

# Trouble with thirsty tamarisk

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## a desert place

Natural beauty  
through preservation

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Along the lower Colorado, Salt and Gila Rivers, and in many other parts of the Southwest a dangerous intruder is infesting the rivers, clogging the canals, and crowding out the native cottonwoods and willows.

The name of this menacing alien is *Tamarix Gallica*, better known as tamarisk or salt cedar. The tamarisk was brought to this country from the Mediterranean region early in the 19th century as an erosion control plant. It served very well at that job, but being a vigorous and ambitious plant it soon escaped its cultivated bounds and spread across much of the nation, especially the Southwest.

It was not the desert environment of the Southwest as such which tamarisk found attractive. Apart from its small leaves the plant had no specially adapted desert survival features. It lacked the huge water storage capacity of the cacti; the ocotillo's

ability to leaf out and transpire only after a rain or the creosote bush's three distinct types of leaves, each adapted to a different environmental condition.

Instead of trying to compete with drought-resistant plants such as the foregoing, tamarisk headed straight for water. The tree spread to riparian areas, along side streams and rivers, lakes and canals where it demonstrated phenomenal growth. The native riparian plants simply could not compete. So in region after region, the tamarisk has all but replaced the once vast cottonwood and willow community.

Perhaps the worst danger from the tamarisk is its prodigality with water in a locale where that vital commodity is in extremely short supply. The tamarisk is a phreatophyte, a term meaning trees and bushes whose roots reach down to groundwater. Other phreatophytes include mesquite, willow, cottonwood, arrowweed and seepwillow.

All are heavy users of water, but the heaviest user of them all is the tamarisk. Naturalist, Ruth Kirk, estimated that on the Gila River floodplain, tamarisk trees use in one month the equivalent to a year's rainfall. That equals as much as 15 inches every four weeks throughout the summer.

That enormous quantity of water comes from rains, streams, or groundwater. Sucked up by the twigs and branches and evaporated into the atmosphere by the leaves, there is a loss of good water which the United States Geological Survey estimates at 31 billion cubic meters per year.

Of course, not all the billions of gallons of water squandered by the tamarisk would otherwise be available for human use. But enough would be available to alleviate Phoenix' water problem for many years, it has been suggested.

Various organs of government are looking for ways to conserve water used by the tamarisk. The most obvious way is the physical removal of the plants. But removing the tamarisk is not as simple as it sounds. Not only is it expensive, but the appearance of the treated area leaves much to be desired. It has been termed 'aesthetically repulsive.' Furthermore, tamarisk has an annoying way of regrowing after removal.

A second method of coping with tamarisk is spraying it with a waxy substance which clogs the pores of the leaves, greatly reducing transpiration. Tests have shown that spraying cuts transpiration by 25 percent to 75 percent for various periods of time. Wildlife control agencies are turning more and more to spraying rather than eradication.

However, the tamarisk is the only green thing in some parts of the desert. Its branches give abundant shade to birds and animals where no other is available. Doves by the thousands find sanctuary among its leaves. And more than one camper seeking shelter beneath tamarisk branches has been lulled to sleep by the soothing of air currents in its crown, arousing memories of mountain winds blowing through evergreen forests.

The tamarisk is now a permanent part of the desert scene, and a lovely one. Cave Creekers who enjoy the presence of a mighty and beautiful grove of tamarisk almost in the very heart of town, would strongly oppose eradication. The object should be to manage the tamarisk, not to destroy it; to reduce its wasteful water use to the greatest possible extent. And then to relax and enjoy its unique beauties.