



Invasive Plants in Maine Forests

Maine Forest Service, DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
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What are Invasive Plants?

Invasive plants grow rapidly enough to out-compete and displace locally adapted plants. Most invasive plant species, but not all, were shipped over from other continents and intentionally planted. Unfortunately, some of the traits which made them initially desirable allow them to outcompete other vegetation, having negative impacts on the forest landscape, threatening biodiversity, and causing problems for landowners.

Why are Invasive Plants a Concern?

Invasive plants can make it difficult to achieve many of the objectives landowners commonly have for their woodlands. For example, invasive plants compete for resources with desired tree species, especially young seedlings. This can make it difficult to establish new seedlings to replace the larger trees when they die or are harvested. Some invasive plants, particularly species of vines, such as Asiatic bittersweet, can even kill valuable mature trees by smothering or strangling them. Other species, such as Japanese barberry and shrub honeysuckle, often form dense thickets. These thickets can make it nearly impossible to access the woods for work or enjoyment. Because invasive plants can out-compete native species, they also lead to a reduction in the diversity of species present in the forest.

What Makes a Plant Invasive?

Not all non-native species of plants are invasive; in fact, most non-native species never escape from cultivation. Most of the species that do escape into the wild never become invasive. Botanists use what is called the “tens” rule to describe how many plant species are likely to become invasive. According to this rule only one in ten non-native species is likely to escape into the wild. Of those that escape, only one in ten is likely to become invasive. Certain species of plants have characteristics that make them more likely

to become invasive. In general, invasive plants have most of the following characteristics:

- They are habitat generalists, able to invade a range of sites;
- They leaf out before native plants and hold their leaves later;
- They out-compete native plants through shading and nutrient competition;
- They have few, if any, natural predators here;
- They reproduce both sexually and vegetatively;
- They have long flowering and fruiting periods and produce many seeds;
- They are pollinated by wind or by generalist pollinators; and/or,
- Their seeds are dispersed over long distances (e.g., by birds, wind, water or people).

What Invasive Plants Species are Causing Problems in Maine Forests?

Although there are many species of plants that are considered invasive in Maine, there are some species that are of particular concern in the forest. These species include:

- Japanese barberry (*Berberis thunbergii*)
- Shrub honeysuckles (*Lonicera* spp.)
- Asiatic bittersweet (*Celastrus orbiculatus*)
- Common buckthorn (*Rhamnus cathartica*)
- Glossy buckthorn (*Frangula alnus*)
- Autumn olive (*Elaeagnus umbellata*)
- Multiflora rose (*Rosa multiflora*)
- Winged euonymus (*Euonymus alatus*)
- Norway maple (*Acer platanoides*)
- Japanese Stiltgrass (*Microstegium viminum*)

These species are causing serious problems, particularly in southern and coastal Maine and the islands. Some of these invasive species, such as

Asiatic bittersweet and autumn olive, are more problematic along forest edges and in young forest stands. Others such as the buckthorns, shrub honeysuckles and Japanese barberry can invade the understories of undisturbed mature forests.

How Can I Protect My Woods From Invasive Plants?

Learn to identify invasive plant species. There are many excellent sources available to help you identify invasive plants. Fact sheets on the species listed in this information sheet, as well as additional species of concern are available from the Maine Natural Areas Program website or by request:

http://www.maine.gov/dacf/mnap/features/invasive_plants/inv sheets.htm

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Don't plant invasive species in your woodlands or near the edges of your yard. Maine has a DO NOT SELL List of invasive plants; lawn & garden centers should not be offering them for sale. Know which plants are invasive and don't plant or transplant them. The University of Maine Cooperative Extension maintains a list of nurseries that sell native landscaping plants, and a list of good native plants to use in landscaping. These lists can be found at the following websites or by contacting your county extension office:

<http://www.umaine.edu/publications/2500e/>

<http://www.umaine.edu/publications/2502e/>

Get ahead of the invasion. Once invasive plants are well established getting rid of them can be very difficult and costly. Prevention and early detection are key to keeping the invaders at bay. Because invasive plants are so aggressive, they tend to occupy disturbed areas more rapidly than native species. Therefore, it is important to determine if there are invasive plants present in the forest understory before creating a disturbance such as a timber harvest. Identifying and removing a few invasive plants before a harvest could prevent a full-scale invasion later.

How Can I Control Invasive Plants in My Woods?

Mechanical control involves cutting and or pulling up undesirable plants. Mechanical control is most effective when entire plants, including the roots, are removed. Mechanical control is best suited to situations with few plants where a thorough job can be

done. Before using mechanical control, check on which method is most effective for the target species.

Chemical control involves the use of an herbicide to kill the plants. An advantage of chemical control is the proper herbicide, properly applied, can kill the entire plant. Some types of herbicide may only be applied by licensed pesticide applicators, but many are available to the general public. Information on the laws and rules governing pesticide use in Maine can be obtained from the Board of Pesticides Control:

(207) 287-2731

<http://www.maine.gov/dacf/php/pesticides/index.shtml>

The labels on all herbicide containers include information on what types of plants they control, how to apply them, and the necessary safety precautions that you must take when using them. **ALWAYS READ THE LABEL AND FOLLOW THE DIRECTIONS WHEN USING ANY HERBICIDE!** Different types of herbicide are designed to kill different types of plants, so reading the label is essential to be sure you are using the correct type. Improper application can harm or kill desirable native plants along with the targeted invasive species. For controlling woody invasive species, mechanical and chemical control methods can be combined. Invasive plants can be cut and a concentrated herbicide applied to freshly cut stems; large plants can be cut and re-sprouts can be sprayed the following year, resulting in less herbicide use overall.

Can I Get Help Dealing With Invasive Plants in My Woodlot?

Dealing with invasive plants is often best approached through an overall management plan for your woods. The WoodsWISE Incentives Program offers cost-share assistance for obtaining such a plan. Contact your nearest Maine Forest Service District Forester for more information about the program.

For more information, please contact:

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