



Mesquite and Salt Cedar

by Marilyn Loser

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We just returned from a wonderful trip to Hawaii and I have mesquite and salt cedar (*Tamarix*) on my mind. Until this trip, I didn't realize much of Hawaii is being overrun by tropical mesquite (*Prosopis pallida*). I was already familiar with mesquite (velvet *Prosopis velutina* and hone *Prosopis pubescens*) in the Sonoran desert south of Tucson from years ago when I spent some time there. Looking into the impact of these trees, neither of which grows in the San Luis Valley, led me to discussions of salt cedar that does grow here. All three have unusual and controversial characteristics.

First thoughts of Hawaii often bring to mind lush, dark green foliage. How does a tree that is known for growing in arid places fit into this? Turns out the leeward sides of the islands are often dry. Mesquite trees are native to the Sonoran desert, but those in Hawaii were introduced in 1828. According to The Private Naturalist (PN) website, "it was introduced to the Hawaiian Islands the head of the first catholic mission to Hawaii. He planted a tree on the grounds of the Catholic Mission on Fort Street in Honolulu." By 1840, the progeny of that single tree became the principal shade trees of Honolulu and were already spreading to the dry leeward plains on all of the neighbor islands, including Maui."

Called kiawe (pronounced "kee-AH-vay") in Hawaiian, it is considered a pest species by many as it invades, out-competes, and overwhelms native grass and woody plants. It also has nasty thorns. It readily reproduces in two ways: the production of easily-dispersed seeds and suckering. According to PN it requires less than four inches of annual rainfall and survives well in arid environments due to its extremely long taproot.

Here's where I raise an eyebrow. I know Arizona's mesquite trees have very deep roots. According to the Wikipedia website, "There are recorded instances of taproots of the mesquite tree reaching a depth of almost 200 feet down into the soil." But those in Hawaii often cling to life atop lava beds with very little top soil. I didn't notice 'tap roots' trailing along the top of the lava, but several sources say they form lateral roots in rocky areas. How they survive on lava beds remains a mystery to me.

It's easier to understand how they do well along sandy beaches where there tap roots have a chance of reaching deeper. According to some, they are the only tree in Hawaii that does well along sandy beaches providing shade for those enjoying the shore. So many people love them.

However, if you want to remove them it is very difficult. The University of Arizona (UA) website says, "The roots of the mesquite can regenerate if the tree is chopped off above. Ranchers feel that the mesquite removes water from the land that could be used for livestock and farming, making it unpopular with those individuals."

The UA website continues, “The benefits of the mesquite tree far outweigh any perceived shortcomings. The wood is very hard and it is used in making furniture and tool handles. The flowers from the mesquite species provide bees with nectar to produce honey.” I would add that many love to barbeque using mesquite wood.

The kiawe provides the same benefits. After Hawaii established its first thriving colony of honeybees in 1857, the honey industry began to grow on many of the Hawaiian Islands. Many folks love to cook over mesquite fires and, apparently, cattle seek shade under its canopy in spite of its nasty thorns.

Mesquite trees in areas of Africa and south Asia are valuable in efforts to control soil erosion; kiawe serves a similar purpose on islands such as Maui where beach erosion is a serious problem.

So what is the connection to salt cedar that dots the landscape of Alamosa in yards and in riparian areas and produces feathery leaves and pink blossoms? Wikipedia reports salt cedar was introduced to the United States as an ornamental shrub, a windbreak, and a shade tree in the early 19th century. Millions of trees were planted during the Great Depression to fight soil erosion.

When I was in Arizona, ranchers hated salt cedar as much as mesquite. Like mesquite, salt cedar is also efficient at withdrawing moisture from soil and killing nearby plants. It’s hard to kill. It is on Colorado’s Department of Agriculture species of plant to avoid. Along with Russian olive, the goal is to stop the spread of the indicated species.

Melissa Lamberton, with a degree in environmental science from the University of Arizona, has a different take on invasive species and their effect on the landscape. I will address her research in a future article.

“A healthy ecosystem, given the chance, will heal itself from damaging invasions.” Lamberton