



**Non-Native Invasive Plants in
Ramsey's Draft Wilderness Area:
A Threat to Biological Diversity**



The Project Area

During the growing season of 2010, Wild Virginia surveyed the trails and major streams in Ramsey's Draft for non-native invasive plants (NNIP). None of the six wilderness areas in the George Washington National Forest (GW) had been previously surveyed for NNIP. Many people assume that wilderness areas have not been invaded by non-native plants, or have been less impacted than other areas on the landscape.

Two trailhead areas, Mountain House and Confederate Breastworks, were also surveyed. Five NNIP were identified along trails within the wilderness area. In order of abundance, they were Japanese stiltgrass (*Microstegium vimineum*), coltsfoot (*Tussilago farfara*), bush honeysuckle (*Lonicera* spp.), multiflora rose (*Rosa multiflora*), and autumn olive (*Elaeagnus umbellata*).

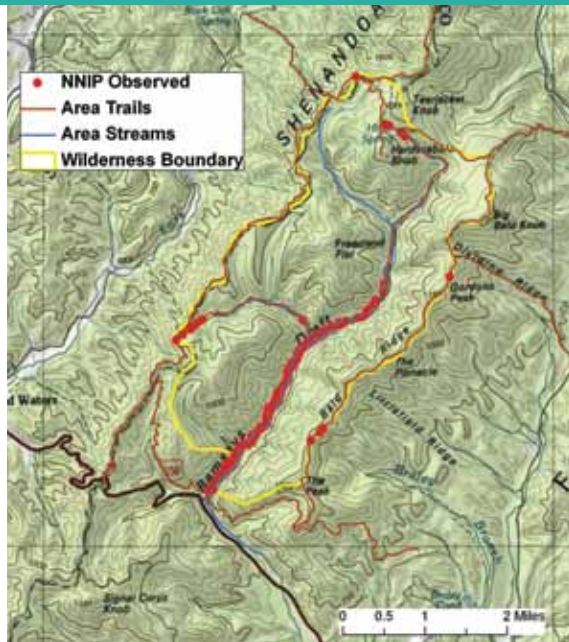
These five species plus several others were found at Mountain House and Confederate Breastworks. They are garlic mustard (*Alliaria petiolata*), spotted knapweed (*Centaurea biebersteinii*), wineberry (*Rubus phoenicolasius*), crown vetch (*Coronilla varia*), ladythumb (*Polygonum persicaria*), and motherwort (*Leonurus cardiaca*). A full report of the project is available at www.wildvirginia.org.

Native

Plants

Occurrences of Non-Native Invasive Plants

Ramsey's Draft Wilderness Area



Non-Native

Invasive

Plants



Pink lady's slipper
(*Cypripedium acaule*)



Spring Beauty
(*Claytonia virginica*)



Wild azalea
(*Rhododendron canescens*)

What are Non-Native Invasive Plants (NNIP)?

Very simply, non-native invasive plants (NNIP) are plants that are not native to this region. They are considered invasive if they become dominant in an area. They occur naturally in other places, often on other continents. Many made their way here by way of human action, whether intentional or accidental. Seeds, spores, or even plants themselves are sometimes unwittingly carried across oceans or other natural barriers by ships, planes, and the humans that travel on them.

In some cases, plants were brought here deliberately. For instance, kudzu (*Pueraria lobata*) was introduced from Japan and has been used extensively in the past in the southeastern US as an erosion control measure. Some non-native plants are popular with gardeners and landscapers. Because birds love to eat their seeds, bush honeysuckle (*Lonicera* spp., pictured below right) “escaped” domestic settings and is now firmly established in the landscape. The non-native plants that are able to out compete native plants, often due to a lack of natural predators or disease in their new home, can spread or “invade” broad areas. Unfortunately, many nurseries continue to sell bush honeysuckle and other NNIP.

NNIP are an ecological threat to natural areas and regional biodiversity. NNIP can displace native plants, increase exposure of native species to disease, degrade or eliminate some types of wildlife habitat, and threaten rare plants. In recent years there has been a growing awareness among conservation groups, public agencies, and the general public about the growing threat of NNIP to native plants and communities. Public lands like the George Washington National Forest (GW) and Shenandoah National Park in western Virginia have not been spared from NNIP. Many organizations are now taking steps to combat NNIP.



