The Otter

Sponsored by Friends of Verde River Greenway

Volume three
Fall Issue

The Verde Watershed Restoration Coalition begins its 4th Treatment Season!

It's a very exciting time of year; the chance of rain has increased from 0 to 50%, its hot, but not as hot and the crews are back in town! Starting the third week in September our field crews will begin training for their next six months of invasive plant removal.

We've outgrown our traditional training spot at Dead Horse Ranch State Park and this year will be training over 40 people at Yavapai College. There will be a total of three AZCC crews in attendance; two from the Flagstaff office working with VWRC for the next six months and one from the Tucson office who will be working for the Gila Watershed Partnership. The Yavapai Apache Nation crew will also be in attendance as well as the seven person Vetraplex crew.

Crew training will be two weeks long and will cover everything from an introduction to riparian ecology to chainsaw safety and maintenance. VWRC partners will be presenting on a variety of topics related to crew work: native plant ID, secondary invasive ID, Walton Family Foundation's Freshwater Initiative, threatened and endangered species, bio control and more.

The crews will then go into the field for the second week of training to practice their skills at Rocking River Ranch south of Camp Verde. While training is an important part of the field season, it is just the beginning. The crews will continue to learn and perfect their skills for the next six months working from the Upper Verde to the Oak Creek Confluence and a lot of places in between.

While the learning continues throughout the season we encourage VWRC partners to get involved with the crews either through educational presentations throughout the year or just a quick visit to say "Hi" after a steering committee meeting. Partners and the public are invited come by to meet the crew on **TUESDAY, SEPTEMBER 22 for a BBQ at Dead Horse Ranch State Park.** RSVP to sara@verdewrc.org.

Program manager's Log

Greetings,

It's hard to believe summer is drawing to a close, I will miss the torrential monsoon rains we've received here in the Verde Valley.

Aside from all the planning and fundraising we've been working on in preparation for VWRC's fourth field season, we've been working on some exciting new projects here in the Verde Valley with our partners. These projects include pollinator gardens and waystations for monarchs, native grass pilot projects, Common Cottonwood Experimental Gardens and developing a native plant propagation center for the Verde Valley. Look for more on these projects in the next issue of The Otter.

Anna

News you otter know about VWRC

Verde NRCD Education Center

Thanks Lynda!

In 2010, retired school teacher Lynda Zanoli started the Verde Environmental Education Center with limited funds and a big vision: to embed environment education in the K—8 curriculum throughout the Verde Valley. Since then Lynda has built a strong program that in 2014 -2015 school year brought environmental education to more than 10,000 students in the Verde Valley. Through Lynda's dedication students across the valley will continue to gain valuable local based knowledge about water conservation and sustainable agriculture.

Lynda is attempting to retire for the second time. We want to thank her for all of the hard work, creativity and dedication that she put into building this dynamic program for the youth of the Verde Valley.

Lynda, your work is truly appreciated. Enjoy your retirement!

Welcome Erin!

Erin Cody will be carrying on Lynda's work at the Verde NRCD Education Center. Erin has a Bachelors degree in Environmental Studies, with a minor/certification in Ecological Restoration from the University of Washington. She earned her Masters of Elementary Education/ Teacher Certification from the University of Phoenix. She has 12 years experience in education; 7 years in Seattle, WA and 5 years in the Cottonwood Oak Creek School District.

"I started teaching Environmental Education in Seattle, and found that doing so brought out a passion in this field that was very satisfying both career wise and personally. I decided to gain a better understanding of Elementary Education by pursing my masters degree. I taught for three years at Cottonwood Elementary, first in 4th grade then two years in 5th grade. I'm looking forward to continuing Lynda's legacy of environmental education for the K—8 students of the Verde Valley "

Submitted by: Erin Cody, Director, Verde NRCD Ed Center

Partners Update: Arizona Game and Fish Department

Grassland Enhancements for Watershed Health

The health of the Verde River is as vital to wildlife as it is to those human residents that occupy the Verde valley. As you travel away from the river and into the uplands you pass quickly from the tiered flood plains and canyons, away from the ribbon of green and into a world where native grasses and forbs are dominant. This is the surrounding landscape of the Upper Verde west of Perkinsville. And these are the plants that possess the physiological and metabolic adaptations that help them endure a harsh environment, where temperatures can exceed 100° F in the summer and get well below freezing during the winter; where rains can be lacking for months at a time. These are the grasslands of central Arizona. A native plant community that has equal partners in the wildlife it sustains.

