

FIELD

NOTES

FOR MEMBERS OF THE NATURE CONSERVANCY IN ARIZONA

SPRING 2021

INSIDE

River Friendly Living

*Laughing Waters,
Happy Fish*

The Nature
Conservancy 

Protecting nature. Preserving life.



FIELD NOTES

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Field Notes welcomes
comments and questions.
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From the Director

Working Together for a Bright Water Future



This spring, I will complete my first six months as Arizona's state director. I'm hopeful that we in the U.S. have passed the worst of the COVID epidemic, and that we can soon get together in person with our friends and families. I look forward to seeing our wonderful volunteers and staff, who have been working remotely the past year. I also hope to meet many of you in-person in the months ahead.

When I first came to Arizona five years ago, I quickly came to understand how critical water is to people and nature. Water is important in all of the Conservancy's work in Arizona, and it's the focus of this issue of *Field Notes*.

One of my favorite trips since coming to Arizona was to one of our oldest project sites, Aravaipa Canyon Preserve. While hiking along the stream that runs for more than 10 miles through canyon wilderness, I felt an emotional connection to the water and how important it is to the fish and wildlife of the canyon. I'm proud that years of well-managed conservation there is having a positive impact on Aravaipa Creek, one of the state's best native fisheries. The creek is seeing a trend of increasing flows, in spite of some of the driest years on record. (See article, page 12.)

Another favorite trip was floating the Verde River. I've come to appreciate how Verde Valley residents value this river for its recreation, but also its importance to the economic lifeblood of these communities. In this issue's "Three Farms" story, Verde Valley grass-fed beef producers share their conservation philosophies and love of the river. The Conservancy is working with them to improve their irrigation infrastructure and in the process, take less water from the Verde.

A big win in the State Legislature this year will encourage conservation of our streams and rivers. The Nature Conservancy in Arizona worked on getting this law passed for several years. Passing water legislation in Arizona is not easy and TNC's work on this issue demonstrated many of the things that make us unique as an organization — the ability to convene partners, find common ground, develop innovative solutions and take on big challenges. This new law will make it easier for landowners to allow their unused water to stay in streams and rivers and will have a profound impact on conservation. (See article, page 10.)

I hope you find inspiration in this issue of *Field Notes*. Thanks to you, we are conserving our precious water and making a difference in Arizona, for our rivers, wildlife and communities.

Sincerely,

Daniel S. Stellar,
State Director

Bill Way: The Secret Sauce of Success



What are the essential ingredients for success in protecting our environment, alleviating global poverty, or any other huge, real-world problem?

The Nature Conservancy's board chair in Arizona, Bill Way, has a unique perspective about that, based on his 30-plus years in the corporate world. As managing director of Accenture, he led a global social impact investment corporation.

"Creativity, innovation, initiative, partnership and people" are part of the "secret sauce," as Bill puts it. And, he adds, "not being afraid of failure."



Bill, who lives in Phoenix with his wife Mary, sees these ingredients at work in many of their wide-ranging pursuits, which include the arts, education and the outdoors. But none more so than with two organizations with whom he serves on the boards: The Nature Conservancy in Arizona, as chair, and with MCE Social Capital, a global nonprofit investment firm. Both organizations address quality of life and the environment.

MCE Social Capital seeks economic opportunities and market-driven solutions to global poverty and health issues. The company addresses food and agriculture, water and sanitation and renewable energy in developing countries, as well as providing more access to funding, healthcare and technical assistance.

"I'm proud of this work over the last 10 years. If we don't address people's basic needs, like access to a well for drinking water, or ability to sustainably grow food, how are we going to convince them to help conserve the environment or protect wildlife?" he said.

Similar dynamics are at play in Arizona. Quality of life and making a living are important factors in doing what is right for the environment.



Bill credits the Conservancy with developing creative solutions — the secret sauce — to tough environmental challenges.

