



Friends of the San Pedro River Roundup

Winter 2014/15

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President's Report

By Tom Wood

As I write my first President's Report for the newsletter, I'm both looking backwards at where we have been and forward to the year ahead. I'm unusually suited to look back, since I have been involved with the Friends and the River for 25 years. I was recently sorting through some old slides (remember slides?) and came upon photos of San Pedro House from around 1996. The house and grounds are almost unrecognizable. Landscaping and improvements to the house and visitor amenities have made a huge difference in making SPH a welcoming, comfortable place. I'm sure a similar photo of Fairbank would be even more striking!

BLM has worked very hard and made significant strides in protecting and enhancing SPRNCA. The Friends have been a major force aiding their efforts. Every time I visit the River, I find volunteers staffing the bookstores, weeding and watering the native plants, leading walks and activities, and working to make the River a better place. Behind the scenes, committees and Board volunteers are answering e-mails, taking care of paperwork, fundraising, meeting with BLM and others, and performing all the myriad tasks necessary to keep an organization running smoothly. I accepted the position of president knowing that the organization included dozens of selfless individuals working toward the common goal of protecting our River and making it a better place. It's humbling to walk the sidewalk at SPH and look at the bricks commemorating the contributions of those who came before and watch the continuing contributions of so many.

Looking forward for the organization, we see new staff coming on board (see article, p. 5), continuation of BLM's planning process (see article, p. 6), and a new slate of activities and programs. As a naturalist, even in February, I see the cottonwoods greening along the San Pedro, hear the calls of the early returning Grey Hawks, and see the first wildflowers and know that spring is not far away. The migration of neotropical birds along the River is a palpable feeling, the pulse of the planet moving up our valley to the entire western United States.

We need to continue to work hard to protect the natural and historic wonders of the San Pedro, but also take some time to enjoy the River. Join us for a hike or take one on your own and marvel that we have a flowing river in the high desert. You can feel grateful that your organization has helped protect this precious and fragile place.



FSPR Annual Meeting

On October 19, Board election results were presented and new Board members were introduced. Outgoing president Ron Serviss shared FSPR accomplishments during the past year, then introduced new president Tom Wood, who shared his vision of the organization (see article, p. 1). Volunteers with at least 100 hours of service during the last fiscal year received recognition awards (see article, this page). Attendees enjoyed BBQ burgers and brats.

FSPR Volunteers Contribute Nearly 11,000 Hours in FY 2014

By Dutch Nagle

Volunteers are the lifeblood of our organization and our programs could not operate without them. In the last fiscal year that ended September 30, FSPR volunteer hours totaled 10,998, for a value of \$238,646. Some 150 people volunteered at least 1 hour during that time frame!

Two women received special awards in Fiscal Year 2014: Chris Long received the “President’s Award” for exceeding over 4000 lifetime volunteer hours, while Renell Stewart had a brick installed in the San Pedro House dedication walkway for volunteering over 2000 lifetime hours.

The following people earned “America the Beautiful” Passes for giving over 400 volunteer hours: Mike Foster, Ann Hartfiel, Dutch Nagle, Gary Noonan, Renell Stewart, Ron Stewart, Ron Serviss, and Sally Rosen. (They also received a store coupon.)

These individuals earned a store coupon for volunteering more than 100 volunteer hours: Ginny Bealer, Mary Bonds, John Broz, Jane Chambers, Tom Clancy, Alice Garrett, Betty Goble, Dave Heck, Gabrielle LaFargue, Sue Leskiw, Dwight Long, Nancy McCarell, Ted Mouras, Dutch Nagle, Eve Nagy, Kathleen Oliver, James Peterson, Regina Rutledge, Joan Spiczka, Jack Whetstone, and Erika Wilson.

Beavers on the San Pedro

By Ron Serviss

When Europeans first came to the San Pedro Valley a few hundred years ago, they found a very different environment from what we see today. Much of the river floodplain was mesquite bosques—shallow, wide swamps. The primary engineer of this ecosystem was the American beaver. Early trappers found so many beaver that the San Pedro was known as the Beaver River. In their drive to extirpate beaver from the San Pedro River valley, it is said that over 2000 were killed in one year. This, along with several other factors, was to have a profound impact on the river.

