Tamarisk Leaf Beetle Distribution & Ecosystem Impacts Monitoring Program

Tamarisk Coalition
Restore. Connect. Innovate.

January 30th, 2013

Season Martin
Restoration Coordinator

Restore. Connect. Innovate.

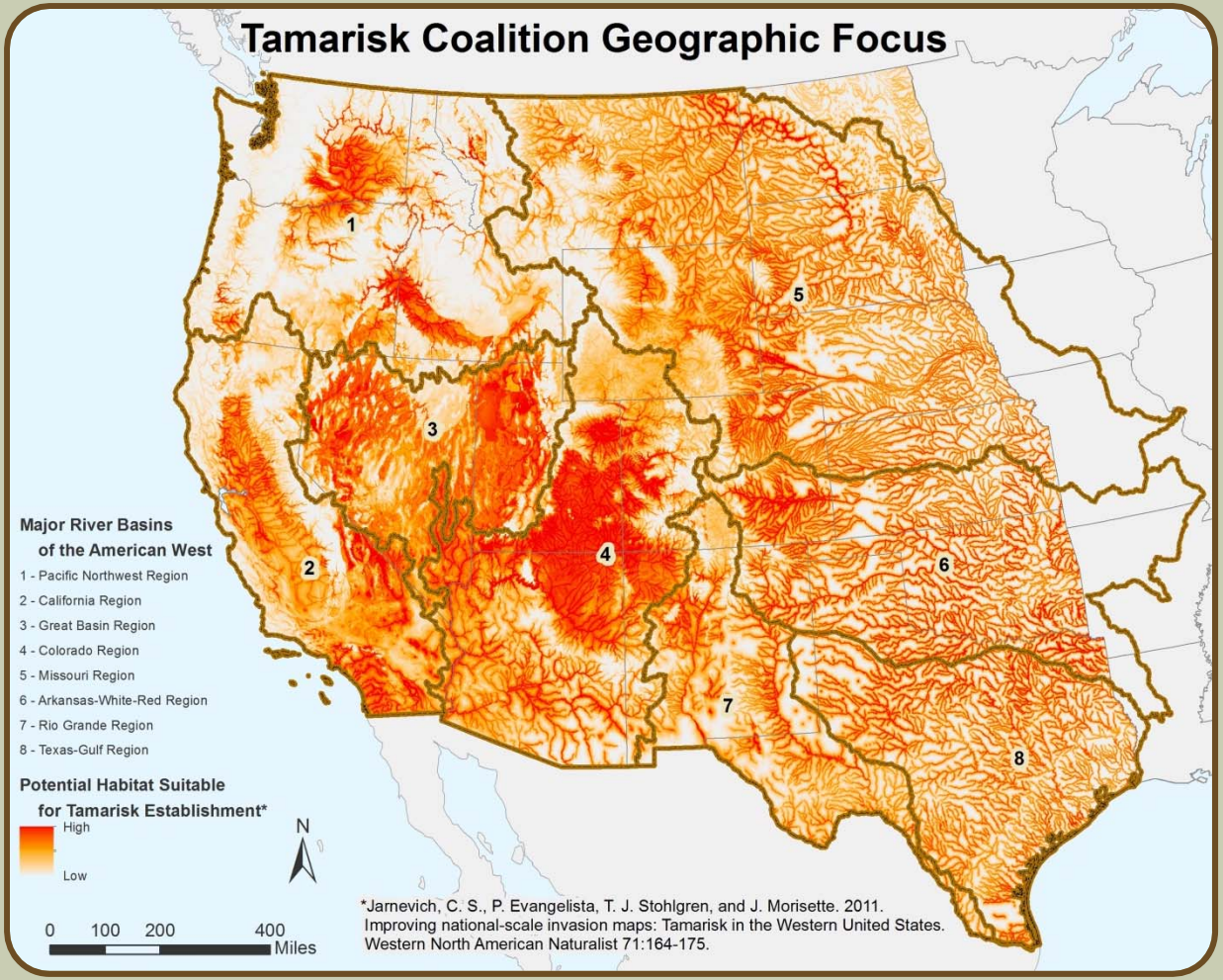
Tamarisk Coalition

Our Mission

Advancing the restoration of riparian lands through collaboration, education, and technical assistance.

Our Vision

We envision healthy and self-sustaining riparian ecosystems throughout the American West resilient to invasive plant species and supported by enduring communities of stewards.