In the Verde River Valley, TNC has carved out an innovative business model aimed at increasing river flows. He cites the example of working with farmers to switch to crops, such as barley, that use water in the spring when there's more water in the river. And then, to provide a market for that barley, TNC invested in a facility to produce malt to sell to local breweries.

“Who would have thought that investing in Sinagua Malt would be part of a solution to river flows? We weren't sure it would work, but it has and it's a creative solution. I'm very proud of the initiative and the people who made this happen.”



The same is true, he said, for the Salt and Verde Alliance, which is taking our forest and rivers conservation work to the city, to demonstrate to water users the benefits of conserving nature upstream. And the latest programs: Arizona Thrives, which engages business, government and other diverse groups to plot out a future of clean air and clean energy, and the Healthy Cities Program, which seeks to make our cities greener, cooler and healthier.



Are we doing enough given our many challenges, including addressing climate change? Bill's response: “We're doing what we do best.”

“We're partnering with others; we know we cannot do it alone. And, we're not afraid to take risks.”

He cites the Conservancy's forest innovation efforts to make forest restoration more economical. The effort is risky because there's not much of a market for low-value, small-diameter wood. However, doing nothing is not an option. Without thinning our overgrown forests, we could lose them to extreme fire, and consequently, we'd lose all the carbon stored in those trees.

“Our work demonstrates how nature is part of the solution. We're giving nature a hand and letting it do the work.”



Bill grew up in Seattle, Washington where the outdoors beckoned. Hiking, skiing and camping are pursuits he continues today. He attended Whitman

College, a liberal arts college in Walla Walla, Washington, where he received a bachelor's in economics and met his wife, Mary. “It was a blind date and it was love at first sight,” he said.

After getting a master's degree in economics from the London School of Economics, he spent 26 years with Accenture, based in the U.S., London and Tokyo. During that time, he and Mary lived briefly in the Phoenix area and ultimately, after a five-year stint in Tokyo, decided to make Arizona their home.

Here, Bill and Mary have taken creativity to a new level. Mary is the executive director of Southwest Shakespeare, and she and Bill have a film production company that has garnered prestigious awards from both the Sundance and Berlin film festivals.

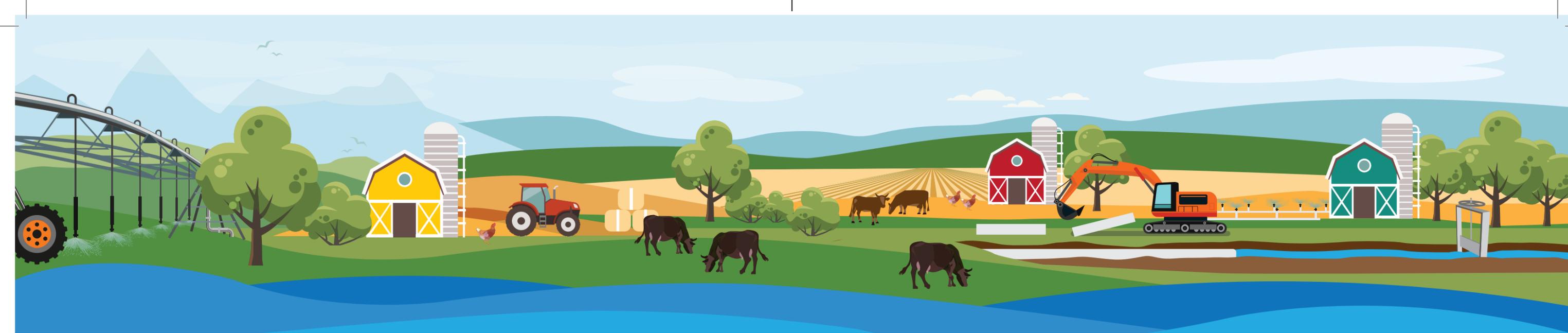
In addition to the Conservancy's board, Bill has served on the boards of Whitman College, Phoenix Art Museum, Arizona State University Gammage and several socially minded film organizations.