Jumping ahead to 1989, it didn’t take BLM biologists long to recognize that if they wanted SPRNCA to be the riparian ecosystem it was intended to be, beaver had to be part of the recovery. So over the next several years, problem beavers in other parts of the state were trapped and relocated to the San Pedro. Living up to their reputation for being busy, these enlistees quickly expanded in both numbers and area. It is not at all difficult to locate signs of beaver along many stretches of our river, including herbivory (the chewing on trees and bushes), slides on banks where they frequently leave or re-enter the river, and, of course, their iconic dams. Spotting actual beaver during the dim light of dawn or dusk can be a thrill.

This activity can be challenging in the fall, after we have had healthy monsoon rains and subsequent flooding, which often wipes out the beaver dams. While beaver will normally rebuild their dams once the river level has dropped sufficiently, they don’t always do so in the same location. (Biologists believe it is the sound of running water that motivates the beaver to begin dam construction. One researcher actually placed a tape recording of running water in a field, away from the water, and the beaver covered it with mud and branches, as if trying to dam the sound of the flowing water.) So this is when the fun can begin for us beaver enthusiasts. We begin the game of “Where’s Waldo?,” substituting dams for poor Waldo.



(Left) Entrance to a beaver lodge. (Right) Beaver tracks in the mud. Photos by Ron Serviss.

For the past several years, there has been a family of beaver south of the Hereford Bridge that has constructed dams in several locations. Last summer's floods did an impressive job of altering the landscape along this stretch and the dams were obliterated. However, recent hikes along this stretch have found evidence that the beaver are still there. For now, the water is still quite high and North America's largest rodents appear to be in no hurry to rebuild, but like the swallows to San Juan Capistrano or the buzzards to Hinckley, Ohio, I am confident they will continue to build and to delight.

Continue to check the Friends of the San Pedro River calendar for events. We may offer a walk to some beaver dams later in the year.

Wildlife Corridor Navigation Along the San Pedro River

By Blake Suarez & Oscar Diaz

Located in southeastern Arizona, the San Pedro River flows north out of Mexico into Arizona. It is the last free-flowing river in the Southwest and is an important migration route for many bird species. More than one third of the bird species found in the United States occur along the San Pedro River. In addition to the birds that live here, over 80 species of mammals call this area home.

Cochise College has had an undergraduate research program since fall 2012. During the first year of the program, biology instructor Edmund Priddis wanted to launch a new research venture that would be a combined project of both field and laboratory research methods. Due to the college's geographic location, it was decided to study the San Pedro River because of its important role in the ecology of Cochise County.

This study examines the role of the San Pedro River as a wildlife corridor and also seeks to identify dispersal routes used by wildlife to move between the river and other habitats, particularly the sky islands. The research team's primary goal was to identify the land mammals that traverse the San Pedro using the river as a corridor and to record species diversity. In addition, we wanted to investigate relationships between seasonal patterns and water supply that could affect mammal populations.

Sandy Anderson, director of Gray Hawk Nature Center, provided access to Gray Hawk to study the river. With her vast knowledge of the San Pedro River and southeastern Arizona, Ms. Anderson educated us about mammals along the San Pedro. The team determined that stationary camera traps would be an effective method to obtain desired data on population density and movement patterns of mammals.

The procedure for the research was crafted by Mr. Priddis and implemented by the research team. To record species diversity along the river, high-output covert infrared detecting camera traps, made by Reconyx ©, were stationed near Gray Hawk. The cameras were checked every one to two weeks to ensure proper function and to collect data. During this time, the cameras proved to be effective, based on

the amount and quality of the images provided. The team decided to categorize images based on species, number in the image, and time and date to produce a data base for the creation of frequency graphs.

After organizing photos into files by species, we employed the Pro-tier camera trap data analysis program created by James Sanderson, an expert on small wild cats. The program—used by the Bureau of Land Management, the US Fish and Wildlife Service, and University of Arizona’s local jaguar research—provided insight into our camera trap data. We evaluated frequencies of individual species sightings, as affected by factors such as time of day, moon phase, and activity of other species. One interesting result from this analysis was the percentage of species photographs of pumas (16%), second to the relatively ubiquitous white-tailed deer (48%). We were also surprised to find that the only species pair activity pattern that was statistically significant in terms of similarity was that of the puma and skunks, although these results did not account for the diversity of skunk species in the upper San Pedro area.

