

A Small Beetle Creating Big Changes

By Larry Hyslop



Tamarisk leaf beetle larvae on a tamarisk

It is not newsworthy to say the Western U.S. is seeing huge changes in its landscape, nor is it worth repeating that we do not know the outcomes of these changes. This column concerns a small beetle that is causing good changes along our Southwestern streams, at least we hope the changes are good.

At one time, our streams were lined with native willow and cottonwoods. But then in the late 1800s, the tamarisk tree, also called saltcedar, was imported to the U.S., where it soon began colonizing stream banks. It spread quickly, forcing out native vegetation. Thick stands stifled other plant types and made the soil more saline. Tamarisk reduce groundwater, stream flow and lower the animal biodiversity.

Today, two million acres of Southwest stream sides are covered with tamarisk, sometimes at 3,000 plants per acre. Up until now, it all seemed so simple. Everyone hated tamarisk and huge amounts of money were spent trying to remove it. Burning only encouraged it so work crews cut down all shoots, removed all limbs and trunks, and sprayed stumps with an herbicide.

But then the tamarisk leaf beetle appeared. After thorough testing to make sure it would not make use of any other plant, beetles were released in specific spots in 2001 and 2004. They have proven highly effective, and cheap, in killing tamarisk.

Releases in southern Utah resulted in beetles multiplying and moving down the Virgin River, into Arizona to the Colorado. Dead tamarisks soon dotted stream banks upstream into the Grand Canyon and downstream along Lake Mead. The larvae of these beetles eat tamarisk leaves, denuding long stretches of trees in a few days, before the larvae mature and move on. This does not kill the trees, however, and during the next spring, new leaves will appear. But the beetles usually return and in four to five years, the tamarisk trees are dead.

Miles of dead tamarisk is a good sight, sort of. In 2009, the USFWS placed a moratorium on beetle releases, due to the endangered willow flycatcher nesting in tamarisk. Native willow is better flycatcher habitat but the fear is willows will not return fast enough to keep the flycatcher from going extinct. The ban on releases is only in effect where the flycatcher lives and only bans cross-state beetle travel. States

can still release the beetles within their boundaries. Besides, the beetles do not understand state borders.

People are inundating national park rangers with questions concerning all those dead trees along park streams. The parks understand they need to remove the dead tamarisks and plant native willows and cottonwoods but do not have the staff or money for this huge project. Also, people who do not remember stream banks shaded by willows and cottonwoods, complain about no shade beneath dead tamarisk trees. In some areas, willows are colonizing tamarisk-free areas but any open ground these days usually means more weeds. Besides the usual noxious weeds, Russian olive trees are spreading along stream sides.

Another concern is the athel tree, a decorative tree in people's yards and a close relative to the tamarisk. In areas where nearby streams held large numbers of beetles, peoples' athel trees appeared sickly although they improved after the beetles moved on. The hope is as tamarisk groves are reduced, the beetle population will reduce to stay in balance and not learn to move on to other hosts.

Here in Nevada, the beetles have shown up in the Las Vegas Valley. Beetles released along the Humboldt River near Lovelock are spreading along the river.

Tamarisk is being seriously reduced along Southwest streams, which is a good thing. But what will replace the tamarisk and how quickly? No one knows yet.

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