We promote cross-boundary, ecosystem-wide restoration approaches that employ a landscape-scale perspective

Our Partners

Individuals, agencies and organizations such as local, state, federal and tribal government, land managers, private citizens, watershed groups, universities, nonprofit organizations, and foundations

Our Strategies

Our Programs

Act as an Information Clearinghouse

- Web accessible information and resources
- Riparian Restoration Connection for links to training and funding opportunities
- Monitoring of the distribution and extent of the tamarisk leaf beetle

Empower Practitioners

- Host annual conferences and symposia
- Conduct and coordinate training and workshops
- Coordinate and support landscape-scale restoration partnerships

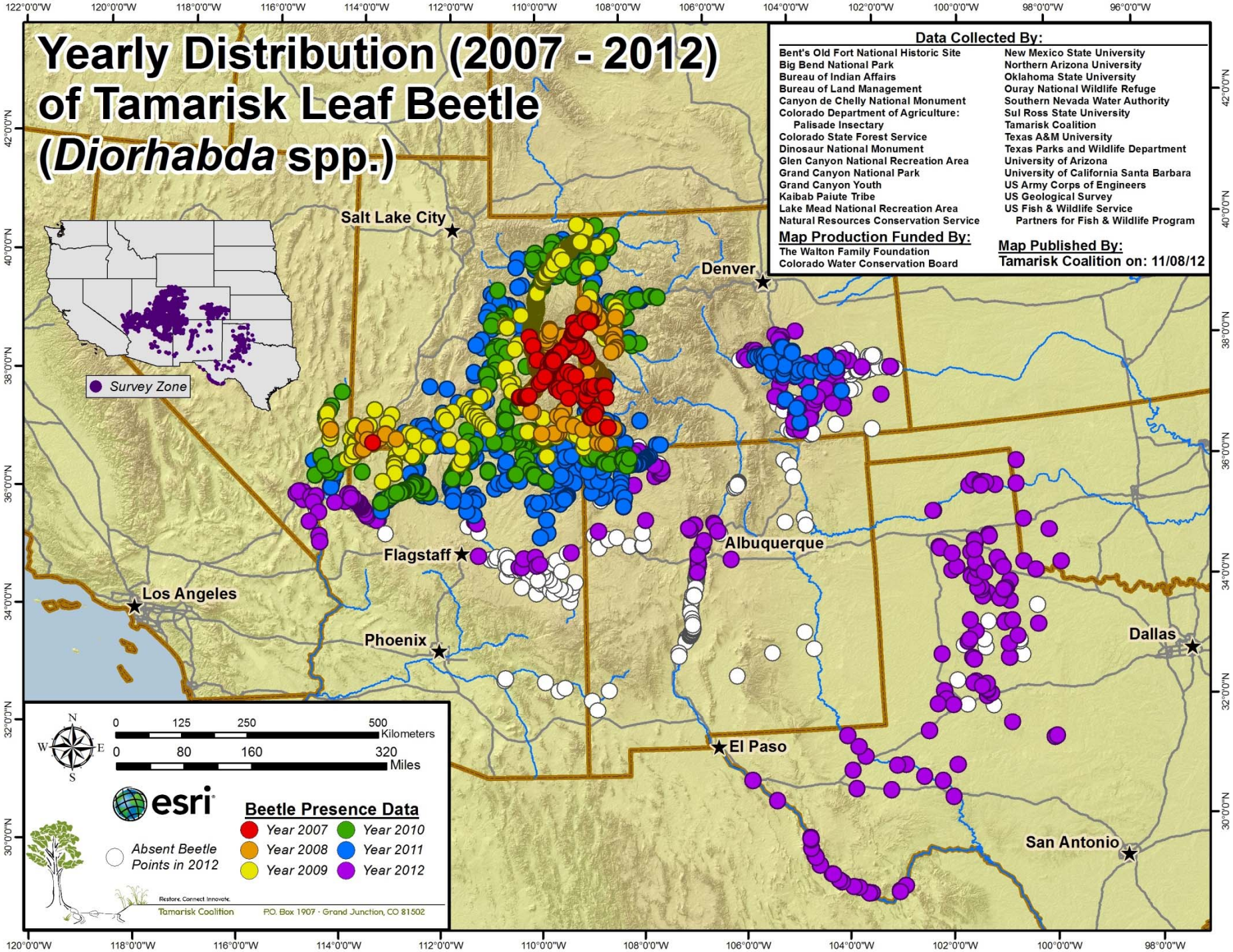
Enhance Frameworks for Restoration

- Improve access to funding opportunities
- Support development of a cross-watershed collaborative network
- Education and outreach

riparian restoration connection
Powered by Tamarisk Coalition

Origins of the TC Biological Control Monitoring Program

- Colorado Department of Agriculture Palisade Insectary wanted to expand monitoring outside of CO
- 2007 TC worked with CDAPI and UC Santa Barbara to develop landscape scale monitoring program
- Focused on the Colorado River Basin


