid invasive plants is to choose plants that are native to your area. Natives often are adapted to a specific ecological niche and have natural controls (pests, disease, climate) that keep them in balance.

Invasives exploit bare soil and empty niches. When you remove an invasive plant, unless there is another plant substituted, the invasive will tend to come back (either by seed or resprouting). What grows at a site in the future depends largely on what is planted there now. It is important to fill that niche with desirable plants.

Invasive Plants In Pennsylvania



Japanese stiltgrass spreading into the forest



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

Treatment Considerations

Early detection of invasive populations minimizes control cost and effort. Smaller populations of invasive plants can typically be hand-pulled or cut with minimal effort. Large, established populations typically take many years of concerted effort to achieve eradication.

Remove invasives first where their densities are low. Removing smaller, satellite populations reduces further spread of invasive plants across a landscape. Working from small populations towards the perceived highest density allows for more treatment success over time. Invasive plant control works best where there is a functioning native plant community still in place, which can recolonize the empty niche.

Have plan for maintenance over time. Monitoring and treatment can only be successful over the long term if plans are in place to ensure new populations don't become established after initial treatments are complete.

Clean all equipment thoroughly. Invasive plant materials and seeds can be spread on equipment. Thoroughly clean all lawn mowers and landscaping equipment to reduce new infestations.

Undertake invasive treatments carefully. Effective treatment options typically can include mechanical removal by hand pulling or cutting as well as the use of herbicides. Herbicide treatments must be carried out using label instructions. The appropriate personal, protective equipment should always be worn. Consider hiring certified, trained individuals to carry out large herbicide treatments. Appropriate timing, dosage, and chemical choice is necessary to ensure effective herbicide treatments. Consult the DCNR Invasives website and other appropriate resources to ensure the most effective herbicide treatment.

