

## Narrowleaf Bittercress (*Cardamine impatiens*)



Narrowleaf bittercress is a small (< 2 ft. tall) perennial herb with narrow, lance-shaped leaves and small white flowers. This Eurasia native is found in moist areas, such as wetlands, fields and disturbed areas. It spreads by ballistic seed dispersal, grows quickly, establishing dense stands that choke out native flora and reduce biodiversity. It can hinder access to land, impacting training, recreational and land management. Chemical and mechanical controls are preferred means of control.

**Look-A-Likes:** Hairy bittercress and Pennsylvania bittercress are similar species. Hairy bittercress is smaller with rounded leaflets at its base. Pennsylvania bittercress has broader leaflets and grows more upright.

## Japanese Stiltgrass (*Microstegium vimineum*)



Japanese stiltgrass is a large (up to 3 ft. tall) annual grass with broad, flat leaves and delicate, feathery seedheads. Native to Asia, it is found in thick mats in forests, along roadsides, and in disturbed areas. It suppresses the growth of nearby native plants and alters habitat for wildlife. It can be difficult to navigate through, concealing dangerous terrain, making training, recreational activities, and land management difficult. It is controlled mechanically and chemically.

**Look-A-Likes:** JSG resembles other low-growing grasses like white grass, nimbleweed, and deertongue grass. The first two lack the JSF's silvery leaf midrib while the third has broader leaves, grows more upright.

**Prickles, Spines & Thorns:** Prickles project from skin tissues like rose or raspberry; spines from leaf or stipule tissue like cacti, barberry or water chestnut; and thorns from stem tissue like autumn olive or locust.

## FAQ - AN INVASIVE PLANT PRIMER

**Q: What are invasive species? A:** Invasive species are non-native species that harm environments and human activities. West Point has many invasive plant species.

**Q: How do invasives spread? A:** Invasives spread to new areas or within an area by wildlife, wind, and water but often by human activities like construction, agriculture, recreation.

**Q: How do invasives establish? A:** Invasive thrive in new areas due to high seed production, no predators/ competitors, fast growth, dense structures, and chemical use (allelopathy).

**Q: How do invasives harm ecosystems? A:** Invasive plants can alter and impair ecosystem composition, structure and function, reducing biodiversity and harming the other plants and animals that live in those invaded ecosystems.

**Q: How do invasives harm people? A:** Invasives harm utilities and infrastructure, human health (toxicity, puncture, tripping etc.) and training and recreation by limiting access.

## FAQ - INVASIVE MANAGEMENT

**Q: What can be done? A:** Prevention, or keeping invasives from being spread to and in areas, is the best form of management. But if present, treatment may be possible via:

**Mechanical means:** Mechanical removal means the physical removal of plants. Methods include cutting, mowing, girdling, pulling, burning, matting, and drowning cut stems.

**Chemical means:** Herbicides or pesticides can be used to kill targeted plants. Chemicals are researched and deployed by professionals to target invasives in limited scope.

**Biological means:** The use of living organisms, usually from the invasive home range, to fight invasive plant growth. Host specificity is critical. Never release any animal or plants.

At West Point, allow Natural Resources or Roads & Grounds or pest management to handle invasive treatment in non-residential areas, both on and off Main Post.

## FAQ - WHAT CAN I DO?

**Q: What can readers do? A:** While certain means of invasive species control is best left to land managers, prevention and response is a community effort. You can learn, teach and act.

- Learn** — Using this brochure and other resources, learn more about these and other invasive species, how to identify these plants, and how these plants are spread.
- Teach** — Share this and other information with others to help them identify and learn about these plants and what can be done to prevent their spread.
- Act** — Stop the Spread. Check clean clothing, pets, equipment and vehicles if in or near invasive stands. Stay on established roads, trails and avoid infested areas.

# INVASIVE SHRUBS, HERBS & GRASS OF THE WEST POINT MILITARY RESERVATION



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## INVASIVE SMALL SHRUBS, HERBS & GRASSES

Invasive species are non-native species that harm the environment and interfere with human activities. West Point has many invasive plants that can harm both our ecosystem and the military mission. Proper management of these plants is imperative and identification is a critical first step toward preventing new introductions and further spread of species already here. It is our goal, in putting out this brochure - one in a four-brochure series on invasive plants - to help its readers, better understand common invasive species. This brochure contains a description of some of the invasive aquatic and wetland plants at West Point including pictures and a brief species summary including physical description, habitats, ecological and mission impacts, safety concerns, best management options and look-a-like species. We hope this brochure is useful but it is by no means comprehensive guide. For more information, see the NYSDEC website at <https://dec.ny.gov>.