Over the course of the last 150 years, our landscape has taken on a different complexion. In central Arizona, grasslands were once the norm, but an invader has slowly enveloped significant portions of this historical grassland. *Juniperus monosperma* and *Juniperus osteosperma*, commonly known as one-seed and Utah junipers are acting opportunists in this changing climate, claiming title to landscapes once devoid of shade. Talk to any long-time rancher or wildlife biologist and you'll get an earful on how junipers have gradually encroached upon lands, with a litany of negative impacts on the resource. And when junipers get even moderately thick on the landscape, they can have profound effects on the understory plant community and can compound soil erosion problems leading to increased sediment input into the tributaries and main stem of the Verde River. It is a watershed level problem that has been compounded by overgrazing and past practices by managing agencies. Fortunately, the science has caught up with the times and there is a near universal recognition that on-the-ground management must now be coupled with science based mitigation efforts to restore this ecosystem.

Grassland Enhancements for Watershed Health

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The Arizona Game and Fish Department has additional motives: the pronghorn antelope (*Antilocapra americana*). This antelope species is a migratory species often moving many miles in one day and whose survival has been disrupted by highways, housing developments and an overall loss of habitat. These barriers have led to fragmentation and genetic bottlenecking that has had a profound effect on the reproductive success of these animals. Throw into the mix more and more juniper trees, which can serve as ambush sites for coyote, and you have a ready-made recipe for reduced fawn recruitment. Other grassland obligate species impacted by the spread of these trees include: American badger, prairie dog, burrowing owls, ferruginous hawks and several grassland obligate bird species. As the State of Arizona's wildlife management agency, the Arizona Game and Fish Department has a mandate to ensure the future viability and success of all wildlife; invasive species being a significant threat to habitat supporting wildlife. While the agency has a particularly strong interest in seeing pronghorn populations increase, the greater picture of overall upland grassland health is tied to the ecological integrity of the entire grassland ecosystem. With this under siege from invasive junipers, marquee species such as the pronghorn, are threatened.

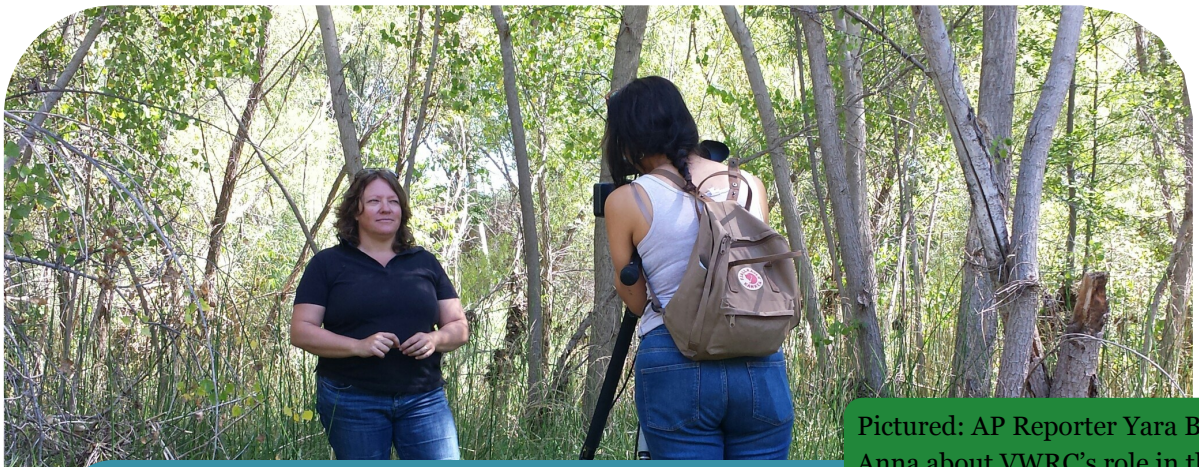
By 1999 pronghorn populations in Arizona had declined to less than 8000 individuals. Individual populations, such as the Willow Lake herd, no longer exist. Recognizing this species as an indicator, the Prescott National Forest, Bureau of Land Management and the Arizona Game and Fish Department decided to join forces to address this concern. During the course of the last decade conversations between agencies resulted in collaborative efforts of exchanging data and identifying areas of concern. Partnerships were strengthened and by 2010, the Central Arizona Grassland Conservation Strategy (CAGCS) was signed by the BLM, the Forest Service and Arizona Game & Fish with the role of managing historic grasslands and the wildlife species that inhabit them. These three agencies combined efforts have subsequently developed an integrated management strategy for conservation and restoration of grassland ecosystems and associated pronghorn populations in central Arizona. Additional players include the Natural Resource Conservation Service and the local NRCDs, who provide technical support and funding opportunities through the Farm Bill.