Rank 1- Severe Threat. Exotic plant species that possess characteristics of invasive species and spread easily into native plant communities and displace native vegetation. Includes species that are or could become widespread in Pennsylvania.			
Severe Threat	<i>Ailanthus altissima</i>	Tree-of-Heaven	TREE
	<i>Alliaria petiolata</i>	Garlic Mustard	FLOWER
	<i>Ampelopsis glandulosa</i>	Porcelain Berry	VINE
	<i>Aralia elata</i>	Japanese Angelica Tree	TREE
	<i>Berberis thunbergii</i> & <i>B. vulgaris</i>	Japanese & European Barberrys	SHRUBS
	<i>Celastrus orbiculatus</i>	Oriental Bittersweet	VINE
	<i>Conium maculatum</i>	Poison Hemlock	FLOWER
	<i>Fallopia japonica</i> , <i>F. sachalinensis</i> & <i>F. x bohemica</i>	Japanese, Giant & Hybrid Knotweeds	FLOWER
	<i>Ficaria verna</i>	Lesser Celandine	FLOWER
	<i>Frangula alnus</i>	Glossy Buckthorn	TREE
	<i>Galega officinalis</i>	Goatsrue	FLOWER
	<i>Heracleum mantegazzianum</i>	Giant Hogweed	FLOWER
	<i>Humulus japonicus</i>	Japanese Hops	VINE
	<i>Lonicera fragrantissima</i> , <i>L. maackii</i> , <i>L. morrowii</i> , <i>L. x bella</i> , <i>L. standishii</i> & <i>L. tatarica</i>	Sweet Breath, Amur, Morrow's, Beautiful, Standish & Tartarian Honeysuckles	SHRUBS
	<i>Lonicera japonica</i>	Japanese Honeysuckle	VINE
	<i>Lythrum salicaria</i>	Purple Loosestrife	FLOWER
	<i>Microstegium vimineum</i>	Japanese Stiltgrass	GRASS
	<i>Oplismenus hirtellus</i>	Wavyleaf Basketgrass	GRASS
	<i>Persicaria perfoliata</i>	Mile-a-Minute	VINE
	<i>Phragmites australis</i> ssp <i>australis</i>	Common Reed	GRASS
	<i>Pueraria montana</i> var. <i>lobata</i>	Kudzu	VINE
	<i>Rhamnus cathartica</i>	Common Buckthorn	TREE
	<i>Rhodotypos scandens</i>	Jetbead	SHRUB
	<i>Rosa multiflora</i>	Multiflora Rose	SHRUB
<i>Spiraea japonica</i>	Japanese Spiraea	SHRUB	
<i>Typha angustifolia</i> & <i>T. x glauca</i>	Narrow-Leaved & Hybrid Cattails	GRASS	
<i>Vincetoxicum nigrum</i> & <i>V. rossicum</i>	Black & Pale Swallow-Worts	VINE	
Rank 2- Significant Threat. Exotic plant species that possess characteristics of invasive species but are not presently considered to spread as easily and aggressively into native plant communities as those species listed as Rank 1.			
Significant Threat	<i>Acer platanoides</i>	Norway Maple	TREE
	<i>Albizia julibrissin</i>	Mimosa	TREE
	<i>Alnus glutinosa</i>	European Black Alder	TREE
	<i>Arthraxon hispidus</i>	Small carpetgrass	GRASS
	<i>Buddleja davidii</i>	Butterfly Bush	SHRUB
	<i>Centaurea jacea</i> , <i>C. nigra</i> & <i>C. stoebe</i>	Brown, Black & Spotted Knapweeds	FLOWER
	<i>Chelidonium majus</i>	Greater Celandine	FLOWER
	<i>Cirsium arvense</i>	Canada Thistle	FLOWER
	<i>Cirsium vulgare</i>	Bull Thistle	FLOWER
	<i>Elaeagnus angustifolia</i> & <i>E. umbellata</i>	Russian & Autumn Olives	SHRUB
	<i>Euonymus alatus</i>	Winged Euonymus	SHRUB
	<i>Euonymus fortunei</i>	Wintercreeper	VINE
	<i>Hesperis matronalis</i>	Dames Rocket	FLOWER
	<i>Iris pseudacorus</i>	Yellow Flag Iris	FLOWER
	<i>Lespedeza bicolor</i> & <i>L. cuneata</i>	Shrubby & Chinese Bushclovers	SHRUBS
	<i>Ligustrum japonicum</i> , <i>L. obtusifolium</i> , <i>L. sinense</i> & <i>L. vulgare</i>	Japanese, Border, Chinese & Common Privets	SHRUBS
	<i>Pastinaca sativa</i>	Wild Parsnip	FLOWER
	<i>Paulownia tomentosa</i>	Empress Tree	TREE
	<i>Perilla frutescens</i>	Beefsteak Plant	FLOWER
	<i>Phalaris arundinacea</i>	Reed Canary Grass	GRASS
	<i>Phellodendron amurense</i> , <i>P. japonicum</i> & <i>P. lavallei</i>	Amur, Japanese & Lavella Corktrees	TREES
	<i>Phyllostachys aurea</i> , <i>P. aureosulcata</i> & <i>P. bambusoides</i>	Golden, Yellow Groove & Giant Timber Bamboo	GRASS
	<i>Poa trivialis</i>	Rough Bluegrass	GRASS
	<i>Pyrus calleryana</i>	Callery Pear	TREE
	<i>Rubus phoenicolasius</i>	Wineberry	SHRUB
	<i>Securigera varia</i>	Crown-vetch	FLOWER
	<i>Tetradium daniellii</i>	Bee-Bee Tree	TREE
	<i>Viburnum dilatatum</i> , <i>V. plicatum</i> & <i>V. sieboldii</i>	Linden, Doublefile & Siebold Viburnums	SHRUBS
	<i>Wisteria floribunda</i> & <i>W. sinensis</i>	Japanese & Chinese Wisterias	VINES
	Rank 3- Lesser Threat. Exotic plant species that spread in or near disturbed areas, and are not presently considered a major threat to undisturbed native plant communities.		
Lesser Threat	<i>Aegopodium podagraria</i>	Goutweed	FLOWER
	<i>Anthriscus sylvestris</i>	Wild Chervil	FLOWER
	<i>Artemisia vulgaris</i>	Mugwort	FLOWER
	<i>Bromus japonicus</i> , <i>B. sterilis</i> & <i>B. tectorum</i>	Japanese, Poverty & Downy Bromes	GRASS
	<i>Broussonetia papyrifera</i>	Paper Mulberry	TREE
	<i>Cardamine impatiens</i>	Narrowleaf Bittercress	FLOWER
	<i>Carduus acanthoides</i> & <i>C. nutans</i>	Spiny-Plumeless & Musk Thistles	FLOWER
	<i>Datura stramonium</i>	Jimsonweed	FLOWER
	<i>Epilobium hirsutum</i> & <i>E. parviflorum</i>	Hairy & Smallflower Willow-Herbs	FLOWER
	<i>Hedera helix</i>	English Ivy	VINE
	<i>Hemerocallis fulva</i>	Orange Day-Lily	FLOWER
	<i>Lysimachia nummularia</i>	Moneywort	FLOWER
	<i>Miscanthus sinensis</i>	Chinese Silvergrass	GRASS
	<i>Morus alba</i>	White Mulberry	TREE
	<i>Pachysandra terminalis</i>	Japanese Pachysandra	FLOWER
	<i>Persicaria longiseta</i>	Bristled Knotweed	FLOWER
	<i>Schedonorus arundinaceus</i>	Tall Fescue	GRASS
	<i>Sorghum bicolor</i> ssp. <i>x. drummondii</i>	Shattercane	GRASS
	<i>Sorghum halepense</i>	Johnson Grass	GRASS
	<i>Stellaria media</i>	Common Chickweed	FLOWER
<i>Viburnum opulus</i>	Guelder Rose	SHRUB	
<i>Vinca major</i> & <i>V. minor</i>	Bigleaf & Common Periwinkles	FLOWER	

This brochure lists plants that have been observed to be acting as invasive species on DCDNR lands or are known to be invasive in nearby states.

Species are grouped into three categories based on their perceived threat to forest and wetland habitats.

This list is available for download at: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20033302.pdf