He and his family — including twins Lexie and Tricia, 30, and John, 26 — also make it a priority to connect with the outdoors: A five-day backcountry ski trekking trip in the Whistler area in British Columbia, hiking in the Olympic Mountains of Washington, trekking in the Himalayas and the European Alps, climbing Mount Fuji in Japan, and of course, Bill's favorites in Arizona, the Grand Canyon and Red Rock State Park.

“I'm a recovering amateur athlete,” said Bill, who also loves cycling, rowing, swimming, and running, and has participated in the Boston Marathon, Arizona Ironman and Henley Master Rowing Regatta events.

“I love the outdoors. In fact, everything I do touches on the environment,” he says.

— Tana Kappel



Water Friendly Living A Tale of Three Farms

In the Verde Valley, small farms are big. Three grass-fed beef operations, mindful of their use of the area's most important natural resource, are working with The Nature Conservancy to improve their irrigation systems and reduce water waste.



Editor's Note: Funding for the irrigation infrastructure improvements in the Verde Valley came from the U.S. Natural Resources Conservation Service, Bonneville Environmental Foundation and the Walton Family Foundation.

Plowing Ahead Ranch



In 2010, when Zach and Shannon Wolfe purchased their dream property, 10 acres along the Verde River, they weren't sure what their future held. They both grew up in ranching and wanted to experiment with regenerative farming. They got chickens and a couple of calves.

Since Zach had developed allergies to grocery-store beef, they started raising their own beef.

Their neighbors near the town of Camp Verde began to notice the small all-natural, grass-fed beef operation. "Would you raise one for me?" one neighbor asked.

With an uptick in demand for local beef, they began raising more steers and selling more sides of beef in the local community.

"We were basically plowing ahead without a plan," said Zach. That was how the Plowing Ahead Ranch came to be, incorporated in 2016.

Then 2020 happened. Even if you had a best-laid plan, COVID changed everything: product distribution, transportation,

even shopping. Some Arizona stores kept running out of toilet paper, and some couldn't get enough chicken or beef.

"Our phones were ringing. But we couldn't keep up with demand," Zach said. "We didn't have enough beef, so we offered folks a couple options. Either wait 6 – 10 months for our beef or contact other area beef producers."

If there was a silver lining due to COVID, it is that it fueled an already rising demand for local food, especially food grown sustainably. In the Verde Valley, that often means "river friendly."



The Wolfes use Verde water to irrigate their grass pastures that feed their cattle. They rotate their steers every 3 – 4 days across 10 pasture sections, a rest and rotate system to keep their fields productive and weed-free – without using pesticides and herbicides.

"Our steers are hormone, steroid and antibiotic free. Our ranch cares about the quality of the beef we sell," said Zach.

“We also want to be as efficient as we can about our water use. We love the Verde River and we love recreating on it. We don’t want to see it go dry,” he said.

The Nature Conservancy is working with the Wolfes to improve the efficiency of their irrigation system and reduce the amount of water they take from the river.

“Each landowner has different challenges in their irrigation efficiency. We want to work with them to identify where they are losing the most water in their irrigation system,” said Kim Schonek, the Conservancy’s Verde River program manager.

At the Plowing Ahead Ranch, most of the water loss occurred in a low spot in the dirt-lined ditch that conveyed river water to the pond used to distribute water to the fields. The Conservancy worked with Zach to replace the ditch with PVC piping.

Their irrigation water is pumped from the OK Ditch, one of a series of irrigation ditches that have long sustained Verde



Valley agriculture. The ditches date from the late nineteenth and early twentieth centuries.

Today most of Camp Verde’s ditches are operated by associations. Zach is a board member of the OK Ditch Association, which serves 107 users over its 5.5-mile length.

He hopes that by emphasizing water-use efficiency, this area will become a showcase for ag and water conservation.

Rancho Tres Brisas



River friendly also describes another Camp Verde grass-fed beef operation, Tres Brisas Beef.

