

# Focus On: The Holly and the Ivy

## WSU North Puget Sound Extension Forestry

### E-Newsletter

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What's wrong with a little ivy? Plenty. The photos below were taken in Olympic National Park, demonstrating that invasive species know no boundaries. This was only a small piece of the infestation, which was killing and pulling over trees and completely destroying the native understory. This has very little wildlife value, unless you're a rat. "But I only have a little!" That's how this started out, too. It spreads aggressively both vegetatively and by bird-disbursed seeds. There are a number of different varieties, all invasive and all brought in as ornamentals.



Spraying is challenging because ivy has a thick, waxy leaf - but there are some products listed for use in this way (always follow label instructions). But it pulls up (roots and all) pretty easily, so with a little elbow grease you can make good strides. You should wear gloves and a dust mask for this, for the sake of comfort. For ivy growing up and strangling trees, you don't have to pull it all off the tree (which could damage the bark, not to mention needless effort. Pull it off up to shoulder height, making sure to sever all stems growing up the tree. Without ground

contact, the remainder up the tree will die. Then work on pulling the stuff on the ground back from the tree, pulling it up by the roots.

Here are three fact sheets on controlling English ivy:

- <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/19802/ec1595-e.pdf>
- <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/english-ivy-control.pdf>
- <http://www.whatcomcounty.us/DocumentCenter/Home/View/2386>

This is an English holly that I pulled out of the ground. What I want to impress upon you are the measurements. From the top to the root collar is about 12 inches. The root then extends from 12 inches out past 36 inches. Folks, that's a 2-to-1 root to shoot ratio. Maybe they should change the expression "tip of the iceberg" to "tip of the holly." Can you imagine what the root system is like on larger hollies?



This is one of the big problems with this invasive species--it's so firmly rooted that anything larger than what I pulled up is very difficult to dig out and causes a lot of soil disturbance. Most of our invasives can ultimately be killed by shade, so establishing a healthy forest overstory is a long-term solution. Not so with holly, as it is extremely shade tolerant. Other understory vegetation will be long gone from heavy shade before the holly gives it up. It spreads not just by birds eating the red berries, but also by suckering and layering.

"But it's so pretty!" Yes, and that's why most of our invasives ended up here--because of their beauty. Think Scotch broom, butterfly bush, etc. "But the birds enjoy the berries." Yes, but the birds also enjoy a myriad of native food sources. They did just fine for thousands of years before this English import, and they will continue to do fine without holly trees. Each of those red berries represents a new infestation that will crowd out the diversity of native food sources

that a whole host of different wildlife species depend on, and each of those berries represents a lot of difficult restoration work on other properties, parks, and natural areas.

Holly is dioecious, meaning male and female on separate plants. The females are particularly bad because of all the berries that feed infestations. The males are hardly innocuous, though. They fertilize the females, and they spread by suckering and layering to form large thickets. "But I only have a few holly plants here and there and they don't seem to be spreading." Perhaps not above ground...yet. It may be getting well-established below ground to prepare for future expansion. Recent research (Stokes et al. 2014) suggests that a holly plant can stay relatively contained for about 14 years, after which it begins growing exponentially creating large colonies that overtake the rest of the understory.

So why if this invasive plant is so problematic can it be farmed and sold? Why is it not listed as a noxious weed like similar plants? The answer is basically politics, lobbying, money, etc. The listing of an invasive plant by state government has as much to do with politics as it does with science and damage potential. Here's an interesting article that talks about some of these issues: <http://www.pacifichorticulture.org/articles/english-holly/>

So what to do? If you see sprouts 12" or less, that is the time to pull them out. Use gloves and pull slowly (don't yank) with firm pressure to ease the whole root out. For bigger specimens, you may need to do some serious digging. Or if it's not practical to dig, you may need to use an herbicide. Foliar sprays aren't practical because the holly resists them with their thick, waxy leaves. Cut stump treatment is a common approach in which herbicide is applied to the stump immediately following cutting. A recent local study by EarthCorps found that triclopyr was more effective than glyphosate for cut stump treatments. The study also found that frilling (a.k.a. hack and squirt) with triclopyr or stem injection with imazapyr were even more effective. Stem injection is nice because the applicant and surrounding environment have minimal exposure to the herbicide. Cut stump and frilling also have pretty low impact as there is no overspray on other vegetation and a relatively small amount of herbicide is used, compared to foliar sprays. Check with your county's noxious weed program for more information and recommendations. Make sure any herbicide you use is registered for your type of site (e.g. forestry) and always follow all label instructions.

Here's a link to the EarthCorps study:

[http://www.earthcorps.org/ftp/ECScience/Projects/Holly Research/Holly Treatment Study Report 2013.pdf](http://www.earthcorps.org/ftp/ECScience/Projects/Holly%20Research/Holly%20Treatment%20Study%20Report%202013.pdf).

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- <http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/Brochures/English-Holly-Fact-Sheet.pdf>
- <http://www.whatcomcounty.us/DocumentCenter/Home/View/2396>