Garlic mustard
(*Alliaria petiolata*)



Japanese stiltgrass
(*Microstegium vimineum*)



Autumn olive (*Elaeagnus*)



ns)



Witch hazel
(*Hamamelis virginiana*)



Flowering dogwood (*Cornus florida*)



How do NNIP spread?

As is true with many “weedy” plants in general, NNIP are often able to take advantage of disturbed areas to “invade” a site. Roads, trails, streams, logging sites, and other areas where soil has been disturbed often become “hot spots” for the establishment and spread of NNIP. Human activity such as hiking, biking, horse back riding and other recreational pursuits can facilitate the spread of NNIP, by transporting seeds and continuing to keep the soil disturbed.

Human activity can

facilitate the

spread of NNIP



us umbellata)



Coltsfoot
(*Tussilaga farfara*)



Bush honeysuckle
(*Lonicera morrowii*)

Continue to educate

yourself and

others.

What You Can Do:

It is important to know that many organisms in addition to plants are non-native and can have severe negative impacts on our native forests. For instance, the chestnut blight fungus (*Cryphonectria parasitica*) was introduced to the U.S. from Asia around 1900. Since then, it has virtually eliminated the once dominant American chestnut (*Castanea dentata*) from our eastern forests. A more recently arriving forest pest, the hemlock woolly adelgid (*Adelges tsugae*) of Japan and Asia, is destroying populations of the eastern hemlock (*Tsuga canadensis*) throughout the Appalachian Mountains. Until recent years, Ramsey's Draft was home to a renowned old growth hemlock forest. Most of the trees are now dead or dying, with few healthy ones remaining.

It is imperative that we all become aware of, and begin controlling the spread of, non-native plants and pests. We must pay attention in our back yards and neighborhoods as well as natural areas of the George Washington National Forest (GW) and beyond. Some positive steps include:

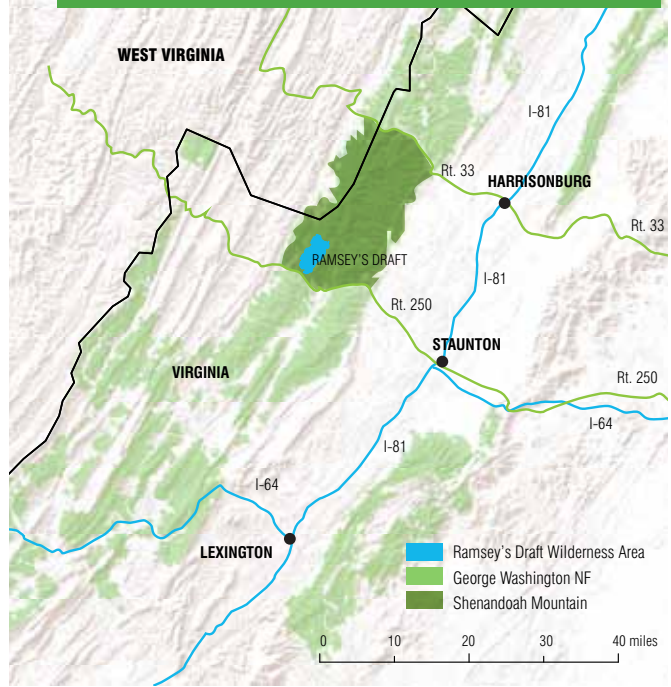
- Use native plants in gardens and landscapes.
- Prevent further spread of non-natives. When visiting the GW, be sure to cleanse yourself and your accessories (boots, clothes, bikes, horses & dogs, canoes, etc.) of "hitchhiking" seeds.
- When camping, do not transport firewood from outside the area you are visiting.
- When possible, control populations of NNIPs and prevent their further spread.
- Continue to educate yourself and others.

Early detection of NNIP is critical for effective control. Methods must be specific for the target species. Wild Virginia sponsors occasional work days to control selected species in specific locations. Please consider helping us. Become a member of Wild Virginia to join us on monthly hikes, stay informed about management issues on the GW, and help contain the spread of NNIP.