By using the same data analysis program used by other research teams working in our region, our researchers at Cochise College can share and compare data sets with others using camera traps in established monitoring efforts in southeastern Arizona, such as San Bernardino National Wildlife Refuge, Leslie Canyon National Wildlife Refuge, and Coronado National Memorial. Our goal is to maintain a mutually beneficial alliance with these local research teams, so that, together, we may identify trends that will produce some meaningful and inspiring results.

As we expand the area for placement of our camera traps, one place of interest is right in our backyard. Behind the Sierra Vista campus of Cochise College runs a wash that ultimately connects to the San Pedro. We thought it would be fascinating to see how many species use this wash as a corridor. With that question in mind, we hid a camera trap where paths used by animals might converge. Particularly of interest to us will be the effect of human activity on the frequency and diversity of the species we see.

An idea we are eager to develop is a neighborhood internet database where local citizens can report animal sightings. By featuring an easy-to-use social media-type interface, we hope to increase community involvement, awareness, and excitement about wildlife research here in Cochise County.

This project is important to the college and the community, as it raises awareness about species that call the San Pedro home and provides insight into the importance of the San Pedro River. To this effect, those that take the time to learn about the research validate our reasons for continuing this program. We would like to thank the Friends of the San Pedro River for taking interest in this program and to Christi Charters for allowing us to pen this report and supporting the research program with her knowledge as an educator and field researcher.

Blake is the current president of the student government association at Cochise College, while Oscar is president of the Phi Theta Kappa chapter. Both plan to obtain a medical degree after graduating from Cochise.

Where Would You Like to Go?

The FSPR has in the past held a number of events only open to its membership. For 2015, we currently plan members only tours of Charleston and Hereford.

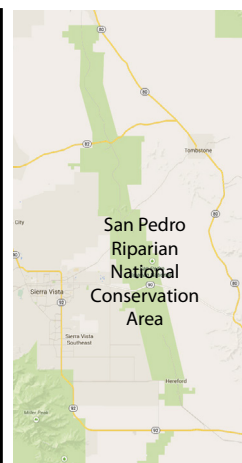
We would like your input. What other sites would you like to visit? Our primary emphasis is of course on sites in the SPRNCA, but if there are other destinations you might want to visit with a group of FSPR members, please let us know. We are working to add more events for 2015 and want your input.

Some suggestions:

Sites on the SPRNCA: Contention, beaver dams

Other sites: Empire Ranch, Kentucky Camp, Ironwood National Monument

Please let us know if you would be interested in any of these or better yet, give us your ideas. **Send us an email at fspir@sanpedroriver.org**



FSPR Seeks Program Coordinator

Friends of the San Pedro River is recruiting for the new position of Program Coordinator. The person hired will perform a variety of duties: administrative support to the officers of the organization; represent the Friends in meetings with other private organizations or government agencies; and prepare and deliver youth education programs. This position has been funded for a year and may be renewed, depending upon resources available. Details concerning the position are in the job description below. Interested parties should contact FSPR at (520) 459-2555 or send a resume to fspr@sanpedroriver.org. The closing date for resumes is April 15, 2015.

Position Summary

This is a full-time (40 hours/week) position to assist in the daily management of administrative activities of the organization, provide support to the president of the Board of Directors, and to develop educational programs for the youth. Position is for one year; employment beyond that period is subject to available funds.

FSPR maintains an office within the US Forest Service Ranger Station at 4070 E. Avenida Saracino, Hereford, AZ. Office duties would include responding to daily phone messages and mail (directing or responding to them as appropriate) and organizing and maintaining office files. This position will coordinate with volunteers, who provide a variety of services to FSPR (e.g., managing volunteer hours, editing a quarterly newsletter). There will be some light bookkeeping and annual reporting duties, as appropriate.

The Program Coordinator will work closely with the president of the Board of Directors, doing a variety of activities that will serve and enhance FSPR's mission. These will be developed in consultation with the president and be appropriate for the interest and experience of the Program Coordinator.