Jeni O’Callaghan, who owns and operates Tres Brisas with her husband Mike, is passionate about living in harmony with the river that runs through the valley and provides water to irrigate 14 of their 160 acres.

“Without water there can be no food,” said Jeni. “Growing local beef is good for our community. And we raise happy, healthy beef.”

Over the last few years, O’Callaghan has seen an uptick in demand for their locally produced beef, which they sell at farmers’ markets and direct to buyers.

Tres Brisas cattle graze the irrigated acreage and occasionally they receive a special treat — beer mash, a by-product of brewing from Lumberyard Brewery in Flagstaff. “The cows love it,” said Jeni. “When we pull up with a truckload of mash, they come running.”

The O’Callaghan irrigation water is conveyed to the property via the Pioneer Ditch which gets its water from West Clear Creek, a tributary to the Verde River. With the Conservancy’s help in funding and support, the operation switched from flood irrigation to sprinkler irrigation, and is saving about 20 percent of the water they previously used.



“With TNC’s help, we’ve changed how we water our fields. The sprinkler irrigation system waters our fields more evenly,” said Jeni.

As the new board chair of the Friends of the Verde River, Jeni is enthusiastically promoting its latest program: River Friendly

Living. She has even erected a sign along the Verde River identifying her river friendly operation.

“This valley is a wonderful place to live. There are more people here now than in the past, but it’s important to preserve our open space, and really important to keep our river flowing,” said Jeni.

Like her mother and grandmother before her, Jeni is an artist who loves the southwestern desert and its wildlife, which she often depicts in her paintings.

She says keeping water in the Verde River for native plants and animals is a win for everyone!

Tres Hermanas Ranch

Ernesto and Isabel Castro operate their grass-fed beef and organic pastured chicken farm near the town of Cornville, along with their three daughters and their families. They purchased the 70-acre property in 2013.



“The previous owners had three daughters, too, so we kept the name Tres Hermanas,” said Ernesto.

The Castros sell their beef products direct to consumers as “Pure Life Beef.”

The name reflects the pride the Castros place on the well being of their animals. “Being truly pasture raised is the best life any cow can have. They live and roam our beautiful pastures, stress free and happy,” said Ernesto.

“We operate a natural, grass-fed operation, which I consider a higher standard than ‘organic.’ Organic allows for organic grain as feed. Cattle are ruminant animals and they’re healthiest when they eat just grass,” says Ernesto.

The Pure Life name also reflects the family’s philosophy of maintaining healthy soils. “We practice regenerative agriculture and aim to keep carbon in our soils. We

River Friendly Living

A program of the Friends of the Verde River

This new program is intended to inspire a culture of voluntary river conservation. As a certification program, the Friends of the Verde River will use the river friendly living designation to recognize homes, businesses, farms, ranches, real estate developments, congregations communities and others to do their part to protect the Verde River for future generations.

sample our soils every few years to make sure we have the appropriate soil nutrients.”

Mindful of their use of Oak Creek water to irrigate their pastures, the Castros began working with the Conservancy when they first bought the ranch.

“We’re happy that the Conservancy has helped support us to be water efficient. Water in the desert is precious,” said Ernesto. ‘We can’t live without it.’

Ernesto serves on the board of the Mason Lane Ditch, a 160-year-old irrigation ditch that conveys water to his fields from Oak Creek, a tributary to the Verde River. The five-mile-long ditch was built initially by five ranchers. Now those lands are mostly subdivided, and 40 irrigation ditches now bring water to 80 landowners.

“Our ditch was dirt lined and some of the areas were problematic, meaning leaky,” said Ernesto.

“The Conservancy saw the need for infrastructure improvements to help prevent the leaks.

They helped secure funding to survey and engineer a ditch upgrade, including new piping and a control gate. They also secured funding to update our sprinkler system,” says Ernesto.

“This community is an organic-minded community. We’re hoping our efforts help people understand how precious this community is and how precious the water.”

