



Tamarisk Coalition Newsletter

June 2007

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Next Issue

Our August newsletter will focus on funding opportunities.

2006 Tamarisk Research Conference

If you were unable to attend please visit the following website to download presentations and abstracts:

http://www.weedcenter.org/tamarisk_conf_06/conference_home.html

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Wishing you a wonderful summer!

We are busy as usual, working hard to provide education, technical assistance, and coordinating support to you and your organization for the restoration of riparian lands.

This newsletter focuses on the importance of revegetation to ensure successful restoration efforts. Following is an article by Anna A. Sher, Ph.D. Happy reading!

2007 Tamarisk Symposium

Mark your calendars! The Tamarisk Coalition and CSU Cooperative Extension are hosting the 2007 Tamarisk Symposium at the Two Rivers Convention Center **in Grand Junction, Colorado, October 24-25th**. We are also planning a fieldtrip to a beetle release site on the 26th. **Revegetation is the focus of this year's Symposium**. This conference, held every two years, is considered the preeminent conference on the tamarisk problem and will bring together nearly 300 people from throughout the West that include key researchers, on-the-ground program managers, environmental interests, and federal/Tribal/state/local interests to better understand the nature of the tamarisk problem, and develop and implement long-term solutions. The Symposium's focus is on implementation and is a sister conference to the 2006 Tamarisk Research Conference. For more information on these past conferences see our website.

We are in the midst of the planning process and things are shaping up nicely. We will continue to update you on the Symposium details and a separate newsletter will be sent out next month focusing on the Symposium with the agenda, reservation links, etc. We hope you can make it!

The Importance of Revegetation for Tamarisk Restoration Success

By: Anna A. Sher, Ph.D., Assistant Professor of Conservation Biology at the University of Denver, Director of Research, Herbaria & Records at the Denver Botanic Gardens, and Tamarisk Coalition Board President

Restoration of riparian ecosystems can be a difficult and costly business. While tamarisk control often appears to be our focus, we must not lose sight of the real goal: ecosystem restoration, of which removal of tamarisk is only one of many components. Establishment of a clear restoration objective, such as wildlife habitat, pasture, or recreation, will lead to a formulation of a target plant community, whether that be similar or different from the "historic" plant community prior to tamarisk invasion.

Meet the Staff

Tim working hard



John points out the San Juan watershed



Clark on a tamarisk scouting mission



Christy clicking away



Revegetation after tamarisk removal is critical for several reasons. First and often foremost, active revegetation is frequently necessary to achieve the overall management goal (e.g. habitat creation, etc.). Other reasons include stream bank stabilization, aesthetics, and wildfire reduction. However, the most important reason may be to reduce secondary invasion. Both observational and experimental research show that re-invasion by tamarisk seedlings and other weedy species is less likely when desirable (often this means native) vegetation is promoted. Despite the ability of tamarisk to exclude other plants when it is a well-established tree, tamarisk is actually a poor competitor during colonization. As a seedling, it is shade and drought intolerant and may not take up nutrients as quickly or efficiently as a cottonwood. This means that where native species are doing well, tamarisk will likely be excluded, or at least pose less of an invasion risk. A multi-state survey of tamarisk restoration sites has recently found that noxious weed cover, and tamarisk cover in particular, was lowest under conditions that favored native species. Thus, despite the associated short-term costs, one may argue that the long-term benefit makes revegetation a sound investment.

Where there is adequate water, remnant desirable plants, and a favorable hydrological regime, removal of tamarisk may be enough to allow the system to continue repairing itself to a favorable state - what we call “partial restoration.” There are several examples of successful passive restoration projects after tamarisk removal. A recent one would be the restoration projects along the San Miguel in Colorado, conducted by The Nature Conservancy; tamarisk was not a monoculture and thus could be removed to leave a native riparian community. These remaining plants can be the foundation for a complete restoration¹. Another classic example would be the good work done along the Middle Rio Grande in New Mexico by the Fish and Wildlife Service; at the Bosque del Apache National Wildlife Refuge, removal of thick stands of monoculture tamarisk was ‘naturally’ replaced by native cottonwood and willow, due to a proper flooding cycle and ample seed sources from a few healthy trees in the area². A landowner in Southeastern Colorado has also reported wonderful regrowth of desirable vegetative cover shortly after tamarisk removal, due to perennial springs and perhaps a healthy seedbank³. In these cases, revegetation of sites invaded by tamarisk was passive and required no introduction of new plant material, however success of this type may be the exception, rather than the rule⁴.



Active revegetation, or the introduction of new plant material can be difficult,

1 Mallory Demitt, The Nature Conservancy, Personal communication.

2 Sher, A.A., D.L. Marshall, and J. Taylor. 2002. “Spatial partitioning within southwestern floodplains: patterns of establishment of native *Populus* and *Salix* in the presence of invasive, non-native *Tamarix*.” *Ecological Applications* 12:760-772.

3 Rick Enstrom, Personal communication.

4 Shafroth, P. B., V. B. Beauchamp, M. K. Briggs, K. Lair, M. L. Scott, and A. A. Sher. In press. “Planning riparian restoration in the context of *Tamarix* control in western North America.” *Restoration Ecology*.

