

# Conservation Connections

Newsletter of Plateau Restoration from Moab, Utah

WINTER 2016

Service, Science, Education and Exploration since 1995



Winter is magical at Arches National Park. PRI is one of the few outfitters in Moab that offer winter ecology and geology tours. Plateau Restoration is a licensed and insured outfitter with the BLM and National Park Service.

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## Positive Impacts... From the Ground Up

For the 21st year, Plateau Restoration has hosted students from around the country and the world in our conservation-based Service-Learning Programs. Students learn about natural resources by being directly involved in hands-on restoration work, alongside educators and leaders, who are also the organization's managers. Where else can students learn from leaders with such intimate knowledge and experience of the organization and the projects they work on? Meaningful conversations and critical discussions on issues around land management and wildlife habitat are an important part of each day.

This year we hosted five schools during prime planting times, in February to May and again in November. Our

projects included revegetation of a wildfire site near Green River, UT, bank stabilization of the rural-residential creek in Castle Valley, and riparian restoration at Jackson Bottom

along the Colorado River. Partial underwriting came from the Cross Charitable Foundation and from member contributions.

*(continued on p. 2)*



Students from Verde Valley High School, AZ take a break at Arches National Park during a service-learning program in November. Students from this school have studied with PRI annually since 2010.

## River Rendezvous Goes From Red to Green

Our 7<sup>th</sup> annual Moab River Rendezvous shifted locations, from the reds of the Colorado River to the opal hue of the Green and the friendly confines of the JW Powell River History Museum in Green River, UT. This new partnership combines the Rendezvous with the Museum's River Runner's Hall of Fame Induction ceremony and dinner.

The Rendezvous took a break last year to celebrate the 20<sup>th</sup> anniversary of the host organization (Plateau Restoration) and is now back on track to be held annually once again. The event still

features many of the same great aspects of the previous six gatherings that were held in Moab, a series of expert presentations on science and history, films, food and social activities. The customary field trip and service project was thwarted by floods that closed the only access road.

Presentations included the latest views on evolution of the Colorado River, the use of insects to control weeds, the historic town of White Canyon, now under Lake Powell, endangered fish of the upper Colorado basin, history of rubber

rafts, plus films on river history and plight of the Dolores River. Details on speakers and content of this and all the previous events is shown on [www.moabriverrendezvous.com](http://www.moabriverrendezvous.com).



Guests of the 7th River Rendezvous, a Bony-tailed Chub (left) and Razorback Sucker (right), both endangered species of the Colorado River. The feisty Chub jumped out of the fish tank during the presentation by its guardian, Tildon Jones, of USFWS.



University of Kansas students deep-planting a cottonwood along the Colorado River.



## Positive Impacts... *Continued from p. 1*



University of Montana students plant cottonwood poles at the Curtis Island Farm Fire in holes they manually drilled to the water table using a bucket auger.

The seventy volunteers this year were from Rollins College, FL, Univ. of Montana, Univ. of Kansas, Colorado Outward Bound School and Verde Valley High School, AZ. They planted three different riparian sites with hundreds of willows, shrubs and trees, many of them with the base buried deep below the surface to get roots closer to the water table. They also cleared annual weeds to aid maintenance of the plants and help future treatment of perennial noxious weeds. 1250 hours of labor worth \$30,000 were given this year.

All sites support abundant wildlife, are protected from recreational disturbance and will be gifts that keep on giving.



University of Kansas team on a educational raft trip with PRI while taking a break from several days of planting at a variety of sites during their 8-day program in Moab.

## Fast Facts– Nature

### Death of a Mammoth

With little fanfare, a massive Ponderosa pine simply named "The Big Tree" passed away in 2015. It was located near Trout Lake in the Gifford Pinchot National Forest of the Columbia River Gorge. It was estimated to be 500 years old and stood 213 feet tall. It was believed that the tree contained 22,000 board feet of lumber. Ponderosa Pine is the most widely distributed pine tree in North America.

*(Seattle Times)*

### Wildlife Fun Facts

1. Sea Otters hold hands to keep from drifting apart.
2. Squirrels plant thousands of trees each year simply by forgetting where they left the acorn.
3. When playing with female puppies, male puppies will often let them win, even if they have a physical advantage.
4. Turtles can breathe through their butt.
5. Cows have best friends.
6. Butterflies taste with their feet.
7. Crows are so intelligent that they can play pranks on each other.
8. Seahorses mate for life and when they travel they hold each others tails.
9. The closest relative to elephant shrews is elephants, not shrews.
10. Oysters can change gender depending on which works best for mating.

