

Putting Water Back in the River by Taking Out Tamarisk

By Scott Cameron

A group of related species native to Eurasia, the shrub saltcedar/tamarisk first entered the United States in the 1800s as a windbreak and ornamental plant. This invasive plant, classified as a noxious weed by the U.S. Department of Agriculture, has now largely displaced native cottonwoods and willows in many western riparian areas, significantly altering western riparian ecosystems in the process. From a water user's perspective, the deep taproot of saltcedar means it can pull water out of the ground in places and quantities that are not typical of native plants. This means less water available for agriculture, municipal and industrial water users, and fish and wildlife. Saltcedar's range in North America expanded rapidly in the 20th century, covering more than one million acres in the riparian zone by the 1960s, and it now can be found throughout the West, perhaps occupying about 1.5 million acres.

While the water savings from eliminating stands of saltcedar varies substantially from one geographic location to another, numerous studies demonstrate that controlling tamarisk results in water savings. Techniques for controlling this invasive plant vary from physical removal, application of herbicides, and biocontrol by beetles that feast on tamarisk leaves. The State of Colorado estimates that its campaign to fight tamarisk with the tamarisk leaf beetle has saved a conservatively estimated 7,000 acre-feet of water annually in the Arkansas River Basin and the Colorado River corridor, representing an economic value in the millions of dollars.

Federal and state land management agencies, Indian tribes, and private landowners share a common cause in trying to reduce the economic and environmental risks posed by tamarisk across the West. State and federal legislators are paying attention. In summer 2013, a bipartisan group of lawmakers founded the Congressional Invasive Species Caucus to raise awareness on this issue in



the United States Congress. Representative Paul Gosar (R-AZ) has shown a special interest in tamarisk control. He recently reported, "In May of this year I hosted an Invasive Species Roundtable in Phoenix to bring together local stakeholders and identify best practices for successfully removing invasive saltcedar. In my district, invasive saltcedar comprises nearly 60 percent of the vegetation within a 17-mile stretch along the Gila River. Saltcedar can absorb up to 200 gallons per day per plant. These are precious water resources in the already-arid West."

As the population in the West increases, and drought conditions in many parts of the West become more severe and more prolonged, westerners need to find ways to make the most of current and potential water resources. Communities across the West are pursuing a variety of strategies to address these challenges. Water marketing, urban and agricultural water conservation measures, groundwater banking, and desalination plants are all being pursued to varying degrees. Taking a systematic approach to reclaiming riparian areas now occupied by tamarisk, and thereby freeing up hundreds of thousands of acre-feet of water for beneficial uses and instream flows, certainly needs to be part of the solution. Combatting tamarisk and other invasive plants in western riparian zones is not only less expensive than most structural alternatives for producing more water supplies, it also serves the dual purpose of restoring native ecosystems.

While it certainly makes sense to focus efforts on saltcedar, saltcedar is not the only invasive species that is featured in the nightmares of western water resource managers. Invasive zebra mussels and the closely related quagga mussels are already established in the lower



Reduce Risks from Invasive Species CoalitionSM

Colorado River system. Among other problems they pose, they have the potential to clog up irrigation works and hydroelectric facilities. As a result, many western state governments are working hard to keep these mussels out of their waterbodies, having seen the multibillion-dollar economic problems these mollusks are causing for midwestern water utilities, industrial facilities, and recreationists. For instance, Arizona now requires boaters to clean, drain, and

dry boats that have been on infected waters. Again, lawmakers are taking notice. "I am a strong supporter of the 'Don't Move a Mussel' campaign promoted by Arizona Game and Fish," observed Congressman Gosar. Boat decontamination or inspection programs like Arizona's are blossoming across the West to reduce the risks of recreational boaters accidentally transporting the invasive mussels from already-infested waterbodies.

While certainly serious problems, invasive species like tamarisk and zebra mussels can be effectively controlled by pursuing a combination of new innovative technological solutions and old-fashioned cooperative action by the public and private sectors.

Scott Cameron is president of the Reduce Risks from Invasive Species Coalition, a nonprofit organization promoting nonregulatory solutions to invasive species problems. Scott is based in Washington, DC, and can be reached at scott.cameron@rrisc.org.