5 Bay, R.F. and A.A. Sher. In Review. “Success of active revegetation after *Tamarix* spp. removal in riparian ecosystems of the southwestern USA: a quantitative assessment of past restoration projects.” *Restoration Ecology*.

Staff Cont'd...

Elyse all smiles at the office



Ryan is our latest addition to the Tamarisk Coalition!



however a recent survey of sites showed a surprising degree of success, especially when there was careful site selection and continued monitoring⁵. Other considerations such as which species are used for revegetation, and whether seeding, transplants, or pole plantings are used will depend on water availability, site access, and financial resources, among other considerations. Pole plantings require reachable groundwater, whereas the success of seeding will often depend on precipitation. Seedbed preparation has been shown to increase planting success, but is not always possible due to site accessibility.

All of these issues and others are addressed in an upcoming special issue of *Restoration Ecology* to be published sometime later this year. Other resources include a tamarisk management *Best Practices Handbook* funded by the EPA due this year, and a revegetation handbook that focuses on the challenges of revegetation in the Upper Colorado River Basin, currently in the works with funding from the Central Utah Completion Act Office. The aim of these will be to document stories of success and identify key features of these in order to assist future projects. The release of these and any other works will be announced in this newsletter, as well as on the Tamarisk Coalition's website (www.tamariskcoalition.org).

If you have your own revegetation success story after tamarisk removal, we would be interested in hearing from you. The more information you could provide regarding initial conditions, water availability, and measures of plant community response, the more valuable your story will be to our effort, but we welcome even anecdotal data. Please email your stories to Elyse at ecadogan@tamariskcoalition.org. Restoring the ecosystems of these invaded watersheds is a challenge requiring the cooperative effort of a wide range of states, agencies, and stakeholder groups. Killing tamarisk is not the greatest challenge. Ecosystem restoration, often through active revegetation, is. Sound practices will save us all critical resources, especially in the long run.

Additional Revegetation Resources...

Local revegetation specialists, Cooperative Extension, NRCS, and comprehensive revegetation and restoration texts should be used to develop a course of action for individual projects. There are many excellent sources available to inform revegetation actions with some of them reviewed below:

➤ **Society for Ecological Restoration**

Summary: This site provides a reading list for ecological restoration practices, links for many example projects, resources, and support.

http://www.ser.org/reading_resources.asp

➤ **Riparian Restoration in the Southwest – Species Selection, Propagation, Planting Methods, and Case Studies**

Summary: This document identifies the natural processes and managed activities that cause the degradation of riparian lands and provides general guidelines to restore natural systems. It details methods of selecting appropriate species for revegetation, producing riparian plants, planting techniques, and provides case studies of past projects.

<http://www.nm.nrcs.usda.gov/programs/pmc/symposium/nmpmcsy03852.pdf>

Meet the Mascots

Chewbacca



Ghoti



- **Stream Corridor Restoration: Principles, Processes, and Practices**
Summary: This large and detailed document has a three-tiered design. The first section provides background information describing the basics of stream corridor systems. The second section describes the steps to produce an effective restoration plan. The final section provides guidelines to implement restoration projects.
http://www.nrcs.usda.gov/technical/stream_restoration/
- **Guidelines for Planning Riparian Restoration in the Southwest**
Summary: This restoration guide addresses concerns that must be considered when developing riparian restoration projects as well as a number of responses or solutions to these potential problems.
<http://www.nm.nrcs.usda.gov/news/publications/riparian.pdf>
- **Guidelines for Planting Longstem Transplants for Riparian Restoration in the Southwest: Deep Planting**
Summary: This site describes a good possible technique if you are revegetating a riparian site that lacks overbank flooding and has a deep water table.
<http://www.nm.nrcs.usda.gov/news/publications/deep-planting.pdf>
- **The Pole Cutting Solution**
Summary: Guidelines for planting dormant pole cuttings in riparian areas of the Southwest. Planting dormant pole cuttings has proven to be a successful technique for establishing many riparian tree and shrub species.
<http://www.nm.nrcs.usda.gov/news/publications/polecutting.pdf>
- **Plant Technology Fact Sheet: Tall-Pots**
Summary: This fact sheet describes the use of tall-pots to establish plants in areas lacking sufficient soil moisture or irrigation availability to revegetate using more traditional means. A discussion of the structure, usefulness, benefits, and limitations of the tall-pot revegetation method is included.
<http://www.nm.nrcs.usda.gov/programs/pmc/factsheets/tall-pot.pdf>

Stay Tuned

Our August Newsletter will concentrate on funding opportunities.

Funding the Tamarisk Coalition

As a non-profit, the Tamarisk Coalition continuously strives to fund its efforts to restore western river ways. We are hitting our stride and need **YOUR help** to continue our efforts. Please take the time to send in your membership dues if you haven't already. Membership forms are available on our website (www.tamariskcoalition.org) under the "Join Us" heading. Your continued membership is essential for the **Tamarisk Coalition to facilitate tamarisk control efforts and the long-term reestablishment of native vegetation along the West's rivers and streams.**

Happy trails,

Tim Carlson

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