## **Habitat and Spread**

Yellow archangel thrives under a wide range of conditions—from sun to shade and from wet to dry soil. It is often planted in gardens, landscaped beds and used as an accent in hanging baskets and containers. Unfortunately, stem fragments can develop roots at leaf nodes, allowing the plant to survive and spread vegetatively into valuable forests, greenbelts and riparian areas.

Yellow archangel primarily spreads by creeping stems and rooting stem fragments, but new infestations are also started by illegally dumped yard waste and from the improper disposal of hanging baskets. Plants can also spread by seed, although the seed do not appear to disperse far from parent plants.

Infestations are predominantly found in western Washington although escaping plants can also be found in eastern Washington.

Yellow archangel growing in a natural area from an illegal yard waste dumping.



### **Noxious Weeds in Washington**

"Noxious weed" means a plant that when established is highly destructive, competitive, or difficult to control by cultural or chemical practices. RCW 17.10.10

Noxious weeds reduce crop yields, destroy native plant and animal habitat, damage recreational opportunities, clog waterways, lower land values, and poison or harm people and livestock.

Yellow archangel is a Class B noxious weed in Washington State. Control is mandatory in designated areas and recommended everywhere else. Check with your local county noxious weed control board or extension office to learn more about this and other noxious weeds.

### **Contact Us**

If you have questions about yellow archangel or noxious weeds in general, we can help. Please contact us at:

WA State Noxious Weed Control Board P.O. Box 42560 Olympia, WA 98504 360-725-5764 http://www.nwcb.wa.gov Email: noxiousweeds@agr.wa.gov

Or contact your local county noxious weed control board:





# Yellow archangel

Lamiastrum galeobdolon



An aggressive, noxious weed in Washington

### Identification

Yellow archangel is an evergreen to semievergreen, fast-growing, perennial groundcover. It spreads to form a dense carpet of stems and variegated leaves. Stems can grow through and over low-growing plants.

- Its square stems grow along the ground and can root at leaf nodes.
- Leaves are opposite each other on the stem with distinctive silvery-white to gray variegation. They are oval, hairy and have toothed edges. During winter months, leaves often develop a purple coloring on the undersides and in the center of the upper surface.
- Upright flowering stems start to grow in early spring and produce whorls of bright yellow flowers at leaf bases in April. Flowers are small and two "lipped"; the upper lip forms a "hood" and the lower lip has orange to brown markings.
- Flowers produce 4 brown-black nutlets, with each nutlet containing one seed.



Yellow archangel is a rapidly-growing invader that forms dense mats of stems and leaves. It is difficult to control these infestations because of the plant's aggressive growth, its vegetative reproduction, and its ability to regrow after control operations are attempted. Monocultures of yellow archangel take the place of native plant species, reducing food and cover for wildlife.



#### Control

Repeating and/or combining control methods and monitoring are needed to successfully control yellow archangel.

Manual: Small infestations of yellow archangel can be hand-pulled, although it is highly time consuming. All roots and stems need to be removed. This is easiest to do when the soil is moist, from fall through spring. Use a digging tool to remove the clumps of fibrous roots and then sift through the soil to make sure no stems and roots remain. Pulled plants should be bagged and removed from the site. Do not put plants in a home compost pile as it does not get hot enough to kill the plants. The infestation can be cut and then covered with sheet mulch. Cutting/mowing alone will not kill yellow archangel, and may even end up spreading the plants.

Mulching/Smothering: Covering yellow archangel with sheet mulch or a landscape fabric can be successful if properly installed and maintained. You can sheet mulch by covering the plants with thick layers of newspaper or cardboard (providing good overlap of newspaper and cardboard edges) and then add a thick layer of wood chips (see picture). Monitor and control any stems growing out from under the edges. Replenish the woodchips as needed. If using landscape fabric, be sure to secure the fabric to the soil, again making sure stems can't grow out from under the edges. Also, fix any holes in the fabric to prevent stems from growing through them. Fabrics can either be left uncovered or covered with a woodchip mulch.



Sheet mulching of yellow archangel infestation with overlapping layer of cardboard topped with wood chips.

Herbicide: Yellow archangel can be controlled using foliar applications of glyphosate, triclopyr, or imazapyr; mixtures of glyphosate with either triclopyr or imazapyr have been shown to more quickly defoliate plants than glyphosate or imazapyr alone and may be more effective than single-product treatments. Additional applications over the course of the year will likely be needed to completely eliminate the infestation. Please see additional details in the PNW Weed Management Handbook online at <a href="http://pnwhandbooks.org/weed/">http://pnwhandbooks.org/weed/</a>. Always read the label before applying any herbicides.

After initial control, it is very important to monitor your site for resprouts from stems and roots as well as seedlings. Seeds have been found to survive in the soil for at least a few years. If yellow archangel regrowth is not controlled, the infestation will soon be as big as it was prior to the initial control. Once yellow archangel is controlled, plant areas with non-invasive plants to prevent other weeds from establishing.