

KC Weed News – October 2011

King County, Washington

(<http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-news.aspx>)

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Weed of the Month: Velvetleaf (*Abutilon theophrasti*), a Class A Noxious Weed in Washington State

One of the things that interests me about weeds is how, exactly, they come to be weeds. In other words, what sets them apart from all the other plants that are introduced to our area? I want to know how each weed species travelled so far and then what made them so troublesome once they got here.

This month's featured weed, velvetleaf, has an interesting history. It's native to southern Asia and has been a useful plant cultivated in China and other countries for several thousand years. It is mainly grown for its jute-like fiber and it can also be cooked and eaten. In fact, it was first brought to North America in the late 1600's and early 1700's as a fiber crop. One source writes that "China Jute or Indian Mallow (*Abutilon theophrasti*) is an annual plant that yields a strong, coarse, grayish-white lustrous fiber with characteristics similar to jute. It has been extensively grown in China and was introduced into North America where it can thrive. The fibers have great tensile strength, take dyes readily and are used in China for making rugs and paper."

(<http://www.faculty.ucr.edu/~legneref/botany/fibers.htm>)

Although velvetleaf was cultivated for fiber by early American colonists for about a hundred years, it never caught on as a commercial fiber source. Unfortunately however, it did escape from where it was planted and thrived so much on its own that it became an expensive and damaging crop weed in North America. For instance, it can decrease corn yield by 34% and costs millions of dollars to control in corn alone. Although velvetleaf is most common in the Midwest and southeastern United States, it has more recently spread throughout the rest of North America, most likely as a contaminant in soy and corn and other crop seeds, but also moving with harvesting equipment and other means.

In Washington, velvetleaf was first noticed as a weed in the 1980's when it showed up in Thurston County in chicken manure, that was then distributed to many organic farmers. The original source was traced to chicken feed from the Midwest where the weed is

more common. There have been other introductions since then and it also gets spread around between farms on equipment, animals and in manure. Since velvetleaf grows best in rich soil, it is most often found around farms and dairies, but also grows on roadsides and other disturbed areas. Northwest crops that have had velvetleaf problems include corn, asparagus, vegetables, strawberries, raspberries and oats. Unfortunately, velvetleaf is also bad for crop soils. The leaves and seeds have allelopathic effects that inhibit the germination and growth of some crops, including alfalfa, radish, corn and turnip seedlings.

In addition to how it got to our area, another question to ask about a weed is what makes it so troublesome; what allows it to invade and out-grow other plants? One of the advantages velvetleaf has over crop plants is its rapid growth in the summer and ability to quickly monopolize food, water and space. It germinates right after fields are tilled and then simply out-grows and out-competes row crops. Velvetleaf is tall with large, shade-producing leaves and strong, stout stems and it grows very quickly in rich soils. Also, it can grow rapidly even in the shade of corn or other tall crops. Basically, it is well adapted to the conditions created in croplands – tilling, rich soils and water – and it can out-grow most crops once it gets established, robbing them of resources and reducing their yield.

In small quantities, velvetleaf is actually pretty simple to control since it is just an annual with easily pulled roots. However, over large areas this plant has other competitive advantages. Seed production is high, as you would expect with an annual weed, and the seeds are extremely long-lived. To make matters worse, velvetleaf self-pollinates, so it doesn't depend on pollinators to set seed. Very quickly a small population can explode into a huge infestation that produces flowers, seeds and seedlings all summer long. Once velvetleaf gets established, it is very challenging and expensive for a farmer to keep this plant from impacting their crops.

Fortunately for Washington farmers, velvetleaf is not widespread here and can usually be nipped in the bud before it becomes a big problem. The key is to look for large, velvety leafed weeds growing in and around fields and roadsides, starting in about May and especially after fields are tilled. In July and August, the plants will be anywhere from 3 to 8 feet tall, with yellow flowers that look like mallow or hollyhock type blooms, and big, floppy, heart-shaped, velvety leaves growing on stout stems. Another distinctive trait is that the leaves typically wilt in the afternoon and then perk back up the next morning. By fall, plants will have their distinctive button-like seed capsules. If you are pulling velvetleaf in the fall, make sure to carefully bag around the capsules so you don't spread the seeds. If you mow in an infested area, be very careful to wash the mower. Velvetleaf seeds can be viable in the soil for 50 or more years and one plant can produce up to 17,000 seeds.