One of the primary duties of this position will be to develop one or more youth educational programs. At least one of these programs must meet the Bureau of Land Management (BLM) guidelines for the Hands on Land (HOL) grant. The Program Coordinator will work closely with FSPR volunteers, BLM staff, and other nongovernment organizations and as appropriate. Weekend work will often be required.

The Program Coordinator will attend a number of meetings, which may include the FSPR Operations Committees, the Board of Directors, ad hoc committees, and meetings of related organizations, as deemed beneficial to organization.

Duties and Responsibilities

The specific duties of the Program Coordinator will be developed in consultation with the president and reflect the changing needs of the organization and the interests and experience of the person hired. These duties should include:

- Staffing the FSPR office several days a week, to answer phone messages and deal with the mail;
- Meeting with the FSPR president frequently in person or by phone or email, to consult on ongoing activities;
- Working with the treasurer, perform light bookkeeping duties using Quickbooks and/or other bookkeeping software and assisting with creating year-end reports;
- Attending a variety of FSPR committee meetings and those of other organizations, as appropriate;
- Performing communication duties, such as creating PSAs and event flyers and helping with their distribution;
- Assisting with maintenance of the FSPR website, Facebook page, and other appropriate social media;
- Coordinating among volunteers to ensure accurate, ongoing records concerning structure, budget, membership, and volunteer hours;

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- Developing one or more youth programs, with the intent to get young people involved in the conservation and enhancement of the San Pedro River. At least one of these programs must meet the requirements of the BLM Hands On Land Program, for which FSPR has received a grant. The Program Coordinator may work with other FSPR volunteers to seek additional grants to fund these programs;
- Submitting a monthly report to the president on the monthly activities and the status of various programs;
- Assisting with fundraising activities.

[PLEASE NOTE: While this may appear to be an extensive list of duties, FSPR has a very active volunteer base, contributing well over 10, 000 hours annually. Many of these duties will be to simply coordinate the activities of the volunteers.]

Desired Qualifications

- Experience in program development and management;
- Experience in education and/or working with youth;
- Excellent written and oral communication skills, including social media;
- Excellent knowledge and experience in a variety of computer applications.

Personal Qualifications

- Adaptable, flexible, and cooperative;
- Organized and able to multi-task;
- Self-motivated, “get it done” ability, able to meet deadlines.

Compensation

Beginning annual salary is \$26,000. An additional \$200 per month will be provided to assist with the purchase of personal health insurance. Two weeks’ vacation the first year (after six months).

Status Report on Resource Management Plan

[Reprinted from BLM SPRNCA Newsletter. vol 2, January 2015]

The Bureau of Land Management’s Gila District, Tucson Field Office is currently preparing a Resource Management Plan for the San Pedro Riparian National Conservation Area (SPRNCA) in southeastern Arizona that will guide the management of the area for the next 15 to 20 years. Located in Cochise County, the SPRNCA protects more than 44 miles of the San Pedro River as it flows north from the U.S.-Mexico border near Palominas to St. David near Benson. It is a key component of the BLM’s National Conservation Lands, a system of special places covering 30 million acres nationwide.

Where are we now?

The BLM is currently in the alternative development phase of the San Pedro Resource Management Plan (RMP). Alternatives are a key component of the federal land use planning process, a step that requires the BLM and other agencies to formulate various management options and analyze their potential effects. The goal is to provide a logical and accurate basis for the selection of final plan.

In order to effectively address the robust public feedback gathered during scoping, the BLM is taking a measured and deliberate approach to alternative development.

Planning guidance requires the BLM to develop a broad and reasonable range of alternatives grounded in the issues raised during scoping. The alternatives process recognizes that for any given issue, there may be multiple options to resolve it.

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There's more than one way to crack an egg (or conserve a river). The alternative development and analysis process is at the core of the National Environmental Policy Act, serving as a means to weigh the pros and cons of various land stewardship options. Public and stakeholder input have been essential in helping the BLM craft a range of alternatives.

The planning process began by asking:

» What are the management issues on the SPRNCA by that need to be addressed in the future?

