

Ashe Juniper (Cedar) in Sun City Texas

Ashe juniper (*Juniperus ashei*) is a native invasive tree found in the Texas Hill Country and into Missouri (Figure 1). It is also known as cedar, mountain cedar, post cedar, and other common names.



Figure 1. The Ashe juniper is a common tree growing in the Texas Hill Country.

The Concerns

Ashe juniper comes with three concerns.

First, the male tree produces pollen in the January-February period associated with 'cedar fever' for people with allergies.

Second, if Ashe juniper is allowed to grow in the Berry and Cowan Creek flood plain and other drainages, it accumulates flood debris creating dams (Figure 2). Major flood events occurred in 2007 and 2010. In 2007, a 100 year event reached the yards of several houses. In 2010, a 500 year event flood waters entered 32 houses on September 7-8. Large debris dams were found throughout Berry and Cowan Creeks. The dams slowed the water allowing it to reach higher levels.



Figure 2. An example of the trash accumulation by Ashe juniper in Berry Creek.

Third, the Ashe juniper is flammable due to its oil content (Figure 3). Embers do not easily ignite the tree. A grass fire usually provides the sustained heat source and flames required to ignite, often from the inside. Within the tree, there is dead material, mostly old needles at the



Figure 3. An area on Tranquility Trail before clearing (top). After clearing, the open area below the trees allows more flood water to flow through.

back of the green needles. Old bark can also ignite. The dead needles are usually the first to ignite. Normally the tree burns from the inside out giving it the appearance of “exploding.”

Wildfires have occurred in or near Sun City. In August 2008, an approximately 12 acre wildfire occurred in the Tranquility Trail area. A wildfire of approximately 1.5 acres occurred in March 2011 in the area of Cool Spring Way and McKinney Falls Lane. In February 2014, a wildfire of about 4 acres occurred just outside of Sun City behind Walgreens.

Is Ashe Juniper a Water Hog?

Ashe juniper has another characteristic that is interesting. It does not use more water for growth than other trees. However, based on Central Texas research, the tree and the needle bed beneath it, retain about 75% of a 1 inch rainfall in its foliage and litter bed which then evaporates into the atmosphere (Figure 4). About 5% is lost to streamflow. The remaining 20% goes into the soil for plant use and recharge.

Hardwood trees such as live oak, retain about 45% in its foliage and litter bed with about 5% lost to streamflow. About 50% goes to plants and recharge.

Native grasses have been found to have about 20% interception loss and 80% for plants and recharge.



Figure 4. A graphic representation of the fate of a 1 inch rainfall on 3 vegetation types.

Wildlife Value

The fruit is a blue “berry” (actually a cone) that appears in the fall on the female trees. The fruit is utilized by birds, deer, coyotes, and other wildlife. As a result, the seed pass through the animal’s digestive system which scarifies it. It is then deposited in the fecal material. The result is a wide spread distribution of the seed. It then readily invades the common areas creating hazards for the Sun City Texas residents.

The bark of the mature Ashe juniper is used for nesting material by the endangered golden-cheeked warbler.

Managing Ashe Juniper

In the older areas of Sun City Texas, the areas were ‘park’ cleared removing the small trees and shrubs and limbing the large trees to 6 feet above the ground. This opened the area to juniper invasion.

Management in Sun City Texas has 3 goals: reduce flooding potential, reduce wildfire potential, and develop a diverse wildlife habitat. Removal of Ashe juniper is an ongoing process.

Sun City Texas is in the golden-cheeked warbler management area and management follows the Texas Parks and Wildlife Department guidelines.

The tree is a non-sprouter, that is when cut below the lowest needle, it does not sprout new limbs and needles.

Removal of the juniper opens the area beneath the hardwood canopy, particularly along waterways allowing water to flow. It allows for the future development of a mid-level canopy of shrubs and small trees for additional wildlife habitat.

Once an area has been cleared, it must be maintained by removing new junipers about every 3-5 years.

Summary

Ashe juniper is a native invasive tree that needs to be managed to reduce the flooding and wildfire potential and develop a more diverse wildlife habitat. Once an area has been cleared, it must be maintained by removing new junipers. Ashe juniper is a very aggressive species!

Created cooperatively by the
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