



Inside Ag

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Bug of the Month Diorhabda Elongata Dolores River Tamarisk Defoliated!



The easy winner for bug-of-the-month is the tamarisk leaf beetle, *Diorhabda elongata*. This insect has now chewed it's way along at least 50 tamarisk-filled miles of the Dolores River and will undoubtedly finish off another 50 miles before the year is done!

Tamarisk is an invader of river corridors, lakeshores, and other wetlands throughout the west. It crowds out native plants, is poor wildlife habitat, obstructs river corridors for recreational use and uses large amounts of precious water, vital to agriculture. In Colorado most watersheds have tamarisk and the Dolores River is no exception.

The Dolores River originates in southwestern Colorado high in the San Juan Mountains. It flows north, along the western boundary of the state, through picturesque and remote red rock canyons. After flowing through the town of Gateway it turns westward, crosses into Utah and joins the Colorado River upstream from Moab. The remote nature of the Dolores River makes tamarisk control difficult and expensive; a perfect setting for the use of biological control.

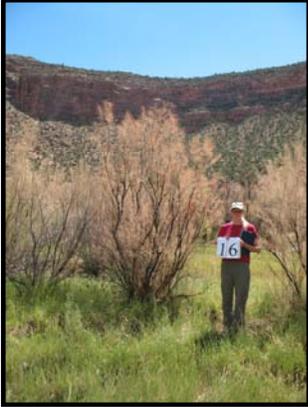
The Colorado Department of Agriculture is working with the Bureau of Land Management (BLM) in a major tamarisk biological control program on the Dolores River. We have several sites on BLM land where we have released beetles and are monitoring their progress. At the Gateway site we noted complete defoliation of our marked monitoring trees this year (see photos). We have also mapped the presence of beetles along the Dolores River and continue to map tamarisk defoliation throughout the season.



Dolores river with defoliated tamarisk and green willow and blue sage

Tamarisk is a tough little tree. It can survive fires, floods and herbicides only to resprout as strong as ever. Beetles don't kill the plants either, at least not right away. It takes multiple defoliations for the insects to kill a plant but when the beetles are well established they go back and defoliate as long as the plant keeps sending out greenery. What seems like tireless work to us is just having lunch for them!

Before the plants are killed, the benefits of biocontrol can still be measured. At a test site in Nevada it was shown that defoliated plants use only about 5% of the amount of water used by green plants. That translates to more than a million gallons of water saved every day that the trees along the Dolores are brown instead of green. A second benefit of defoliation is that the tamarisk canopy opens up, allowing sunlight to better reach native plants beneath.



A final and very important benefit of large beetle populations on the Dolores is that CDA field workers can easily travel from the Palisade Insectary to the Dolores and collect adult beetles for distribution around Colorado. This year we have released beetles on the Arkansas, the South Platte, the Colorado, the Green, the White, the Mancos and the Gunnison Rivers. Total numbers released exceed 200,000 adults. With vigilance on our part, and some luck, these beetles will start the long difficult task of reducing tamarisk on Colorado's waterways.

Tree 16 at Gateway site is totally defoliated by July 22.jpg