### Candid Quotes

*"You must be the change you wish to see in the world"*

Mahatma Gandhi

*"A person's true wealth is in the good deeds that he does for the world".*

Wendell Berry

*"Some people are into the environment and some aren't. But at the end of the day, this old planet is what keeps us alive, so we have to take care of it".*

Don Henley, The Eagles



The Bookcliffs form a backdrop for burned cottonwood trees at Curtis Island burn area on the Green River. The green carpet is primarily tumbleweed.

## Down at the Farm Fire

Restoring vegetation to a 45-acre burn on Curtis Island, prime wildlife area along the Green River, became a new project for our service programs this year. With support from Utah Dept. of Forestry, Fire and State Lands, students planted 50 riparian trees and about 50 shrubs in this site near Swasey's boat ramp. Long-stem Box Elder and Cottonwood trees were deep-planted into a scorched part of the burn, along with poles of cottonwood and willow placed in holes hand-drilled to the water table.

To ensure a good survival rate of the trees, a gravity-fed drip irrigation line was added. Over 2000 feet of irrigation pipe is supplied from three 50-gallon rain barrels placed on higher ground on the edge of the road.

After a full growing season, we have seen over 90% survival of trees and shrubs that were planted and all the poles are still growing. This project will continue next year, with the planting of more poles of cottonwood and willow collected from thinning re-sprouts on burned trees.



## Lessons From the Land

In the world of on-the-ground projects, failures are seldom reported. It is somehow almost embarrassing for one to not reach desired outcomes. However, no experiment can be seen as a failure, as long as something is learned from it, and lessons are shared.

Experience with projects, including recreation management, such as social trail removal, and wildlife habitat improvement, such as weed control and revegetation, has taught us a great deal about restoration on the Colorado Plateau. Since most of our projects are long-term, results can be observed over several years to test our conclusions.

The large number of volunteers we attract allows us to try innovative methods that are labor intensive but low-tech and inexpensive. For instance, digging and cutting Tamarisk below the root crown is the only sure way to kill it without herbicides. This has worked for us at several spring sites near Moab.

The main lesson is that bringing back desirable vegetation cover in lowlands

of the Moab area is very difficult, particularly with climate change, where we are shooting at a moving target when it comes to successful plant selection. It is so much better to minimize disturbance than it is to try to restore it afterwards. It is also vital to salvage plants when possible, where they are at risk.

Bare ground surface temperatures can soar in the summer and drying winds can wick moisture out of anything growing. Annual weeds grow faster than native perennials, but they can offer some habitat for wildlife and necessary shelter for native plants to become established. Even undesirable Russian Olive trees can be successfully treated with herbicide and left standing for birds to still perch. Follow-up treatment is also so much easier if the trees have not been cut down.

For revegetation, we believe in planting, and seeding several times with a diverse seed mix, since one never knows when the perfect conditions might occur for re-establishment of native plants.

## Times are a-Changin'

After 21 years of heavy field work, PRI is shifting our focus towards more "brains-on" than "hands-on". Service opportunities are still at the heart of our mission but we find that much more in-depth conversations are possible on our outreach programs than on service projects.

The adult and family GeoTours are growing rapidly as visitors seek to learn more about local conservation issues, a niche we certainly can fill. With smaller groups and more mature audiences, we can better make use of our knowledge and experience. So much fun, too!



GeoTours are exclusive and a fine opportunity for meaningful conversation and learning. We may be older, but we still can make an impact.

## Deadbeat Dams Come Down

The Hewlett Foundation has provided 50 million dollars in funding to its new Open Rivers program in honor of the organizations' 50<sup>th</sup> anniversary. The fund will provide resources for removal of deadbeat dams that have outlived their usefulness and may become a hazard. The Foundation wants to have area communities involved in the process of re-creating free flowing rivers. More than 14,000 such dams currently exist in the U.S. and by 2020 more than 70% of these dams will be over 50 years old. (*National Geographic*)

## Plateau Restoration

A 501(c)(3) tax exempt non profit organization

### Mission

To protect and restore native habitats of the Colorado Plateau through hands on education, landscape restoration, revegetation and research.