— Tana Kappel

THIS PAGE TOP TO BOTTOM Zach Wolfe and TNC’s John Ford installing pipe to replace the dirt lined ditch. © Kim Schonek/TNC; Jeni O’Callaghan and her husband Mike © Courtesy Jeni O’Callaghan; New sprinkler irrigation system © Courtesy Jeni O’Callaghan

New Arizona Law: Non-Forfeiture of

WATER RIGHTS

This spring, the Arizona Legislature passed, and the Governor signed, a new law that will make it easier for landowners to conserve water without losing their water rights.

The Nature Conservancy has worked on getting this law passed for several years and is now working with the Arizona Department of Water Resources to develop a program to administer the statute. The program is expected to be up and running by August 2021.

“Passing water legislation in Arizona is not an easy achievement,” said Arizona director of The Nature Conservancy Dan Stellar. “It was even more impressive that this was passed unanimously by both the House and the Senate.”

“This is a big accomplishment that will make water conservation significantly easier in Arizona.”



No More “Use it or Lose It” When it Comes to Water

Scott Deeny, the Conservancy’s acting director of conservation and an expert on water law, answers questions about the law.

1. What is the new law?

The new statute allows a surface water right holder to file a conservation plan with the Arizona Department of Water Resources, which is effective for up to 10 years and may be renewed. By filing the plan, the water user may then engage in conservation measures and reduce water use without losing their future right to that water.

2. Why is it important in Arizona?

Under the old law, the failure to use all or a part of a water right for five years could have resulted in forfeiture of that water right, in which case the water right would be relinquished and revert to the state. This new law

creates an exemption to forfeiture and abandonment as long as the water user reduces water use in accordance with the conservation plan approved by ADWR.

3. Why was it needed? How will this law impact our water resources in AZ?

Many surface water users feared that not using the entire amount of their water right each year could leave them with no future right to use that water. This created reluctance to reduce their water use – either through more efficient irrigation or by simply reducing water used. Even worse, it encouraged waste of water in years when the entire amount was not



required. This statute creates the first statewide surface water conservation program, which encourages water users to conserve water which benefits our streams and rivers.

4. What other laws are needed to better manage our limited water resources?

This legislation is the first step in helping Arizona’s water users voluntarily conserve water. By protecting the water rights of people who conserve water, there is one less obstacle for them to be more efficient with their water use. It provides them with one more tool to effectively manage their water rights.

However, many issues still need to be addressed in order to ensure surface water resiliency in Arizona. Statutes related to moving water rights and creating protectible instream flow rights require updates to make them more usable. Resolving water rights claims through the ongoing statewide adjudication process, which is over 50 years old and moving much too slowly, is a necessary step to surface water rights certainty. We’ve definitely made progress, but we have a long road ahead.

VERDE RIVER EXCHANGE Incentives for Water Conservation

The new “nonforfeiture” law will make it easier for surface water rights holders to use less water. And if your surface water rights are in the Verde Valley, you could get paid for the water you don’t use.

How? By participating in the voluntary Verde River Exchange Water Offset Program.

The five-year-old Exchange, a program of the Friends of the Verde River and the brainchild of the Conservancy’s Kim Schonek, is a novel, market-based approach to sustaining flows in the Verde River.

Through the Exchange, a surface water rights holder could be compensated for using less water in a given year without giving up the rights to that water for the following year. That unused water is the basis for an “offset credit” that can be purchased by a groundwater user and paid to the landowner not using the water.

Last year, Rainbow Acres, a residential living facility in Camp Verde for adults with cognitive or developmental disabilities, purchased offset credits for the groundwater it uses. Those credits paid for the surface water that a water rights holder didn’t use.

The idea is to make one user’s water savings match another user’s water use.

Other participants in 2020 include Sinagua Malt, Pines Motel, Southwest Wine Center, Page Springs Vineyard, Merkin Vineyards and the DA Ranch.