If you notice [velvetleaf](#) growing in Washington, contact your county noxious weed program as soon as possible so the area can be checked for more plants to stop this plant from getting a foothold here. Here in King County, we usually find a few velvetleaf plants every year, so we know it's here. However, so far we have not found any large infestations so we hope to keep it from being more than an occasional weed. Please report sightings in King County online [on our website](#) and [contact us](#) if you have any questions about velvetleaf or any other noxious weeds.

Weed Tips for October

Look for and control garlic mustard before it's covered by leaves. Young [garlic mustard](#) rosettes grow throughout the fall and winter, building up roots so they can bolt and flower early next spring. Fall is an effective time to use chemical control or simply dig the plants up if there aren't too many. However, fall leaf cover makes it hard to spot the low-growing rosettes, so don't wait too long. And remember, we need to know where you find garlic mustard so we can watch the area carefully in the years to come, making sure it doesn't spread. So please [report to us](#) when you find garlic mustard anywhere in King County, Washington.

Check mowed areas for re-flowering weeds; they are shorter but will still produce seeds. Weeds are sneaky and they are survivors. After they are mowed, many biennial and perennial weeds will continue to grow and will produce flowers and seeds well into the fall. Particularly common around here in October is short but flowering [tansy ragwort](#) and [spotted knapweed](#). Sometimes mowing these weeds again will keep them from seeding, but often they flower shorter than the mower cuts and may even flower again later if we don't get a hard frost. To make sure they don't spread, it may be time to consider manually digging up these persistent weeds or using an appropriate herbicide.

There's still time to control some late flowering plants that are lingering this fall. For instance, [European hawkweed](#) is still flowering. This Class A noxious weed isn't common, but if you have it, go check for flowers now. Also, [purple loosestrife](#) seeds are slow to develop and some plants flowered late this year, so there may still be time to cut and bag the flowerheads before the seeds disperse. [Phragmites](#) is in full flower and this is definitely the time to get it controlled. [Policeman's helmet](#) is mostly in seed, but there may be pockets of late bloomers you can still get to. [Butterfly bush](#) seeds are just getting started, so now is the time to cut off faded blooms and prune back overgrown stems (or just remove the whole plant and replace it with a better behaved shrub).

October is time for the last gasps of knotweed control. Depending on how dry your site is and when the first hard frost comes, you will likely see [knotweed](#) continuing to grow well into October or even later. And, as long as knotweed is growing, it can be controlled. Until the leaves start to turn color, knotweed can be sprayed (assuming you can find a dry day or two!). It is probably too late to use stem-injection since stems are usually too hard by this time of year, but you could check and possibly inject higher up the stem. If you are using manual control methods, you can cut re-growth down one last time or, if the soil is loose and the patch is small, carefully remove any surviving roots and discard in the garbage. And, of course, the most important step is to assess how things went this year and make plans for next year, since knotweed is almost certainly going to be back!

Fall planting is great, but don't plant where you will be controlling tough noxious weeds next year. Although the temptation is to plant as soon as possible, controlling noxious weeds is tough enough without having to work around tender new plants. It is important to wait until you have mostly eradicated weeds like [knotweed](#), [blackberry](#) and other tough, vegetatively spreading weeds. Their roots and rhizomes will spread into and around the new plants' roots, making it next to impossible to control the weeds without harming your new plants. Unless you have excavated all the top soil on a site, expect blackberry and knotweed to come back strongly for at least one or more seasons after the initial control. If you must plant right after you control weeds, make sure to leave plenty of room between plants to allow for access and equipment and use mulch

around the new plants to suppress weed growth right around them where it will be most difficult to control the weeds.

