

NOT WANTED IN ARIZONA

TAMARISK LEAF BEETLES

Tamarisk leaf beetles (*Diorhabda sp.*) are moving into Arizona from southern Utah via the Virgin River to Lake Mead and the mainstem Colorado River to Lake Powell. Environmental compliance for beetle releases in Colorado, Nevada, Utah, and other Western states did not allow for any releases into the State of Arizona or within 200 miles of occupied southwestern willow flycatcher nesting habitat containing tamarisk. Unfortunately, releases at Moab and St. George, Utah, of the Fukang or Chilik strains of the beetle have allowed the beetles to enter the State of Arizona along the Virgin River. Entry via the mainstem Colorado River is anticipated.

Background: The tamarisk leaf beetle was identified in the 1990's as a potential bio-control agent for invasive tamarisk (salt cedar). Through the 1990's, the Animal and Plant Health Inspection Service (APHIS) and the Agricultural Research Station (ARS), both agencies of the Department of Agriculture, worked with local partners and the U.S. Fish and Wildlife Service (USFWS) to provide opportunities to research the beetle and its effectiveness against tamarisk. In 1999, after both National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) compliance was completed, the beetles were released into cages in several locations across the Rocky Mountains and Great Plains with the following restrictions:

1. Only the Fukang (China) and Chilik (Kazakhstan) strains would be released. These strains were believed to only persist in areas above 38° north latitude (approximately at the upper end of Lake Powell) due to day-length requirements and would not be successful below that latitude.
2. No releases were to be made within 200 miles of tamarisk areas that supported endangered southwestern willow flycatcher nesting.
3. The ESA consultation covered the placement of the beetles in field cages, and the later removal of the cages to free the insects to the surrounding areas. Coverage for active movement of the beetles from the experimental release areas was not included.

In 2004, the Delta, Utah, experimental release site was opened for collection of beetles for use by local agencies in Utah to introduce the beetles to non-Federal lands. Grand County, Utah, stocked beetles in at least two sites near Moab in 2004 and another three in 2005. Defoliation on a larger scale was observed in 2005. Since then, the beetles have moved down the Colorado River almost to the upper end of Lake Powell. In 2006, the City of St. George, Utah, released beetles along the Virgin River at 37° north latitude. By 2008, defoliation along the river and at a southwestern willow flycatcher breeding site was documented. The beetles have spread downstream on the Virgin River to at least Littlefield, Arizona, and are expected to reach Lake Mead in 2009 or 2010. Beetles from Moab down the Colorado River to Lake Powell have slowed their advance; however, entry into Arizona via Lake Powell/Colorado River is still likely to occur.

The Problem: Beetle strains not expected to persist below 38° north are thriving at release sites at 37° north (approximately the Arizona-Utah border) and are moving south toward 36° north (approximately the southern edge of Lake Mead). If they successfully continue southward along the lower Colorado River, they may reach the Colorado River Delta and the rivers of Central Arizona (Gila, Salt, San Pedro, and Verde) and affect southwestern willow flycatchers and other migratory birds nesting in riparian habitats containing tamarisk.