“It is not a hard sell,” said Max Wilson, head of the Exchange program at the Friends of the Verde River. “When you give people the opportunity to participate in a solution, they do.”

Since the program was started in 2016, the Exchange has offset the impacts of more than 18.7 million gallons of groundwater pumping.

Laughing Waters &



Happy FISH

in Arizona, year-round flowing creeks are a rarity. One exception: A 20-mile creek running through a stunningly beautiful canyon of the same name: Aravaipa, an indigenous word (some say Apache, some say Pima, some say Papago) said to mean “laughing waters.”

The name fits. As author Ed Abbey described it in a 1982 New York Times article: “The stream is brisk, clear, about a foot deep at normal flow levels, churning its way around boulders, rippling over gravel bars, plunging into pools with bright and noisy vivacity.”

Aravaipa is southeast of Phoenix and northeast of Tucson in the Galiuro Mountains. The creek runs through a 10-mile wilderness canyon with cliff walls scaling 1,000 feet. The stream nourishes a cottonwood-willow riparian oasis for such native desert wildlife as bighorn sheep, bobcats, coatis, box turtles and javelina. The stream — home to spikedace, loach minnow and five other native fish — is widely considered the healthiest native fishery in the Southwest.



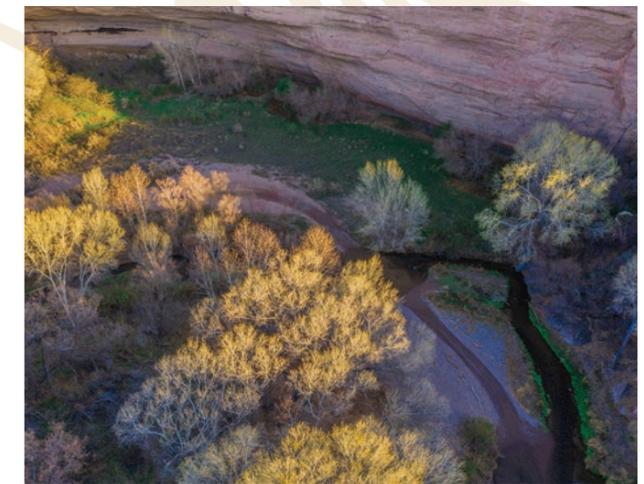
Twenty-five years ago, when Mark Haberstich joined The Nature Conservancy as the Aravaipa preserve manager, the prognosis for the creek was not good.

At that time, an analysis of Aravaipa’s flows showed a declining trend, one that might be expected to continue given the accelerating impacts of climate change. Indeed, the last 20 years have been some of the warmest on record in the desert Southwest. And 2020 was the worst monsoon season in 25 years, producing very little rain.

Yet over the last 10 years, Aravaipa Creek flows are trending upward.

The reason, Mark explains, is that “our preserve lands are acting as a sponge, storing water in the ground and releasing it slowly downstream.”

For the last two and half decades, Mark has focused on keeping this pristine watershed healthy and ensuring the long-term protection of the stream and the riverside cottonwood, willow, walnut, alder and sycamore trees.