Fall is a great time to control many noxious weeds. In the cool, autumn months after the rains start up again and before the hard frosts of winter, there is a window of opportunity for controlling many weeds. Weeds that are actively growing now and building up roots are available for control with herbicides or manual methods like digging. Some prime targets for fall weed control include [Canada thistle](#), [bull thistle](#), [milk thistle](#), [spotted knapweed](#), [garlic mustard](#), [hawkweed](#), [sulfur cinquefoil](#), and [tansy ragwort](#). Chemicals that are useful in the fall on broadleaf weeds include aminopyralid (e.g. Milestone) and 2,4-D. If there is no grass, glyphosate (e.g. Roundup, Aquamaster) will also be effective for fall treatment of many perennial and woody weeds. Digging is very effective in the fall when the soil loosens up with the rain and before it gets too soggy and heavy to work. Also, some weeds are germinating from seed now, so this is a good time to spread cardboard and wood chips or other mulch in order to keep weeds from developing and to prevent germination of other weeds in the early spring.

Cut stump, frilling, stem injection and basal bark methods can control invasive shrubs and trees without hurting other plants. Although stem treatments can work more slowly in the fall than in the summer, they are still effective and may reduce harm to adjacent plants. Woody species like holly and laurel can be controlled with a targeted application of herbicide just inside the bark where sugars are being transported down into the roots. There are many tools out there developed for forestry weed control or you can use simple tools like a sharp hatchet and a spray bottle. The basic idea of many of the methods is to cut into the trunk and apply herbicide to the actively growing tissue of the tree or shrub. Another method is to apply herbicide directly to the basal bark mixed with an oil carrier that will allow the herbicide to penetrate the bark. Chemicals that are most often used for these methods are triclopyr and glyphosate. Products containing these chemicals will have instructions for cut stump and other woody weed control methods. These methods greatly reduce the risk of herbicide getting on surrounding vegetation and, when done in the fall, there is even less risk since many forest plants are dormant now or at least slowing down their growth.

Control invasive vines now to reduce weight on trees over the windy, rainy winter. Our wet, windy winters are a big challenge for trees, especially when they are weighted down by mountains of [English ivy](#) or [Clematis \(old man's beard\)](#) vines. These vines can create a sail effect, catching the wind and creating more stress on the trees in strong winds. Also, both ivy and clematis can develop into thick, heavy stems – it's like having lots of small trees growing all over your tree. English ivy vines can add over 2000 pounds to a large tree, making it hard for even the sturdiest Douglas fir to stay up in a windstorm. Also, vines can make it tough to know how healthy a tree is and can mask problems with rot and dead limbs. It's best to clear the trunks now of all ivy and clematis vines, allowing the upper vines time to die back and dry up before the winter storms begin. If you are unsure how healthy the tree is under all those vines and it is anywhere near buildings or trails, make sure to get an arborist or forester to check for you before it becomes a safety hazard.

Think about doing blackberry control in the fall. Both of our [invasive blackberry](#) species, Himalayan and evergreen, are still growing quite actively in October, and this can be a good time to control them while minimizing impacts on dormant native vegetation. Spraying blackberry foliage with glyphosate is effective until leaves start to

turn color and die back. Also, cutting back canes and digging up the roots works anytime, but is even easier in the fall when the soil is looser than in the hot, dry summer months. As a bonus, birds aren't nesting now, so removing blackberries now will reduce impact on any species that might have been using the thickets in the spring. However, when digging up blackberry, avoid exposing soil near streams and rivers where it will wash into the water during the storms and high waters of the winter. In sensitive areas, make sure to use hand-operated tools only, not heavy equipment that can increase erosion and soil damage. For cutting, there are heavy-duty blades that can be used on weed trimmers or brush cutters or there is the always effective, if time-consuming, long-handled loppers. Digging roots out with a shovel works fine, but somewhat easier is a claw-style mattock that can hook onto the base of the plant and help you lever out the root ball.