**Hazards:** Some of these invasives and other plants have sharp spines, thorns, and prickles that may injure. In case of severe injury: **Keller Army Community Hospital 900 Washington Rd., West Point NY 10996.**

### PHYSICAL HAZARD

### NOT A PHYSICAL HAZARD

#### Japanese Barberry (*Berberis thunbergii*)



Japanese barberry is a medium (3-6 ft. tall) deciduous shrub with small, oval leaves, **thin, piercing spines**, and bright red berries. This east Asian native may be the most widespread at West Point, found in forests, fields, and disturbed areas, often in dense thickets that choke out natives, degrade habitat, and avoids deer browse. It harms training by impeding movement and being a safety hazard, as it has sharp spines and can harbor ticks. It is treated mechanically and chemically.

**Look-A-Likes:** American barberry can be mistaken for it, but this native is less common with fewer spines. Black chokeberry and bush honeysuckle can resemble it from afar but lack JBB's sharp nodal spines.

**Shrubs, herbs & grasses:** Shrubs are woody plants /w stems that persist year to year. Herbs are non-woody /w soft stems that usually die yearly. Grasses are herbs /w jointed stems, narrow leaves & fibrous roots.

#### Multiflora Rose (*Rosa multiflora*)



Multiflora rose is a large (up to 10 ft. tall) perennial shrub with **rose-like prickles** and small, white flowers. Native to east Asia, it can be commonly found in open areas, such as fields, forest gaps and edges, and disturbed areas. It forms dense thickets that outcompete native plants. It impacts training by obstructing access to specific areas and can slow movement, as the prickles can be painful. Both mechanical and chemical controls are used for removal.

**Look-A-Likes:** Native swamp rose has fewer larger floral blooms and lacks MFR's fringed bracts at floral cluster bases. Blackberry and raspberry brambles can resemble it, but produce berries rather than rose hips.

#### Spotted Knapweed (*Centaurea stoebe*)



Spotted knapweed is a small (under 3 ft. tall) perennial herbaceous plant with pink-purple flowers and deeply lobed grey-green leaves. Native to eastern Europe, it is found in fields, construction sites, and roadsides. It alters soil chemistry to outcompete native plants, changing the ecosystem. It can somewhat inhibit movement through fields and trails, affecting training. It can be controlled by mechanical, chemical, and biological means such as the seedhead weevil (*Larinus minutus*).

**Look-A-Likes:** Black knapweed is similar but lacks the dark comb-like bracts that given SKW its spotted look. Canada and bull thistle have similar flowers but spiny leaves. Chicory has blue, not pink-purple flowers.

#### Garlic Mustard (*Alliaria petiolata*)



Garlic mustard is a small (usually under 3 ft. tall) biennial herb with heart-shaped leaves and small, white flowers. This Eurasian native forms dense carpets in woodlands, roadsides, and disturbed areas, disturbing native plants and chemically inhibiting the growth of other plants (a process called allelopathy) there. This plant can make it challenging to restore disturbed landscapes, impair training, recreation and management. It is controllable mechanically and chemically.

**Look-A-Likes:** Violets can resemble GM but the former has more rounded leaves. Ground ivy is another look-a-like but it has square stems and purple (not white) flowers. Toothwort is similar but /w deeper leaf divisions

#### Mugwort (*Artemisia vulgaris*)



Mugwort is a medium (up to 4 ft. tall) perennial herb with deeply lobed, dark green leaves and fragrant. This Eurasia native is found in disturbed areas such as roadsides, recreation areas, parking lots, and around utility right of ways. It forms dense stands that reduce plant and animal biodiversity by outcompeting native flora and altering ecosystems. It can hinder movement for training and recreational activities. It is controlled mechanically and chemically, with regular monitoring.

**Look-A-Likes:** Common ragweed and goldenrods can superficially resemble mugwort. However, both lack the silvery, fuzzy undersides of mugwort. Motherwort is similar, but it has square stems and distinct whorls

**Ticks:** Ticks are small parasitic arachnids that feed on blood and can transmit disease like Lyme to people and other animals. They use thick brush by hiding among it and waiting for a potential host to pass by.