AGFD's primary funding for restoration work in the Verde watershed is derived from the Pittman-Robertson excise tax to benefit grassland ecosystems, CAGCS monies are utilized in planning efforts, the conversion and construction of wildlife friendly fencing and improving waters on the landscape. But the main course of action has been in the cutting of juniper trees to open up grassland habitat and corridors, providing safe passage for pronghorn as they move across the landscape. The CAGCS team convenes a few times a year to identify and prioritize projects in areas that have been identified as critical grassland habitat. Team members work in constant contact on a more informal basis in the management of landscape level projects that frequently occur on public lands. More recently a greater effort is being placed on examining fawning areas, utilizing telemetry data (GPS collared animals) to help prioritize efforts. New GIS tools are currently being developed to employ the best science to help support the CAGCS team decisions. A great deal of these efforts has been employed within the Upper Verde Watershed and in opening up grassland habitat in and around the Aqua Fria Monument. With support from its sister agencies, the Arizona Game and Fish Department will monitor telemetry information and other data to measure the impact of these mitigation efforts on pronghorn populations.

Juniper encroachment has drastically impacted our historical grassland ecosystems, altering the hydrologic cycle, reducing understory vegetation and contributing to overland flow and significant erosion problems on the landscape. These deleterious impacts can in turn, muddy the waters of the Verde River and contribute to habitat and resource issues within the river corridor. Upland mitigation efforts may have a focus on improving populations of American pronghorn, but as a raindrop meanders its way to the river, this form of trickle down management creates benefits for the entire watershed.

Submitted By: Wade Albrecht, AZ Game and Fish Department

EXTRA! EXTRA!



Pictured: AP Reporter Yara Bashara interviewing Anna about VWRC's role in the removal of tamarisk

EXCITING NEWS!

A reporter from the Associated Press travelled to the Verde Valley to interview Anna and to watch invasive plant monitoring in action at Dead Horse Ranch State Park in order to write a story about the effects of Tamarisk and fire in response to the Kearny fire in June. The print story was picked up by newspapers nationally. Click on the picture above to read the story.

Welcome Calvin!

Calvin graduated from the Northern Arizona University School of Forestry in 2010. His interests in ecology and natural resource management have led him to work with the Desert Botanical Garden, the Arboretum at Flagstaff, a forestry study on Southwestern white pine, and with Arizona Conservation Corps. Calvin's first experience with the Verde River was on an invasive species crew for the 2014-2015 field season. He is excited to be back along the Verde again, serving as Field Data Coordinator for Verde Watershed Restoration Coalition.