Good fall pasture management will reduce weed problems next year. The same practices that help you protect healthy pasture soils and reduce erosion will also reduce your pasture weed problems. It's important to keep livestock off saturated soils to avoid damaging pasture plants and leaving openings for weeds. Weeds do much better in compacted soils than grasses so protecting your soil in the wet months will help reduce weed issues. Also, any exposed soil is an opportunity for a weed to take hold, so make sure to spread an appropriate pasture seed mix over any thinly vegetated areas or where there was a lot of traffic over the summer. To get ready for the winter, control the weeds, fertilize, and add lime now to reduce your work in the spring. Also, storing manure under cover will help reduce the amount of weed seeds blowing into it and will improve the quality of the manure for mulch.

Three New Species Considered for 2012 State Weed List

The [Washington State Noxious Weed Board](#) is meeting on November 1 and 2 to hear public comments and vote on proposals to add three new species to the state noxious weed list. The public hearing takes place on Tuesday, November 1 from 1:00 pm to 3:00 pm at the Yakima City Hall Council Chambers, located at 129 North Second St in Yakima, WA 98901. The regular State Weed Board meeting begins at 9:00 at the same location on Wednesday, November 2. For more information or to sign up for online/teleconferenced participation, contact Alison Halpern at (360) 902-2053 or by email at AHalpern@agr.wa.gov.

The following proposals are being considered.

- Adding oriental clematis, *Clematis orientalis*, as a Class A noxious weed
- Adding tree-of-heaven, *Ailanthus altissima*, as a Class C noxious weed
- Adding Japanese eelgrass, *Zostera japonica*, as a Class C noxious weed (on commercially managed shellfish beds only)

[Oriental clematis \(*Clematis orientalis*\)](#) is a yellow-flowered ornamental vine from China that is sold in the nursery trade, but doesn't appear to be widely planted in our area. It has escaped in Yakima County where it has shown itself to be very invasive and capable of overwhelming other vegetation. It is considered an invasive plant elsewhere in the west and is listed as a noxious weed in Colorado. There are a few similar yellow-flowered ornamental Clematis species that are closely related, including *Clematis tangutica* and *Clematis tibetana*. These species are also in the nursery trade. Oriental

clematis is being considered for Class A status meaning that control would be required throughout the state and the goal would be eradication, not simply stopping the spread.

[Tree-of-heaven or Ailanthus \(*Ailanthus altissima*\)](#) is native to Taiwan and central China and is well known as an invasive tree in the eastern United States. It has made its way west and is now showing up increasingly in the western states where it is invasive as well, although possibly more limited in the habitat to where it can be a problem. Ailanthus has shown up in many Washington counties, especially in southwestern and central Washington. In King County, this tree is occasionally quite abundant where it has escaped intentional plantings. As a tall tree it is fairly distinctive with its long, pinnately divided leaves and large clusters of maple-like samaras. However, young plants can be confused with sumac, which can also act like a weed at times. In addition to spreading into natural areas, Ailanthus can cause property damage from its roots and it contains allelopathic chemicals that are toxic to many other plant species. Ailanthus is being considered as a Class C noxious weed, allowing counties to require control if they choose, but not requiring it at the state level.

[Japanese eelgrass \(*Zostera japonica*\)](#) is a non-native Asian saltwater plant species that is closely related to the native eelgrass (*Zostera marina*) found in the Puget Sound and along the Washington Coast. It has much narrower leaves than the native eelgrass and it also occupies a somewhat different habitat, generally occurring farther up the intertidal zone, although the species can also occur together. Japanese eelgrass is quite problematic and abundant in the commercially managed shellfish beds in Willapa Bay and present elsewhere as well along the Washington Coast. There is a mixed opinion about the nature of the impacts of this species as well as the impacts of its control. The proposal the State Weed Board is considering is to make Japanese eelgrass a noxious weed only when it occurs on commercially managed shellfish beds and to make it a Class C weed, meaning control would not be required by the State Weed Board, but it could be selected by a county for required control on those shellfish beds.

If you have any questions about these proposals, please contact [Alison Halpern](#) at the Washington State Noxious Weed Board or attend the public hearing on November 1 at the Yakima City Hall Council Chambers.

