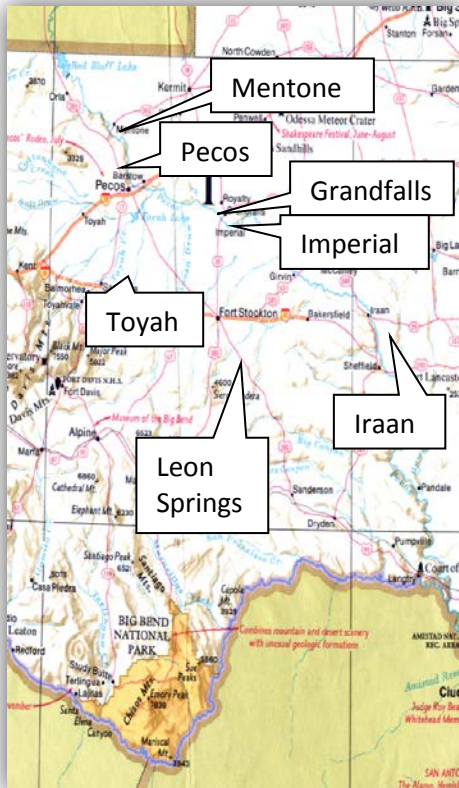


Texas A&M AgriLife Saltcedar Biological Control Implementation Program:
The Pecos River Watershed 2012

Saltcedar leaf beetles, *Diorhabda elongata*, were first released on the Pecos River in 2006 at three locations and established at one site in Reeves County. The population near Pecos, TX quickly increased and by 2010 had defoliated all of the saltcedar along 11 miles of the Pecos River. A second population of Crete beetles was established near Imperial, TX in 2010. However, following the extreme cold experienced in early February, 2011, the Crete populations could not be detected in 2011 and were presumed extinct.

Based on climate-matching studies conducted by USDA-ARS, *Diorhabda sublineata*, the Tunisian beetle was considered better adapted to the Pecos River watershed than the Crete beetle, *D.*

elongata. The Tunisian beetles were initially released in 2010 at three locations (Iraan, Leon Springs and Imperial). Although Crete beetles apparently did not survive the winter of 2011 Tunisian beetle adults and larvae were detected in the spring of 2011. Tunisian beetle population densities increased sufficiently enough at the Iraan location that beetles could be collected and redistributed to other sites.



In 2011, a total of 84,000 adult Tunisian beetles were collected for redistribution from the Iraan and Rio Grande sites. Approximately 27,000 beetles were collected from Iraan and 57,000 from the Rio Grande site. About 13,000 were released at Lake O.H. Ivie and Lake Spence on the Colorado River. The remaining beetles were released the seven sites shown in Figure 1.

In 2012 the Tunisian beetles continued to expand their range on the Pecos River as well as Toyah Creek, Balmorhea Reservoir and Leon Springs. By 29 Oct all visible saltcedar at all the established sites were defoliated in addition to saltcedar at N31 40' 06.94"

W103 37' 35.07" near Mentone, TX. Adult beetles and larvae were also found on all examined saltcedar along the Pecos River at N31 52' 21.44" W103 49' 54.02" near Orla, TX but no defoliation was observed, and adult and larva Tunisian beetles were found at Red Bluff Reservoir N31 53' 58.91" W103 54' 45.06" with 80% defoliation of visible saltcedar. Most of the Tunisian beetles collected for redistribution came from Balmorhea Reservoir. A few

thousand were also collected from Toyah creek near Balmorhea. A total of 116,000 beetles were collected and distributed at new and existing beetle locations along the Pecos River in 2012. The following photographs illustrate the extent of defoliation caused by the Tunisian beetles at various locations on the Pecos River in 2012.





Pecos River at Mentone bridge Oct 29, 2012 upstream.



Pecos River at Mentone bridge Oct 29, 2012 downstream.



Pecos River at Orla bridge Oct 29, 2012 upstream.



Pecos River at Orla bridge Oct 29, 2012 downstream.



Red Bluff Reservoir Oct 29, 2012