This was the focus of the scoping phase (April to September 2013), and helped set the stage for the remainder of the planning process. Scoping helped the BLM identify the following issues:

- » Planning area boundary
- » Recreation and Travel Management
- » Special Designations
- » Fish and Wildlife
- » Special Status Species
- » Grazing and Range
- » International Border
- » Cultural Resources
- » Socioeconomics

Fast forward to 2015 and the BLM is nearly finished with the process of crafting a range of alternatives that would each address the relevant issues in different ways.

Each alternative would strike a unique balance of management objectives, land use allocations, and strategies. One alternative, the "no action" alternative, will depict current management and decisions moving forward unchanged. All other alternatives suggest modification or additions to the current land use decisions.

What's Next?

In late spring 2015, BLM will present the draft range of alternatives to the public cooperators and other stakeholders in order to solicit feedback. Details of this phase of outreach will be distributed once they are finalized.

BLM's work over the next several months will be geared towards the completion of the Draft Resource Management Plan and Draft Environmental Impact Statement (DRMP/DEIS). The DRMP/DEIS will take the finalized alternatives and analyze their likely effects.

Once the DRMP/DEIS is complete, the public will be notified and a series of meetings will be announced to help introduce stakeholders to the DRMP and DEIS. These sessions will provide for focused discussion on key areas for input and will offer guidelines on how to comment effectively on drafts during the official comment period. After carefully considering all comments on the DRMP/DEIS, the BLM will share a proposed RMP/Final EIS (FEIS).

Remember to take advantage of the great resources created so far, including videos of expert presentations from the summer 2013 Educational Forums and detailed notes from the 2014 Alternatives Development meetings and Resource Field Trips. All past meeting materials can be found on the BLM's e-planning webpage.





Green Kingfisher along the San Pedro, November 2014. Photo by Tony Battiste.

Ramsey Canyon Christmas Bird Count Results

By Robert Weissler

The 2014 Ramsey Canyon Christmas Bird Count (RCCBC) was held on Saturday, December 20, 2014. Unlike previous years, this year's count was a Do-It-Yourself (DIY) CBC. Team leaders from prior years were encouraged to cover the same area as in the past, but this time, report the results to the eBird database. Despite much lower participation and lack of a compiler, the count still managed 108 species with only 14 checklists submitted to eBird. Total bird numbers were down to 3,433, likely due to fewer participants.

Although the seed crop seemed very good, sparrow numbers were low. Finding a second neighborhood site in the vicinity of Ash Canyon for wintering Botteri's Sparrow was noteworthy. A couple Fox Sparrows of the gray-headed Rocky Mountain form were found in upper Miller Canyon, just a mile below the crest of the Huachuca Mountains. That species also has occurred in the high-elevation scrub habitat up there. An adult male Hepatic Tanager was a good find in Miller Canyon, less than a half mile above Beatty's property along the main trail. The Sierra Vista Environmental Operations Park recorded high counts for Gadwall and Cinnamon Teal.

While this count excelled last year with an impressive number of participants—namely, an all-time record of 104—this year, the count relied on self-motivated participants. Nevertheless, there are still plenty of local birders who enjoy a beautiful day outdoors counting birds.

Thanks to everyone who has supported this count over the years. This year, the count was something of an experiment in which a lot of was learned, so next year, this DIY approach will be more refined... unless, of course, someone has a burning desire to run the count themselves to continue its tradition as one of the leading non-coastal counts in North America. Mark your calendars for Saturday, December 19, 2015 for the next RCCBC.

Appleton-Whittell Christmas Bird Count Summary

By Robert Weissler, Compiler

The 9th annual Appleton-Whittell Christmas Bird Count (AWCBC) took place on Saturday, January 3, 2015. The tentative total is 102 species, while 4,407 individual birds were recorded. The weather was initially well below freezing, but became mild as the morning wore on. The total number of individuals seen was slightly below last year. Nevertheless, there were some excellent birds encountered during the count. Elegant Trogon was just missed in Huachuca Canyon (as was the Sinaloa Wren), but the trogon was tallied in Blacktail Canyon. The most-unexpected bird was certainly the Crested Caracara that overflowed the parking lot of the Audubon Appleton-Whittell Research Ranch just as the teams in the Sonoita Valley headed into the field!