New Invasive Weed Curriculum Being Offered to Local Schools

You probably know that invasive plants are one of the biggest factors effecting healthy biodiversity of our local ecosystems. And you would probably know a native or invasive plant if you saw one. Well, as of this year, many of our 3-5th grade students will also. Starting this fall, King County and Nature Vision are teaming up to launch a new curriculum available to schools throughout the county called Right Plant, Right Place! Through games and group activities, students will become aware of the impact of invasive plants on native plants in our local ecosystems. Students will learn how to identify invasive plants, how these plants spread, and why they need to be controlled or removed in our own backyards and community. With each new program, we will be increasing the ability of our local kids to be good native plant stewards and to get engaged in the effort to stop the spread of invasive plants. The King County Noxious Weed Control Board is sponsoring up to 15 classrooms this first year and hopes to continue into the future as funding allows. Teachers in King County can register their classroom or get more information by contacting Nature Vision at info@naturevision.org or by visiting the website at <http://www.naturevision.org/school-programs/>.

New Parrotfeather Population Found in King County

A county ecologist recently spotted a patch of [parrotfeather \(*Myriophyllum aquaticum*\)](#) while checking a new King County property near Issaquah Creek by Cedar Grove Rd. Fortunately, it is in a wetland that doesn't directly connect to Issaquah Creek. Unfortunately, it is very close to the creek and certainly in the flood zone. In King County, until now, we had the good luck not to have any parrotfeather populations in natural water bodies. They had all occurred in man-made ponds that didn't flow into lakes or streams. Because of its location, this new population could present a new challenge. It also alerts us to the possibility of other populations in the Issaquah Creek area. If you are in the Issaquah Creek basin, please look for parrotfeather growing in wetlands or small ponds in your area. Under water, parrotfeather looks like regular milfoil, but above water, it really stands out. Parrotfeather is bright green, sticks up about a foot above water, looks like a lot of little pine trees growing on the water, and can completely cover the water's surface. If you think you see parrotfeather anywhere in King County, please [report it](#) as soon as possible.

Garlic Mustard Just Keeps Spreading, Darn it

Field crews have discovered more new infestations of [garlic mustard](#) in rural areas of King County this fall. Patches were found along the Cedar River, especially around the mouth of Taylor Creek, and some scattered plants were found along Soos Creek near Covington. Plants could be moving in flood waters, brought by birds and other animals, or transported on boots—there's no clear pattern, so it's hard to know which the most likely culprit is, or if it's really a combination of all three. Currently, we haven't identified any sites on the Cedar River above the Dorre Don Natural Area, or on Soos Creek above Kent Black Diamond Road. If you find plants upstream of these areas, please [let us know](#) (and we'd love to hear about any other new infestations you find, too). Finding this invader in rural areas is a clear reminder that it's important to clean boots, gear, and pets after visiting areas known to have garlic mustard to avoid transporting seeds to any new areas. Check our [county's noxious weed imap](#) database for known infestations or [contact us](#) to find out where we have located garlic mustard in the county.

Garden Loosestrife Control Trials

After several years of attempts, we still don't know how to kill [garden loosestrife](#). We can suppress it, even keep it from going to seed, but it just won't die. This tall, wetland-loving perennial with pretty yellow flowers is invading lakeshores, riverbanks and wetlands in the Sammamish and Snoqualmie watersheds. We have successfully knocked it back and prevented seeding, but this plant also reproduces vegetatively by rhizomes and stolon fragments and therefore is continuing to persist and spread. This year, we've launched a series of control trials to see if we can figure out how to kill it, roots and all. We are trying three main approaches. First, we are applying a variety of approved aquatic herbicides alone and in combination; second, we've attempted careful hand digging of all roots and rhizomes in loose and sandy soils; and third, we're working with Oxbow Farm and Stewardship Partners to cover an isolated patch with stiff tarps to see if we can starve it out. For more information on these efforts and garden loosestrife in general, please contact [Katie Messick](#), our aquatic weed specialist. Stay tuned for results in the coming seasons!