Yearly Distribution (2007 - 2012) of Tamarisk Leaf Beetle (Diorhabda spp.)
Data Collected By:
Bent's Old Fort National Historic Site
Big Bend National Park
Bureau of Indian Affairs
Bureau of Land Management
Canyon de Chelly National Monument
Colorado Department of Agriculture: Palisade Insectary
Colorado State Forest Service
Dinosaur National Monument
Glen Canyon National Recreation Area
Grand Canyon National Park
Grand Canyon Youth
Kaibab Paiute Tribe
Lake Mead National Recreation Area
Natural Resources Conservation Service
New Mexico State University
Northern Arizona University
Oklahoma State University
Ouray National Wildlife Refuge
Southern Nevada Water Authority
Sul Ross State University
Tamarisk Coalition
Texas A&M University
Texas Parks and Wildlife Department
University of Arizona
University of California Santa Barbara
US Army Corps of Engineers
US Geological Survey
US Fish & Wildlife Service
Partners for Fish & Wildlife Program
Map Production Funded By:
The Walton Family Foundation
Colorado Water Conservation Board
Map Published By:
Tamarisk Coalition on: 11/08/12
Survey Zone
Salt Lake City
Denver
Flagstaff
Albuquerque
Los Angeles
Phoenix
Dallas
El Paso
San Antonio
0 125 250 500 Kilometers
0 80 160 320 Miles
N
S
E
W
esri
Beetle Presence Data
Year 2007
Year 2008
Year 2009
Year 2010
Year 2011
Year 2012
Absent Beetle Points in 2012
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Tamarisk Coalition
P.O. Box 1907 · Grand Junction, CO 81502
122°0'0"W
120°0'0"W
118°0'0"W
116°0'0"W
114°0'0"W
112°0'0"W
110°0'0"W
108°0'0"W
106°0'0"W
104°0'0"W
102°0'0"W
100°0'0"W
98°0'0"W
96°0'0"W
42°0'0"N
40°0'0"N
38°0'0"N
36°0'0"N
34°0'0"N
32°0'0"N
30°0'0"N

What are the effects of the tamarisk leaf beetle on riparian ecosystems?

What restoration strategies do we need to implement in areas where the beetle is present?

What are the effects of the tamarisk leaf beetle on riparian ecosystems?

- Research
- Intensive Monitoring
- Rapid Monitoring
- Tamarisk Leaf Beetle Activity Monitoring

Variable	Research and Monitoring Tiers			
	Research	Intensive Monitoring	Rapid Monitoring	Tamarisk Leaf Beetle Activity Monitoring
Tamarix sp.	These variables may or may not be included in in-depth research projects and will depend on the specific question to be answered	x	x	
Dead/Alive		x	x	x
%Green		x	x	Record Defoliation Level (High > 10%, Low < 10%, None)
%Yellow		x		
%Dry Green		x		
%Brown		x	x	
%Re-growth		x		
%Dead Branches		x	x	
Dead Height		x		
Live Height		x		
Live Width		x		
% Flowering		x	x	
Flowering Type		x	x	
Beetle Count		Detailed Beetle Count		Presence/Absence

Variable	Research and Monitoring Tiers			
	Research	Intensive Monitoring	Rapid Monitoring	Tamarisk Leaf Beetle Activity Monitoring
2m vegetation squares	These variables may or may not be included in in-depth research projects and will depend on the specific question to be answered	Optional	Optional	
6 vegetation transects				
Obvious Disturbance		x	x	x
Other Comments (Fire, Submersion)		x	x	x
Date		x	x	x
GPS Location		x	x	x
Soil Texture		Optional	Optional	
Soil Salinity				
Depth to groundwater		x	x	
Leaf Samples		Optional	Optional	

Plan of Attack

Developing an Information Clearinghouse

- TC Hosts a Website
  - General Beetle Information
  - Tiered Monitoring Protocols
  - Primary Contact Information
- TC to Possibly Host an Online Database
  - Currently over 10,000 P/A monitoring points
  - Data sets from 28 different organizations
  - Possibly Incorporate Intensive & Rapid Monitoring Data

Plan of Attack

Outreach Strategy

- First year's data collection will be opportunistic
  - TC will Work with current interested partners
- Subsequent Outreach will Targeted
  - Focus on those organizations with monitoring capacity

Funding Strategy

- Finding future funding for land managers is a possibility
  - For 2013, will rely on existing capacity of Organization & Agencies

Next Steps

- March 10th, completion of the Website and Monitoring Protocols
- 2013 Trainings for Monitoring Protocols

Biocontrol Monitoring Partners & Sponsors:

Bent's Old Fort National Historic Site
Bureau of Indian Affairs, Western Navajo Agency; Northern Navajo Agency
Bureau of Land Management
Canyon de Chelly National Monument
Colorado Department of Agriculture, Palisade Insectary
Colorado State Forest Service
Colorado Water Conservation Board
Dinosaur National Monument
Glen Canyon National Recreation Area
Grand Canyon National Park
Grand Canyon Youth
Kaibab Paiute Tribe
Natural Resources Conservation Service
Kenny Brothers Foundation
Lake Mead National Recreation Area
New Mexico State University
Northern Arizona University
Oklahoma State University
Ouray National Wildlife Refuge
Southern Nevada Water Authority
Sul Ross State University
Telluride Foundation
Texas A&M University
Texas Parks and Wildlife Department
University of Arizona
University of California Santa Barbara
US Army Corps of Engineers
US Geological Survey
US Fish & Wildlife Service Partners for Fish and Wildlife Program
Walton Family Foundation

Thank You!!!