Some tough grassland sparrows were present and accounted for: Botteri's, Grasshopper, and Baird's Sparrows were tallied. During count week, the mouth of Huachuca Canyon provided Townsend's Warblers, a Painted Redstart, and an adult male Hepatic Tanager. Unlike recent years, Anna's Hummingbird turned up, despite the lack of feeder watchers for this count. Among the misses were teal, Rock Pigeon, Hairy Woodpecker, Steller's Jay, Starling, Lark Bunting, and Yellow-eyed Junco. Mark your calendars for Saturday, January 2, 2016, for the next AWCBC.

For details of any Audubon Christmas Bird Count, visit the CBC website at <http://birds.audubon.org/christmas-bird-count>.

National Conservation Lands

By Ron Serviss

From the time of Teddy Roosevelt, our government has recognized the need to preserve some of our nation's most incredible natural and historic places, so that they may be enjoyed by current and future generations. They have protected such iconic places as Yosemite, Yellowstone, and Williamsburg. These national parks, wildlife preserves, places of historic importance, etc. are administered by various branches of the Departments of Interior and Agriculture.

One branch, the Bureau of Land Management (BLM), has had the responsibility of managing those lands designated for extractive uses, such as mining, grazing, logging, and drilling. This changed in 1983, when Congress acknowledged the value of much of the land under BLM's management was beyond just extracting resources. That year, it designated the first wilderness area to be managed by BLM. In 1996, President Clinton established the first national monument to be administered by BLM, the Grand Staircase-Escalante National Monument in southern Utah. This was the beginning of the National Conservation Lands program under BLM's stewardship.

The National Conservation Lands have grown in the past 19 years to now include 28 million acres of lands, rivers, and trails that contain some of the West's most spectacular landscapes. They include national historic trails, wilderness study areas, wild and scenic rivers, and seven other designations. It is difficult, if not impossible, to convey in words alone just how special these places are.

What does this have to do with Sierra Vista?

In 1988, the San Pedro Riparian National Conservation Area (SPRNCA) was designated as the first riparian area to be protected under the National Conservation Lands. SPRNCA consists of roughly 58,000 acres and protects about 40 miles of the river, from the Mexican border north to Benson. It is one of the most important riparian habitats, of which there are only about 5% left in Arizona today. (The other 95% has been lost due to development, groundwater pumping, and drought and the resulting loss of surface water flow.)

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As we look at the whole of the National Conservation Lands and recognize all of the incredible places they contain, we can be proud of the fact that Sierra Vista and its neighboring communities have been a part of this from the beginning. If we take it a step further and start to explore the San Pedro's uniqueness, we begin to understand why Representative Jim Colby, Senator John McCain, and many others were compelled to protect it. It has one of the finest examples of a Clovis kill site, dating back over 12,000 years. It has the remains of a Spanish presidio, dating back to when our nation's forefathers in Philadelphia were crafting our independence. It has the remains of the mill towns that supported the Tombstone silver boom of the late 1800s. In short, SPRNCA contains examples of much of the history of our nation, all within an hours' drive of Sierra Vista.

Additionally, as a perennial stream flowing through a desert, the San Pedro is a haven for wildlife. For starters, there are over 80 species of mammals in or near SPRNCA and over 350 species of birds that appear here at different times of the year.

To sit quietly next to its running water in the cool shade of the cottonwoods on a hot summer afternoon is a way to relax like no other. It takes many of us back to the much simpler time of our childhood. Today's kids need to experience this. It is a place to be enjoyed by hikers, dirt bikers, equestrians, fishermen, photographers, artists, and many more.

"Why should I care?" you might ask.

"I don't want to go down there with all the bugs and thorns and creepy things." The point might be that while you don't want to go, a great number of folks do. Thousands of people from around the state, our country, and indeed the world, come to Southeast Arizona to learn of our history first-hand and to see and enjoy our abundant wildlife. They come here to see birds they can see nowhere else in the United States. And they spend money when they get here. Sierra Vista is the hub for their visit and they stay in our hotels, eat in our restaurants, and buy in our stores. Studies done by the University of Arizona and others have shown that ecotourism brings hundreds of thousands of dollars into our economy. Over 300 people in Cochise County owe their employment to ecotourism.