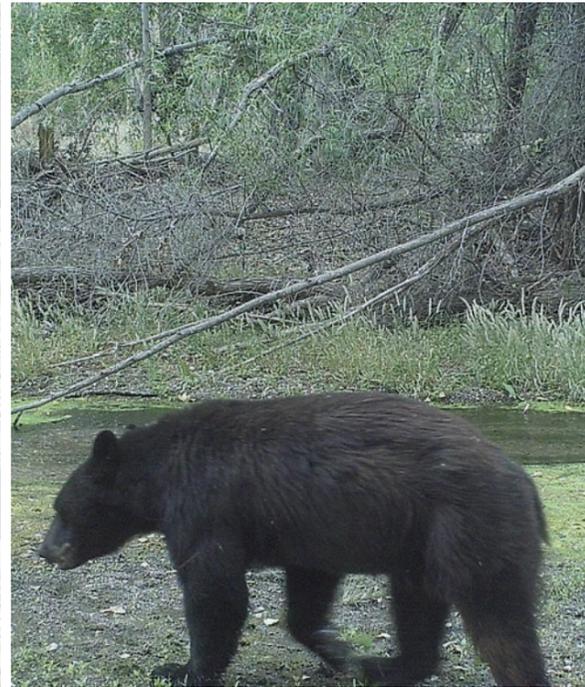


He works in cooperation with the Bureau of Land Management, which oversees the wilderness area cutting through the central gorge. The preserve encompasses 53,000 acres of private and leased land, with cooperative management agreements that extend to 70,000 acres of the surrounding watershed.

When the Cobra Ranch became part of the preserve in 2007, Mark got to work replacing the former alfalfa fields with native grasses and adding shrubs along the creek banks. The native grasses require only a quarter of the water needed by alfalfa and other more traditional crops.

The Cobra Ranch acquisition included the water rights, so the previous water irrigation was retired.

LEGACY CORNER



Mark and his staff induced meanders into the creek and its tributaries, stabilizing the banks and reducing runoff. These efforts promote infiltration during floods, ensuring that more floodwater goes underground and recharges the aquifer.

The health of the native grasses is something of a litmus test for the health of the ecosystem, which is under stress. “We don’t have as much summer rain as they do farther south, so it’s an area that’s become more susceptible to climate change,” Mark said.

The innovative use of fire — including burning at a large scale — is another key component in maintaining the health of the preserve, which lies within one of the largest unfragmented areas in Arizona. Fire has improved the uplands of Aravaipa which benefits the whole watershed and the habitat for bighorn sheep.



now present in the stream’s whole length.

“We still have all the fish we had when I started this job, even though they’ve disappeared from many other Southwest streams,” Mark said.

The native grass field of the Cobra Ranch is abundant with the chatter of grassland birds. And the creek’s gurgling waters and its many tiny fish have something to laugh about.

— Tana Kappel

And the trickling stream. Well, if fishes had wishes, they would all wish for habitat like Aravaipa Creek. A recent fish survey found that spike dace had expanded their range and are

An Enduring Bond with Nature



It was the smell of the ocean air, the taste of sassafras root and the company of a loyal friend, my dog Pepper. An age of innocence, when wandering the woods and swamps in New Jersey had no goal and time was irrelevant. From sandy pine forest to marshes filled with snapping turtles, water moccasins and

bullfrogs, I found the freedom of youth between the ocean, the pines and the sky. At least until my grandparents blew the squeeze horn, signaling dinner was ready and it was time to come home.

These are my first memories of connecting with nature. They became a foundation for a greater spiritual experience with the land beneath my feet: The homelands of the Lenni-Lenape on the Jersey shore, the Seneca Nation of western New York and the Tohono O’odham in southern Arizona.

As the donor relations and Legacy Club stewardship manager for The Nature Conservancy in Arizona, I am

honored and humbled to hear the stories of our most loyal supporters on how they connect with the land and TNC. In doing so, I believe we form a bond with each other, a connection to the world surrounding us and a glimpse into the Divine.

I invite you to share your story, your first experience with nature and why you’ve included TNC in your estate plans.

Please email me, Mark Ryan, at mdryan@tnc.org.

Legacy Club members have made a commitment to the future of nature by putting TNC in their estate plans.



CLOCKWISE Mushrooms © *Marty Cordano*; Poppies © *Christine Conte/TNC*; A white-winged dove feeding on saguaro cactus fruit at the end of a storm. © *Skylar Sherbrooke/TNC Photo Contest 2019*; Children and adults with snake at the TNC Ramsey Canyon Preserve © *Tom Bean*

**NATURE
 THANKS
 YOU**

Your support has helped us to ensure people and nature prosper and thrive, together. Because of you, Arizona and our world will be better for generations to come.

