



Paulownia tomentosa

WA – Monitor List

Empress Tree

Princess Tree, Royal Paulownia

Family: Paulowniaceae

Origins: Native to East Asia, Empress Tree was first introduced to the United States as an ornamental in the 1800s. Due to its rapid growth, it can be found in plantations around the world to sequester carbon dioxide.

Range: Found throughout most of the United States and naturalized in some of the eastern states.

Habitat: Commonly found along roadsides, riparian zones, forests, and disturbed sites. Empress Tree prefers full sun but can grow in partial shade, and prefers moist areas but is drought tolerant.

Impact: Empress Tree is one of the world’s fastest-growing trees, growing 15 feet per year. It can quickly shade out native plant communities and outcompete them for water, light, and nutrients. Empress Tree reproduces by seed and suckers; each tree can produce 20 million seeds per year¹.

Description: Empress Tree is a broadleaf deciduous tree that can grow up to 60 feet tall. Leaves are opposite, egg to heart-shaped, sparsely hairy above, and densely hairy on the underside. Leaves on adult trees are 6 to 16 inches long. Leaves on juvenile plants and stump sprouts may be much larger, up to 3 feet long.

The tubular flowers are light purple with yellow markings inside and bloom in early spring before the leaves appear. The flowers are in upright pyramidal clusters. Flower buds are light brown, hairy spheres that can be found in the winter.

Common Look-Alikes: Oak Tree, Walnut Tre, Fig Tree.

** Empress Tree is not known to be toxic.*



Integrated Pest Management - Control Methods

Integrated Pest Management (IPM) combines various methods such as mechanical, cultural, biological, and chemical controls to manage pests. IPM offers the possibility of improving the efficiency of pest control while reducing its negative environmental impacts. For more information, see the Cowlitz County Noxious Weed’s IPM Resources & Strategy Guide or contact your local Noxious Weed Control Board to develop a customized IPM plan.

Non-Herbicide Control

<p>Mechanical (pulling, cutting, digging, etc.)</p>	<p>Cut mature trees at ground level. Suckering and root sprouts are common after treatment; repeated cutting of sprouts or herbicidal application might be required. Repeated cutting eventually exhausts the roots and kills the plant, but this may take several years.</p>
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Cultural	Prescribed burning can be used to control Empress Tree and help control seeds remaining in the soil. Do not introduce this plant to your landscape.
Biological	Domestic livestock will eat Empress tree and damage it, however, they will not kill or eradicate this plant.

Herbicide Control

Glyphosate² (Rodeo, Killzall, Kleenup, Roundup)	<p>Timing: Foliar treatment when leaves are fully expanded; frill, basal bark, and cut-stump apply to actively growing plants.</p> <p>Remarks: Only spray the intended target; may injure vegetation on contact; refer to the label for use in aquatic areas.</p> <p><i>Foliar:</i> Treatments should be made only to small trees; spray complete uniform coverage but not to the point of runoff; use a non-ionic surfactant; dust on plants may reduce effectiveness;</p> <p><i>Frill:</i> Use a hatchet, machete, or chainsaw to cut downward at a 45-degree angle 6 inches above the ground. A simple guideline for the number of hacks is one per 3 inches of diameter, with a minimum of two. It is essential to space the cuts, leaving intact bark between them. If the stem is completely girdled, the herbicide cannot translocate to the roots; spray concentrated herbicide solution into hacks immediately using a squirt bottle, filling the cuts.</p> <p><i>Cut-Stump:</i> Cut the tree at ground level and immediately apply concentrated herbicide to the exposed stump.</p>
Triclopyr Ester / Triclopyr Amine² (Garlon 4 / Garlon 3A, Element 3A)	<p>Timing: Foliar treatment when leaves are fully expanded; frill, basal bark, and cut-stump apply to actively growing plants.</p> <p>Remarks: Garlon products are registered for range & pastures, non-crop areas, rights-of-way, industrial sites, and forestry; spray complete uniform coverage; dust on plants may reduce effectiveness; refer to the label for use in aquatic areas.</p> <p><i>Foliar:</i> Treatments should be made only to small trees; spray complete uniform coverage but not to the point of runoff; use a non-ionic surfactant; dust on plants may reduce effectiveness.</p> <p><i>Frill:</i> Use a hatchet, machete, or chainsaw to cut downward at a 45-degree angle 6 inches above the ground. A simple guideline for the number of hacks is one per 3 inches of diameter, with a minimum of two. It is essential to space the cuts, leaving intact bark between them. If the stem is completely girdled, the herbicide cannot translocate to the roots; spray concentrated herbicide solution into hacks immediately using a squirt bottle, filling the cuts.</p> <p><i>Basal Bark:</i> Add horticultural oil to the mixture (ratio should be 1:3, 1 part herbicide to 3 part horticultural oil) Spray the bottom 12 to 15 inches off the ground completely around the stem; spray complete uniform coverage until runoff is noticeable at the ground line.</p> <p><i>Cut-Stump:</i> Cut the tree at ground level and immediately apply concentrated herbicide to the exposed stump.</p>

* Cowlitz County Noxious Weed Control Board does not endorse any product or brand name. Brand names are listed as an example only. Other commercial products may contain the listed active chemical for herbicide control. Always read and follow the safety protocols and rate recommendations on the herbicide label. **The Label is The Law.**

This control sheet includes excerpts from the Written Findings of the Washington State Noxious Weed Control Board (WSNWCB), nwcb.wa.gov.

¹Paulownia tomentosa. (2021). U.S Forest Service. <https://www.fs.fed.us/database/feis/plants/tree/pautom/all.html>

²Tu, M. (2002, December). Weed Notes: Paulownia tomentosa. The Nature Conservancy's Wildland Invasive Species Team. <https://www.invasive.org/gist/moredocs/pautom01.pdf>