Happenings Around the Watershed, State, Basin

Cross Watershed Network Workshop hosted by ARKWIPP Arkansas River Watershed Invasive Plant Partnership in Pueblo, Co October 5 and 6

VWRC Calendar of Events

October

Outreach, Education & Engagement Sub-Committee Mtg.
Wednesday, October 21, 9-11 AM
Where: Cottonwood Middle School
Sustainable Funding Mtg
Tuesday, October 27, 10AM– Noon
Where: Yavapai County Board of Supervisors Room
VWRC Steering Committee Meeting
Tuesday, October 27, 1-3 PM
Where: Yavapai County Board of Supervisors Room

November

Outreach, Education & Engagement Sub-Committee Mtg.
Wednesday, November 18, 9-11 AM
Where: Cottonwood Middle School
Sustainable Funding Meeting
Tuesday, November 24, 2015, 10 AM-Noon
Where: Yavapai County Board of Supervisors Meeting Room
Steering Committee Meeting
Date TBD
Where: Yavapai County Board of Supervisors Room

December

Outreach, Education & Engagement Sub-Committee Mtg.
Wednesday, December 16, 2015 9-11 AM
Where: Cottonwood Middle School
Sustainable Funding Meeting
Tuesday, December 22, 2015 10AM– Noon

Volunteer with VWRC!

Please contact Laurie Parker from FVRG at admin@verderivergreenway.org

No experience necessary!

For additional event info visit verderivergreenway.org

Arizona Riparian Council

28th Annual Technical Meeting

October 15 and 16

Click Here for Details

Save the Date!

September 21-October 2
VWRC Crew Training

Saturday, September 26
Verde River Day!
Dead Horse Ranch State Park

Wednesday, September 30, 2105
Friends of Verde River Greenway Quarterly Board Meeting
including
Community Presentations!
@ Yavapai College Clarkdale Campus
5:30—7:00 p.m.

December 3, 2015
VWRC Annual Stakeholders Mtg

Creating Healthy Habitat for Endangered Birds!

Each summer before the VWRC treatment season begins, VWRC partners carry out bird surveys to determine if the Southwest Willow Flycatcher and the Yellow Billed Cuckoo, both listed endangered species, are nesting in the riparian zone that they love to call home for part of the year.

This summer over 100 hundred hours of time was dedicated to surveying 5 miles of river, 6 different times. Both the Yellow Billed Cuckoo and the Southwest Willow Flycatcher were spotted and responded to calls. Birds were detected in areas that will be treated in the upcoming season as well as in areas previously treated. This great news means that the birds are nesting in the tamarisk free areas.

Special thanks to Wade Albrecht, (AZ Games and Fish Department) Tina Greenawalt (National Parks Service), Kris Randall and Jennifer Kaplan (US Fish and Wildlife Service) and Janie Agyagos and Laura Moser (US Forest Service) for surveying and ensuring that we are improving habitat for these special birds.

In additional to the endangered birds, Janie and Laura also had some great wildlife sightings (pictured); a western screech owl and a night snake, both taken near the Oak Creek Confluence with the Verde River.

Friends of Verde River Greenway (FVRG) and the Verde Watershed Restoration Coalition (VWRC) say thank you to the private foundations, federal and state agencies and individuals that provide funding for our programs. If you would like to join them and support our work, please go on-line or click below...

Support Friends of Verde River Greenway

By Clicking here!

ANNOUNCEMENTS!

A New Partnership!

VWRC is teaming up with Mingus Union High School to begin a student driven monitoring pilot project where two River Ecology classes will be adopting a stretch of the Verde River at Dead Horse Ranch State Park to monitor its vegetation health

Arizona State Parks has hired a new Verde River Greenway Sate Natural Area Coordinator. Dustin Humphreys is moving to the Verde Valley from Wyoming bringing with him a wealth of experience to share.

Visit **www.verderivergreenway.org**

Fundraising Announcements

National Forest Foundation– Habitat Restoration **$25,305**

AZ Water Protection Fund– Habitat Restoration **$169,325**

USFWS Partners for Fish and Wildlife– Pollinator Garden- **$40,000**

Prescott National Forest– Habitat Restoration– **$24,000**

Coconino National Forest– Habitat Restoration– **$24,000**

The Nature Conservancy– Native Grass Project– **$32,000**

Special Thanks to VWRC & FVRG Volunteers!!!

