

Restoring Sky Islands of the West

By David Seibert, Executive Director Borderlands Restoration



Borderlands Restoration and Windsong work to restore Southern Arizona’s Sky Islands – Photo Courtesy BR Website.

The Madrean Sky Islands emerge from the high deserts and grasslands straddling the border states of Sonora, Chihuahua, Arizona and New Mexico. Also known as the Apachean montane outliers of the Sierra Madre Occidental, the Sky Islands and northern highlands of Sierra Madre Occidental massif form a globally-heralded center of biological diversity recognized by the International Union for Conservation of Nature and the World Wide Fund.

This region harbors an estimated 4,000 plant species, an untold number of invertebrates including over 600 species of bees alone, and almost 500 species of vertebrates, and it remains one of the most biologically diverse semi-arid and subtropical eco-regions of North America. This exceptional diversity results from the confluence of four great biogeographic domains and the intermingling of their unique floras and faunas. Because of the rugged topography and arid climate, much of the biological wealth of the region has remained mostly intact, but that is changing rapidly. Urban development, persistent drought, and disappearance of streams and riparian forests are resulting in highly

fragmented landscapes and in increasingly isolated and imperiled wildlife populations.

One of the keys to successful ecological restoration at such a scale is the creation of a collaborative restoration strategy that matches the territory.

As one facet of a complex, long-term response, Borderlands Restoration launched in 2012 as the first L3C, or “limited profit/limited liability” company in the state. Our mission includes strategic intervention in the landscape according to three basic principles: research and remediation on hydrology, soil quality, and fire processes; collection and grow-outs of unavailable native plants vital to the base of the wildlife food chain and nectar landscape; and training programs to create jobs restoring and caring for the places we live and work. Programs include consultation and restoration work at all scales, youth training and education, wildlife corridor protection on working ranches, outreach and training for

landowners, and seed collection and banking for restoration work.



Staff and volunteers load native grasses for a habitat restoration project – Photo Courtesy of Sky Island Alliance

In one specific example, many have learned that the ability to increase regional capacities for native plant propagation is vital to successful restoration work, and a potentially major component of an expanding restoration economy at the same time. The lack of widespread availability of plant material grown from native seed hampers effective efforts, both nationally and locally, resulting in a seed bank crisis in the US today that has become a major concern of federal officials. In response to these conditions, Borderlands Restoration coordinated with Gila Watershed Partnership and the Bureau of Land Management to create the Madrean Archipelago Plant Propagation Center [MAPP] in 2013, a combined nursery-seedbank-research-outreach hub on Native Seeds/SEARCH land in Patagonia, AZ. Its primary objectives are to 1) collect, curate, and grow out native plants not readily available commercially, and to track their provenance in an extensive database; 2) reduce restoration costs by improving recruitment success and sharing data on best practices; and 3) to involve local residents in working upon and caring for the places they live, while providing job capacity training, education, and outreach to other communities that might replicate the efforts. Today thousands of grasses, agaves, and selected pollinator-supporting plants thrive as they are prepared for incorporation into regional restoration projects facilitated by Gila Watershed Partnership, Borderlands Restoration, the National Park Service, Sky Island Alliance, and the US Forest

Service, among others, on both public and private lands. Future plans include growing the MAPP's infrastructure to increase production capacity, extending grow-outs into agricultural fields at a larger scale, and training and hiring staff to increase our effectiveness and reach in the borderlands.

For more information on the work Borderlands Restoration does and the events they host visit their website borderlandsrestoration.org



BORDERLANDS



**Pollinator habitat, Deep Dirt Farm Institute
– Photo Courtesy of S. Buckley.**

Current Project Updates

FOR MORE INFO SEE WWW.GWPAZ.ORG

Upper Gila River Riparian Restoration

...funded by The Walton Family Foundation, US Fish & Wildlife Partners Program, National Fish & Wildlife Foundation, and United Way of Graham County

- Will replace invasive tamarisk with native species to restore natural habitats.
- AZCC youth crews have cleared and treated approx. 25 acres during the fall season. A new crew will start work this February.
- Native vegetation is coming in naturally in areas that have been cleared for restoration.