Puget Sound Knotweed Forum – October 31

If you're involved with a knotweed control project in the Puget Sound area, we'd like to invite you to join us for our first annual Puget Sound Knotweed Forum. This is a chance

to sit down and share information about your knotweed project with other people in the area who are also working on knotweed. We'd like to see this grow to an annual meeting that would allow partners to share project locations, success stories, challenges and learn about new research and techniques. In addition to a roundtable on all our projects, we will have short presentations on a few topics of mutual interest such as ecological impacts, data tracking and problem-solving for landscape scale knotweed projects. We'll be meeting on October 31 from 8-12:30 at our offices in King Street Center in downtown Seattle. For the agenda and to register, please contact Frances Lucero by [email](#) or at 206-263-6465. If you would like to share your knotweed maps with others, please contact Frances before October 25 with your data.

Recent "Weeds in the News" Stories

Dirt Road Maintenance Spreads Invasive Plants

Routine roadwork on rural roads may be aiding the rapid spread of invasive species according to a new study. Road graders used in the study sometimes carried seeds more than 200 times farther than the seeds can spread on their own. The findings suggest that, for the sake of the environment, maintenance crews might want to consider altering the timing or techniques they use to keep dirt and gravel roads in shape.

<http://news.discovery.com/earth/dirt-roads-graders-invasive-plants-110809.html>

Policeman's Helmet Catches the Attention of Astoria in Clatsop County, Oregon

We share this weed problem with Oregon and the article describes a familiar challenge – how to find and remove all the populations of an invasive plant when much of it is growing on private property, out of sight of the weed specialists. The goal is to solve this with more outreach and increased cooperation and coordination.

[County's most wanted weed: http://www.dailyastorian.com/free/county-s-most-wanted-weed/article_0a8c677a-e484-11e0-bfa5-001cc4c002e0.html](http://www.dailyastorian.com/free/county-s-most-wanted-weed/article_0a8c677a-e484-11e0-bfa5-001cc4c002e0.html)

Dogs mess up trails and forests

Hiking with your dog can seem like a natural fit, but parks managers say too many people are letting their dogs run wild in the wild. As KUOW's Ann Dornfeld reports, off-leash dogs are taking a toll on the region's trails. This story hits close to home for us as we keep seeing garlic mustard moving from trails into the forest in areas that are frequently used by off-leash dogs.

[Off-Leash Dogs Degrading Trails:](#)

<http://www.kuow.washington.edu/program.php?id=24475>

Lake Osoyoos Milfoil Border Battles

Lake weeds always pose challenges since there are no clear boundaries for aquatic weeds and everything else the water carries. On Lake Osoyoos it is even more challenging since the Canadian-US border runs right through the lake. Here are two stories on this situation from different perspectives.

<http://www.osoyoostimes.com/news/2011/08/03/us-lakeshore-residents-say-plans-for-herbicide-use-about-need-to-eradicate-milfoil/>

-and-

<http://www.osoyoostimes.com/news/2011/07/13/okanagan-basin-water-board-asks-us-weed-control-organization-to-reconsider-use-of-herbicide-in-fight-against-milfoil-in-osoyoos-lake/>

Advice Column from a California Invasive Plant Activist

This article offers a host of great ideas about how to deal with invasive plants. Even if some of the species are not familiar here, the principles and methods are much the same for our weeds.

<http://anewscafe.com/2011/09/10/what-to-do-about-weeds-with-invasive-plant-activist-educator-susan-mason/>

A Feel Good Approach to Weeds from the Feel Good Center of the Universe

It seems so fitting that this article came out in the Maui News website where everything looks a little less bad (but where the invasives are truly terrifying). It presents a way to think positively about invasives without denying the problems they cause.

<http://www.mauinews.com/page/content.detail/id/553305/Kia-i-Moku--Positive-spin-on-invasive-species-by-artists--chefs.html?nav=15>

Food for Thought on Nature

And finally, not really news, and only indirectly about weeds, but a heartfelt and thought-provoking essay inspired by my favorite local park.

<http://www.hcn.org/issues/43.16/the-mirage-of-pristine-wilderness>

If I missed your favorite story on weeds, let me know. Also, if you have something you would like to share with others about invasive and noxious weeds in King County, Washington, please let me know. We can all learn a lot from each other's experiences and observations.