

# Tree of heaven holds invasive reign in Pendleton

By EVAN RUMMERFIELD East Oregonian Aug 15, 2023 Updated Aug 21, 2023

PENDLETON — The tree of heaven, *Ailanthus altissima*, has invaded Pendleton, making the city one of its countless strongholds, and it has been here for decades.

Public and private property alike — parks and yards — the tree of heaven, its name derived from its height, has conquered the land, dominating the native vegetation it comes into close proximity with.

Bill Aney, retired wildlife biologist and forester, serves on the Pendleton Tree Commission, an entity tasked with guiding city council on all matters tree related. “Human intervention is essential,” he said, in combating the invasive species.

“It is an intensive process to eliminate the tree,” he said, and if one is not dealt with properly, many more will sprout up, emblematic of the mythological hydra — cut off one head and two more shall take its place.

To remove the tree, the roots have to be a focus, he said, and late summer seems to be the best time to start the removal process because that is when trees are translocating nutrients into their roots in preparation for dormancy.

Weaponizing the tree’s own system against itself during this time of year, herbicides should be applied to the base of the tree, Aney said, so the herbicide gets into the roots. Then the tree should be cut down and removed after about a month of herbicide application.

Getting rid of the tree does not stop there, Aney said, During the following spring, new seedlings could sprout up. If they do, pull them up and dig out the entire root.

The root systems of these trees are pervasive and must be dealt with, he said, or the tree of heaven will tower over the terrain once again.

**Tough tree and tough on the environment** Originally from China, the tree of heaven was introduced into the United States in the late 1700s, primarily in the Pacific Northwest and the New England states, especially in Oregon between Hood River and Pendleton. Aney said the tree of heaven is prized for its quick growth rate, which means quick shade, a valuable asset for urban development.

The tree of heaven also puts a stranglehold on local ecology, he said. The tree of heaven is an aggressive invasive species, crowding out other vegetation and limiting habitat for wildlife.

No matter where the tree of heaven is entrenched, it sucks up nutrients and water from the soil, depriving native plants of their livelihood.

Being an allelopathic tree, the tree also infuses the soil with its own chemicals that further prevent the viability and growth of other plants around it.

The tree also is durable and resilient, enduring through almost any condition and through almost any environment, such as pollution and drought.

Aney recalled how the tree of heaven fared well compared to other native plants during the heat dome a couple of years ago.

**No good scenario** The trees are prolific along the banks of the Umatilla River through downtown Pendleton. There is a battle going on there, Aney said: The invasive tree of heaven versus the native cottonwood tree and all other native vegetation.

The tree's ability to prevent the viability and growth of other plants around it may seem like a benefit for levee maintenance — reducing vegetation to better inspect for and prevent flooding, akin to the city's use of prescriptive grazing goats. But Aney said the trees leave the soil saturated with chemicals, barren of nutrients and bare of vegetation, and rising water levels then wash away that soil, compromising the levee.

The root systems of these trees, he said, are so ingrained within the levee environment that damage or removal also could compromise the levee.

Aney said he has a friend who says, "The hardest decisions are the ones where there are two right choices." This is one of those scenarios, he said.

In addition to attacking native vegetation and damaging the ecosystem from below, the tree of heaven also assaults the environment from above. Being significantly taller than most native vegetation, it starves all in its shadow of sunlight.

The shadow the tree of heaven casts is a detriment to the land; however, it is not a detriment to the water, Aney said. It actually aids in water quality control — specifically water temperature. Shading of the river provides a viable habitat for native fish. Without the shade, the river would reach temperatures unsustainable for the fish population.

Historically, that has been the function of the native cottonwood tree. Cottonwoods have a short life cycle for a tree. They grow quickly, and then when they die, they fall over, often being carried downstream, dispersing their seeds. It is a natural cycle for the river to have its much-needed shade for the survival of its fish population.

The crucial difference between the tree of heaven and a cottonwood, Aney said, is the cottonwood shares its environment whereas the tree of heaven dominates it.

Stuck in stasis At this time, Aney said, the situation along the levee with the tree of heaven has no clear path forward.

Aney said he didn't know of any commercial value for the tree of heaven either. They lack structural integrity for construction, and they lack density for a good fuel source.

Liam Hughes, the director of the Pendleton Parks and Recreation Department, is not a fan of the tree.

It is on the city's list of prohibited trees, so it cannot be planted on city property. The tree is "notorious for being hard to kill," he said, and there is not unlimited funding to deal with the problem.

He said his department, then, does what it can to eliminate, prevent and manage the invasive species.