Willow cuttings in the Native Plant Nursery at Discovery Park
– Photo Courtesy of J. Johnson

WRRC Water Supply & Demand Study

... funded by the US Bureau Of Reclamation & Desert Landscape Conservation Cooperative

- Check www.gwpaz.org for meeting dates.
- Contact Dr. Kelly Mott-Lacroix for more information, klacroix@email.arizona.edu

Discovery Park Pollinator Garden

... funded by Eastern Arizona College, US Bureau of Land Management, US Fish & Wildlife Service Partners Program

- Installing pollinator garden at EAC Discovery Park campus, benefiting monarch butterflies and other pollinators.
- Hand crews have made progress on site!
- Native pollinator plants are growing in the Nursery at Discovery Park.

San Francisco River Restroom

... funded by the Arizona Department of Environmental Quality (ADEQ)

- Installation of a second restroom for recreation on the San Francisco River was completed in December. This project was completed in coordination with Greenlee County to reduce the E.coli levels on the river and make river recreation safer for our community.

Clifton Restroom

...funded by the Arizona Department of Environmental Quality (ADEQ)

- The restroom is open and functioning along the San Francisco River Road.
- This restroom was installed in coordination with the Town of Clifton to reduce the E.coli levels on the river and make river recreation safer for our community.



Completed restroom along San Francisco River Road – Photo Courtesy of J. Johnson.

Developing Greenlee County as a Bird Watching Destination

... funded by Freeport McMoRan Inc., Town of Clifton, and United Way

- Work being done on trails, signage, maps, and brochures.

Botanical Etymology for Dummies

Silene laciniata, or **cardinal catchfly** is an upper elevation nectar source for hummingbirds and other pollinators.

Silene, there are three possible derivations, the first two perhaps related: (1) a Greek name used by Theophrastus for another plant (*Vesicaria*); (2) for the Greek god Silenus, the drunken foster-father of Bacchus; and (3) Greek *sailon*, saliva.

laciniata, Latin *lacinia*, a torn thing, the edge of a garment, and *-ata*, possession or likeness; fringed, slashed or torn into narrow divisions.

To translate: Cardinal catchfly has the appearance of the torn fringes of the inebriated Greek god Silenus's garments.



Silene laciniata
Cardinal Catchfly

EVENTS



Like **GWP**

ON FACEBOOK TO KEEP UP WITH
ALL OUR EVENTS!!

January 27th – GWP Sustainable
Funding Working Group Meeting,
11AM-12:30PM @ BLM in Safford

Feb 9th – 11th Tamarisk Coalition
Annual Conference.

Every Thursday – Open Volunteer
Hours with GWP, 8-11AM @
Discovery Park Greenhouse.

Thank you to our partners:

AZ Department of Agriculture
AZ Department of
Environmental Quality
AZ Department of Transportation
AZ Department of Water
Resources
AZ Game and Fish Department
AZ State Land Department
City of Safford
Eastern Arizona College
Farm Bureau
Freeport-McMoRan Inc.
Gila Valley Irrigation District
Gila Valley NRCD
Graham County
Graham County Chamber
of Commerce
Greenlee County
Greenlee Co Cattle Growers

Natural Resource
Conservation Service
Southwest Decision Resources
Tamarisk Coalition
Town of Clifton
Town of Duncan
Town of Pima
Town of Thatcher
U.S. Bureau of Land Management
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service
U.S. Forest Service –
Apache-Sitgreaves and Coronado
U of A Cooperative Extension
U of A Water Resource
Research Center

And many community members.

Get involved in your watershed

For more information, contact us at
Gila Watershed Partnership
P.O. Box 1614, Thatcher, Arizona 85552

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www.gwpaz.org