The Trouble With Tamarisk

Tamarisk, also known as salt cedar trees, grow rampantly in the Middle East, Asia, and parts of Africa, and are accustomed to harsh and arid landscapes. In the early 1800's eight species of tamarisk were sold to plant nurseries on the East Coast of the United States as ornamental shrubs. By the early 1900s, farmers in Arizona, southern California, and other western states had begun planting Tamarisk to act as windbreaks, stabilize the soil, and provide shade to reduce evaporation. Eventually, the aggressive plant accounted for 90 percent of the riparian vegetation along the Lower Colorado River.

Some scientists and environmentalists began to point out that dense stands of tamarisk provide poor habitat for wildlife, tend to blaze up in devastating fires, the tree's extensive root system can channelize streams increasing the danger of floods and salinize the soil around them. The trees draw up salt from the soil through its roots and store it in its leaves, in the fall the leaves carpet the ground adding salinity to the soil. The Nature Conservancy's website said that salt oozing from its leaves makes it difficult for other plants to grow nearby.

Ultimately, environmentalists argued that the species didn't belong in the Southwest and pushed for action. In October 2006, former President George W. Bush declared war on tamarisk and signed a tamarisk control law which authorized spending \$15 million annually to help eradicate tamarisk and support riparian restoration efforts. Several federal and state agencies, non-profit organizations and private entities joined together to secure that federal funding in order to restore the Colorado River Corridor.

Here in Colorado, The Tamarisk Coalition has led the way. An environmental engineer, Tim Carlson, dedicated his career to restoring native ecosystems along Colorado's streams and helped start the Coalition. The Coalition began organizing teams of volunteers to chainsaw, bulldoze, or chemically spray salt cedar trees. Soon they were hosting conferences, writing policy documents, and inventorying the health of watersheds across the Southwest. Carlson's commitment to understanding and interpreting the latest scientific data led Federal agencies to look to the Coalition for technical assistance.

Carlson stated that the Tamarisk Coalition's goal is riparian health, not killing tamarisk.

Although the goal is not eradicating tamarisk completely, killing dense tamarisk stands are a major part of the Coalition's work.

"We are doing it to improve the ecology and wildlife habitat, but there are a lot of other benefits and reasons for the work that we are doing," said Tamarisk Coalition Restoration Coordinator Daniel Oppenheimer in an interview three weeks ago. "In terms of public safety, we are reducing fuel loads. We are reducing fuel loads around infrastructures, including over a dozen homes, water treatment plants, and research facilities. And the other public safety aspect is removing that tamarisk along highway 141 we are improving the sight line or sight corridor as well."

Some eradication efforts in the past have resulted in more negative results where tracts of bare soil led way for other invasive species such as Russian olive and buffelgrass to take its place. Carlson insisted that every



Tamarisk Coalition Restoration Coordinator Daniel Oppenheimer said that Redvale based BackCountry Vegetation Management, LLC, has been used to mulch some of the largest, densest stands of tamarisk on public and private lands along the Dolores River. BackCountry's President Gary Rushing is seen by his mulching head that is mounted on an 312 CAT excavator.

"What we do is on the big trees, we raise it up, take the tops out and start grinding the branches and trunks right down to the ground. We don't leave a stump," said Rushing describing the process. "It can throw the mulch up to 300 feet, so you don't have a pile at the base of where the tree was."

He said that chippers chop everything in the same dimensions so that when it gets packed down nothing grows through. His mulcher shreds everything in various sizes and scatters it out.

"By breaking it down like that, it acts very similar to mulch that you put in your garden and allows moisture to go through it and allows the grass to come back through," he said.

Rushing's mulcher is specially designed where it has a separate motor running the mulching head, so he can move, rotate and swing the excavator and the mulching head's speed is not effected.

"If you have the mulcher tied into the excavator hydraulics and you move the escalator, it slows the head down. With mine they are independent, so I can be tracking and swinging and cutting all at the same time," he said.

BackCountry will be used by the Coalition this Fall for 7-8 weeks of work, he said. "It's all big, heavy thick mature trees."

project the Coalition undertakes should have a carefully designed revegetation plan.

Oppenheimer said that sometimes the native vegetation will begin to sprout after laying



dormant under the surface for years, automatically vegetating the area. At other times, native grasses, shrubs and trees are planted and monitored.

"No one is trying to eradicate tamarisk, it is always going to be in the system on some level," said Oppenheimer. "We are trying to get rid of the vast majority of it. The goal is to reestablish those native grasses, shrubs and trees so they dominate the system so you get the benefits in regards to wildlife, livestock forage, fuel load reduction and aesthetics."

"As a partnership we are trying to figure out, given our limited resources, where does it make sense in what situations should you be treating it," he added. "When you are working on 175 miles of river you can't just treat everything. You have to prioritize based on feasibility, site opportunities and constraints. Can you access it? Is the site really degraded? Does it have a good chance of recovery? You have these different criteria to think about where you are going to get your big bang for the buck."

The partnership includes participating landowners as well.

"Each private land is its own story in terms of what the private landowner is looking for - their values and their vision for their property - and we look for those good fits," said Oppenheimer. "Assuming we can find those good fits for restoration, then there are a number of ways that we can support that private landowner whether it's technical assistance, financial support, helping plan work and find information. Oftentimes landowners want to know: What's this growing on my property here? Should I use an herbicide? What kind should I use? So we support them in many ways."

As stated in the previous article on the Coalition in the June 11th edition, they are driven by a fourfold goal: Ecological, Social, Economic

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and Management.

"There are also economic reasons we are working with over 20 private landowners on the Dolores and oftentimes we are getting rid of things like Russian Knapweed to improve forage for their livestock. That's a big economic reason. The other is these riverside campsites that just get taken over by tamarisks and various weeds, we go into these assets that have kind of lost their value and enhance them so that they are accessible and inviting to people again.