Rocky Mountain Bee Plant, *Cleome serrulata*, at Jackson Bottom restoration site, successfully introduced by our seeding efforts in 2012



Students plant willows in the bank of lower Castle Creek in May

## Fifteen Years of Restoration in Castle Valley

A new project to stabilize the banks of Castle Creek, 15 miles east of Moab, was started with our students this spring. Russian Olive removal projects and recent flash flooding have degraded water quality downstream, and we planted hundreds of plants to improve the situation. This marks a total of fifteen years that we have worked on projects in Castle Valley.

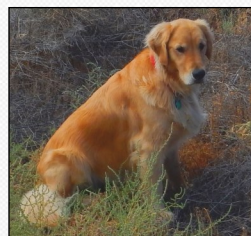
In 2004, we started manual removal of the noxious weed, Diffuse Knapweed, to mitigate the need for herbicide and protect community water supply. PRI was awarded a grant from EPA to expand weed control,

conduct several educational seminars and produce fliers for residents on weed control, from 2007 through 2010. These fliers are still being distributed.

The Porcupine Ranch Fire in the upper valley in 2007 raised more concerns over flooding and further spread of weeds. With grants from National Forest Foundation, we planted grasses, shrubs and cactus into the burn area during 2009-2011. Finally, in 2015, a group of our students helped seed over 200 acres of the burn, to continue the recovery of native vegetation cover, control erosion and improve water quality.

## THANKS... for all your help!!!

Jennifer Speers	University of Montana	Pat Tierny
Bill Topper	Rollins College	Tom McCourt
Cross Charitable Foundation	University of Kansas	Dan Bean
Herm Hoops	Verde Valley High School	Cody Perry
Brad and Cindy Moore	CO Outward Bound School	Tildon Jones, USFWS
Howard McPherson	Off the Beaten Path	Loie Evans
Stuart & Lauren Kingsbery	Utah Division of Wildlife Res	Tim Glenn
Sue Shrewsberry	E. Mennonite High School	Jack Kloepper
Don & Alice P. Hudson	Phyllis Jean Smith	Jim Stiles
Wayne Ranney	JW Powell River History Mus	plus our anonymous donors
Marcus LaFrance	Maravia Corporation	
Jean Ann McDowell	Jack's Plastic Welding	
Four Corners School CCYC	Northwest River Supply	
Tim Severns	Moab Gear Trader	
Roy Webb	Westwater Books	
Becci Webb	Eddyline Welding	
Don Oblak	Hyside	
Denise Oblak	Sol Gear	
Canyon Voyages	Holiday River Expeditions	
UT Forest Fire State Lands	Vishnu Temple Press	
Kim & Paul J. Zilis	Grand Canyon River Guides	



Yampa, the Golden Retriever  
Our Fun Raiser

### Board of Directors

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*"Your insights and passion provided an excitement and wealth that expanded the experience, assisting in making it an adventure that will remain top on our list. Keep up the great work you are doing!"*  
Annemarie, CA, '16 GeoTour participant

## Edibles from the field

There is a tasty addition to the plant list at Jackson Bottom, near the Potash Salt Mine, Western Sea Purslane (*Sesuvium Verrucosum*). This showy, edible succulent has been spreading in several locations at this riparian restoration project site. A perennial, the plant forms a low thick mat, radiating from a central tap root, locally out-competing annual weeds.

Normally growing along the coast, where its roots are important in dune formation, it is likely happy in these very saline soils close to the salt plant. Highly-colored flowers render it stunning when it is in bloom. The plant was widely used by Native Americans and can be eaten raw, pickled or cooked. Purslane contains Ecdysterone, a chemical that is important for molting insects and in humans can enhance athletic performance.

Food markets sell sea

purslane for as much as \$25 per pound. A new cash crop?

More can be found on this fascinating plant at [www.eattheweeds.com](http://www.eattheweeds.com).



Western Sea Purslane near the Potash Mine. Whole plant (top) and close-up of flowers (bottom)

## How we accomplish our mission

Plateau Restoration was founded in 1995 to enlighten, inspire and involve the public in the long-term care of landscapes of the Colorado Plateau through service and science-based learning adventures. We focus on building a connection with nature, and encouraging the spread of the message to make the choir bigger.

We raise funds through memberships, donations, grants and services we provide. Members of the public can learn more about the natural and cultural history of the area while helping support our mission by signing up for a Volunteer Vacation or a GeoTour (land and/or river-based education program). We also provide natural resource education to the broader community through field trips, events and workshops.

You can help by joining the organization, by sharing in an adventure or by sharing the word.

To learn more about Plateau Restoration, become a supporter or join one of our programs please visit our website  
[www.plateaurestoration.org](http://www.plateaurestoration.org), or contact us:

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