Forest understory trees are gradually replacing the dying eastern hemlocks in Ramsey's Draft Wilderness

The George Washington National Forest and Ramsey's Draft Wilderness Area



George Washington National Forest

At more than 1 million acres in size, the George Washington National Forest (GW) is the largest national forest in the eastern United States. It is a tremendous natural asset that belongs to all U.S. citizens. It is very popular among outdoor recreationists—hikers, hunters, anglers, horseback riders, mountain bikers, wildlife enthusiasts, and many others.

The forest performs many vital functions. Its mountain slopes form the headwaters of the James, Potomac, and Shenandoah Rivers. The surface waters are a source of drinking water for 22 local communities in western Virginia. The GW is also home to a wide array of plants, animals, and natural communities. Eighty-five species of plants and animals that are federally threatened, endangered, or considered a sensitive species by the U.S. Forest Service are found here. The Virginia Division of Natural Heritage has identified 110 areas within the GW as ecologically or biologically significant.



Ramsey's Draft

Ramsey's Draft Wilderness was created in 1984 and is one of six wilderness areas in the George Washington National Forest (GW). Formally identifying and designating areas as wilderness is important for maintaining the character and ecological integrity of the forest. Wilderness areas are defined as "land retaining its primeval character and influence, without permanent improvements or human habitation..." that have "been affected primarily by the forces of nature," providing "outstanding opportunities for solitude or a primitive and unconfined type of recreation."

Despite being the national forest closest to Washington, D.C., the GW is the best back country resource in all of Central Appalachia, containing approximately 250,000 acres of Inventoried Roadless Areas. The amount of roadless areas, wilderness areas, and other special places in the GW make it a rare occurrence in eastern North America. It is one of the few remaining places where large areas of relatively undisturbed, mature forest still exist on the landscape. As such, it provides habitat to many plants and animals that are uncommon in other parts of the region.

Shenandoah Mountain

Shenandoah Mountain is at the heart of the unspoiled lands remaining in the GW. Comprised of high elevation areas and a complex of ridges, much of Shenandoah Mountain lies between Route 250 to the south and Route 33 to the north. The area includes eight Inventoried Roadless Areas with Ramsey's Draft Wilderness occurring near the southern end.

Shenandoah Mountain is renowned for its beauty and abundant wildlife. The area is home to black bears, bobcats, wild turkeys, ruffed grouse, raptors, white-tailed deer, and numerous migratory songbirds. Many wild trout streams originate on the mountain slopes. Two animal species, the Cow Knob salamander (*Plethodon punctatus*) and Shenandoah millipede (*Nannaria shenandoah*), occur nowhere else on the globe. Several other globally rare species found here include Virginia least trillium (*Trillium pusillum* var. *monticulum*) and Shale barren rockcress (*Arabis serotina*).





Wild Virginia is a grassroots, nonprofit organization dedicated to preserving wild forest ecosystems in Virginia's national forests. Since 1995 we have worked to protect one of the last large wild forests remaining in eastern North America, the Shenandoah Mountain area of the George Washington National Forest (GW).

Through education and outreach, Wild Virginia informs and mobilizes citizens about issues, threats, and opportunities for the GW. Wild Virginia is also a "watchdog" in the forest, monitoring all proposed projects (e.g., timber sales, road construction).

Financial support for our work comes from our members, individual donors and grants from private foundations. This project was made possible by funding from the National Forest Foundation, The Agua Fund, and an anonymous foundation. We also appreciate the cooperation from U.S. Forest Service staff on the GW.

The Wood Turtle

One of the many

reasons to support

Wild Virginia



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Photo Credits

Wood turtle – Steve Krichbaum

Pink lady's slipper – Thomas Miller

Spring Beauty – W. D. Bramsford

Garlic mustard – Chris Evans, Bugwood.org

Autumn olive – James R. Allison, Georgia DNR, Bugwood.org

Bush honeysuckle – Stacey Leicht, Univ. Connecticut, Bugwood.org