"The other is when we can we hire local contractors to use excavators, spray secondary weeds, and use local help."

He used an example of a recent project in Gateway where they hired local people on an interpretive trail there. The Coalition used a local artist to make the interpretive signs and others for other projects.

"We are always looking where there's a good fit, where we can hire

local contractors to do a variety of projects," he said.

In addition to private contractors, the Coalition has found another ally in their work on the Dolores River Restoration project, the Tamarisk beetle, pictured right. Evidence of the critters' effectiveness can be seen all along the Lower Dolores, among

other areas, where stands of dead tamarisk can be



Cont. on Pg. 7

ower Dolores River South of Gateway Gets Focus of Floaters

This woman from Durango on a paddle board near the Weimer Ranch just below Biscuit Rock on the Dolores River was one among several floaters that took advantage of the high flows of the San Miguel and Dolores rivers recently, a more common sight as Dolores River improvements between Naturita and Gateway are taking place.



who participated in the tour.

Munson said the plan is to publish a map of the campsites on the DRBA website. Raising awareness of a little known stretch of the Dolores is part of the group's mission.

"We want to bring attention to it and get more people to appreciation whitewater opportunity," Munson said. "When people use the river, they understand it's a value worth protecting, and gives us an audience in our effort to optimize flows."

No permit is required on the Lower Dolores River. As of Wednesday, the Dolores flows at Gateway were 1,560 cubic-feet per second. Article by Jim Mimiaga, Journal staff writer, published in The Dolores Star June 18, 2015



There are several pictograms for viewing for those rafting the Dolores River. The one shown above is just before Roc Creek at mile marker 89 on Highway 141 on the north side of the road.

Tamarisk Trouble

Cont. from Pg. 6 seen allowing native vegetation a chance to make a comeback.

The beetles are a natural control agent from areas in the world where tamarisk originated. The beetles and larva consume the foliage of the tamarisk plant, thus reducing chlorophyll production and photosynthesis, which reduces the food (starches and sugars) that is made for the plant. Each time the plant is defoliated, it results in a decrease or dying off of some of the root mass. If it happens repeatedly and the plant isn't allowed to grow new foliage and retain it for an extended length of time, it is possible to kill the plant. Estimates on die off of the tamarisk due to defoliation via the beetle suggest 3 to 5 years, but this could be longer or shorter depending on the size of the plant and its root mass, how often it's defoliated and how limited the time is that the plant retains foliage.

A lot of information for this article was gleened from "The Thirsty Tree, Confronting Invasive Salt Cedar in the American Southwest," by Melissa L. Lamberton at http://www.terrain.org/articles/27/lamberton.htm

This picture, taken by Vicki Phelps, show two Southwest Conservation Corps interns--Theresa Ruswick

"In terms of our work with Vicki, she is one of the 6 private landowners we worked with in the cottonwood planting described above," said Tamarisk Coalition Restoration Coordinator Daniel Oppenheimer.

"We have worked with more than 20 volunteering private landowners to date along the Dolores River, from Slickrock to the confluence with the Colorado River in Utah to achieve restoration that meets the goals of the participating landowner and the partnership," he added. "The partnership has been able to support these volunteering private landowners through a variety of ways: technical assistance, project planning,

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on the left, and Kelly O'Neill--who worked with another contractor, Stan Young of I&E Young, Inc. (whose machine is pictured) to test soil and water conditions at more than 20 sites to identify suitable places to plant cottonwood poles. Working with BLM and six private landowners along the Dolores River, the crew planted 116 cottonwood poles on public and private lands.

monitoring, and funding."

To learn more about how the DRRP might be able to support work on your private lands, contact Daniel Photos courtesy of the Tamarisk Coalition



Two local river groups have teamed up with the BLM to improve campsites on the Lower Dolores River.

More and more floaters are discovering the unusual views along the Lower Dolores from the San Miguel confluence to Gateway. The section is not well known, but has sufficient water flows every year for four to six weeks.

Despite no whitewater release below McPhee dam, there are boatable flows on the Lower Dolores below the San Miguel river confluence, its main tributary. For 33 miles - from the confluence to Gateway - the Lower Dolores flows through BLM lands, featuring red-rock canyons, plenty of flat water and occasional intermediate rapids.

But lack of use has left many campsites overgrown and hard to spot, said Josh Munson, a member of the Dolores River Boating Advocates (DRBA).

"People don't know about it, thinking if there is no whitewater release from the dam then there is no boating," he said. "But for four to six weeks every year, the San Miguel flows make the Dolores runnable for a nice three-day trip."

During a raft tour of the stretch last week, DRBA partnered with BLM river rangers and the Tamarisk Coalition to catalogue campsites and improve access.

There are 10 marked campsites being maintained by the BLM. Six other sites are on a popular river map, but were abandoned because of thick vegetation.

"We did some clearing of brush, and the BLM installed campsite signs so they are visible from the river," said Daniel Oppenheimer, restoration orga-

nizer for the Tamarisk Coalition.

He said the coalition is moving away from a strategy of aggressive tamarisk control to one of long-term monitoring and maintenance of local rivers.

"The stretch opened my eyes as far as the Lower Dolores goes," Oppenheimer said. "We're enhancing recreation opportunities along with DRBA, who are very passionate about the river. They're willing to roll up their sleeves and get dirty, plus they have the boats to get there."

The BLM inventory will be used in a public process to possibly designate more campsites in the area.

"The practical side is to anticipate river traffic and have adequate campsites that are spaced out with clean entrances," said Wade Hanson, a DRBA member