VWRC Steering Committee Members

Friends of Verde River Greenway-**Chip Norton**
The Nature Conservancy- **Kim Schonek**
Coconino National Forest- **Laura Moser**
Arizona State Parks– **George Christianson**
Arizona Game and Fish Department-**Wade Albrecht**
Salt River Project-**Heather English**
National Park Service-**Tina Greenwalt**
Natural Resource Conservation District-**Chris Jensen**
USFWS (Partners for Fish & Wildlife)-**Kris Randall & Jennifer Kaplan**
Tamarisk Coalition-**Jamie Nielson**
Yavapai-Apache Nation-**Vivian Stevens & David Lewis**
Prescott National Forest-**Kris Theil, Dorothy Baxter & Michael Kellett**
Verde Valley Land Preservation– **Steve Estes**
Verde NRCD Ed Center– **Lynda Zanolli**

Staff: Anna Schrenk, Laurie Parker, Laura Jones, Sara Van Marel and Calvin Rogers

Facilitator: Tahnee Robertson, Southwest Decision Resources

Verde Watershed Restoration Coalition

VWRC Sub-Committees

Outreach, Education and Engagement

Co-coordinators: Steve Estes and Laura Jones

Members: Anna Schrenk, Jamie Nielsen, Lynda Zanolli, Laurie Parker, Mary Ontiveros, Dorothy Baxter, Sara Van Marel

Research and Monitoring

Co-coordinators: Ruth Valencia and Michael Kellett

Members: Laura Moser, Chip Norton, Jamie Nielsen, Max Castillo, Anna Schrenk, Kris Randall

Planning and Implementation

Co-coordinators: Anna Schrenk and Laura Moser

Members: Chris Jensen, Kim Schonek, Chip Norton, Ruth Valencia , Sara Van Marel, Dorothy Baxter

Sustainable Funding

Co-coordinators: Jamie Nielson and Chip Norton

Members: Anna Schrenk, Wade Albrecht, Laura Jones, Kristin Jespersen, Chris Theil, Jenise Nyquist, Sara Van Marel

Facilitators: Tahnee Robertson and Larry Fisher

Special thanks to the private landowners and organizations that joined FVRG and VWRC Partners in improving habitat in the Verde Watershed this quarter.

Mingus Union HS

AlterNative Plant of the Quarter

Native Plants of the Verde Valley
Get to Know: scouringrush horsetail *(Equisetum hyemale)*

Photo credit: Max Licher, swbiodiversity.org/seinet

Despite its common name, this plant is not a rush, reed, or fern, but one of only 15 species of the *single surviving genus* (Equisetum) from a class of primitive vascular plants that dates back 350+ million years! These ancient plants do not produce flowers or seeds, but reproduce vegetatively and by spores, just as they did back when dinosaurs roamed our state. These fascinating plants are described as useful tools, border plants for Japanese gardens and water features, and even "living fossils". Scouringrush horsetail is found in low, wet locations in the Verde Valley, especially on the perimeters of streams or ponds, and in ditches.

What it looks like

- A non-flowering, evergreen perennial plant growing from underground rhizomes.
- Rigid, rough, green, hollow stems are vertically-ridged and jointed/segmented like bamboo stems. Stems grow to about 3 feet in height in the Verde Valley.
- A whorl of teeny-tiny scale-like leaves is present at each stem joint, forming a dark band around the stem at the joint. Leaves are so small that the *stems* are actually the photosynthesizers.
- Produces strobili in spring (cone-like structures on tips of stems) which release wind-borne spores. Spores contact wet soil and germinate into male and female gametophytes. Upon fertilization, female gametophytes produce an embryo that develops into a new equisetum plant.

Uses

- The high silica content in scouringrush horsetail stems made them a useful tool for early Americans, for polishing pots and pans. Stems were also used to smooth and polish bows and arrows.
- Numerous ethnobotanical/medicinal uses reported for both humans and horses, but toxic to livestock when consumed in large quantities.
- Makes a great perch for dragonflies.

Written by: **Jamie Nielsen, Tamarisk Coalition**

FVRG and VWRC
P.O. Box 2535
Cottonwood, AZ 86326

Visit our office in "Old Town" at:
903 N. Main Street. Suite B
Cottonwood, AZ 86326
(upstairs above the Red Rooster Cafe)