So here in Sierra Vista, we are part of a great system of outstanding preservation of the natural and historic West. Enjoy it on your own or join the Friends of the San Pedro River on one of their free guided walks, and above all, be thankful it is still here.

[NOTE: This article was published in the *Sierra Vista Herald* in February 2015.]

Fairbank Day 2014

By Robert Weissler

The theme for last year's October 25 celebration of the Fairbank townsite was "The Town Comes Alive!" Over 400 visitors attended. Participating organizations included Amerind Foundation, Brown Canyon Ranch, Buffalo Soldiers, US Forest Service and Smokey Bear, San Pedro River Arts Council, and Sierra Vista Historical Society. The Tombstone Vigilantes re-enacted the Great Train Robbery, while B Troop (4th US Cavalry Regiment) demonstrated firing a cannon and paraded on horseback. Van Fowers gave a living history presentation about Jeff Milton. There were walks to the cemetery and former train depot sites, a hike to Presidio Santa Cruz de Terrenate, and a guided tour of the townsite. There were exhibits from the Murray Springs Clovis Site, an Atlatl (spear) throwing

contest, and flint-knapping and adobe brick-making demonstrations. The Fairbank Family Reunion drew former residents. Local authors Suzanne Arnold, Joyce Aros, and Betty and Charlie Escapule held book signings. EarthPicks provided folk music, while Big Woody's served food. We thank BLM staff and FSPR volunteers for supporting another terrific event.



Massive Storms and Floods, 1- or 2-mile-wide River, People in Trees, and Cutting of the San Pedro River Arroyo

By Gerald R. Noonan, PhD

Floodwaters from massive storms in the Southwest cut arroyos along many waterways from the 1880s into the 20th century. The first written record of arroyo formation along the San Pedro was a heavy rain in August 1881 that washed away a dam upstream of Charleston (Rose, 2012, p. 62), resulting in water from the dam widening the channel at Charleston. In mid-August 1886 a six-foot-high wave of water swept down the San Pedro River at its junction with the Gila (Turner et al., 2003, p. 31, p. 297). In late August 1886 there was four feet of water on the side of the railroad tracks between Contention and Benson (Turner, et al., 2003, p. 31, p. 297).

Storms did considerable damage along the Lower San Pedro River in September 1887 (AWE, 1887a, 1887b; AWJM, 1887; CC, 1887). Floods destroyed crops other than hay for nearly the entire length of the river from Benson to the Gila and reduced some crop fields to bare sand. On September 17, 1887, the San Pedro River in the Mammoth area had “higher water than has ever been known before.”

Floods occurred in the Tres Alamos area in late July 1889. The *Arizona Weekly Citizen* reported (AWC, 1889) on July 27, 1889, “There has been plenty of rain recently on the San Pedro. The river was on a boom last week—over a half mile wide and from five to twenty feet deep. The bridge was knocked down and cannot be used at present for crossing”

The first written record of extensive arroyo digging along the San Pedro River is associated with severe monsoon storms of 1890. These storms traumatized people, produced severe damage along the Lower San Pedro River, and changed the river channel. The August storms dug an arroyo an average of 10 feet deep along the river in a region approximately 18 miles below Tres Alamos (AWC, 1891). Captain Nelson Van Alstino of Tanque Verde said (AWE, 1890a) of the riparian countryside from Tres Alamos to the Gila, “all of it is gone, destroyed, torn up, ‘vamosed’ down with the high water.” Flooding at Mammoth cut a channel 30 feet deep and exposed archaeological relics (Turner et al., 2003, p. 31, p. 297). The *Arizona Silver Belt* noted damage to farms and settlements from Benson to the mouth of the San Pedro and reported that the river near Mammoth and Dudleyville moved its channel from one place to another (ASB, 1890). In early September, the river channel widened significantly and threatened properties in Dudleyville (AWE, 1890b). The new 10-foot-deep arroyo below Tres Alamos subsequently reduced flood water damage during a March 1891 storm by containing much of the floodwaters, even though their volume was greater than that in 1890 (AWC, 1891).

Newspaper accounts demonstrated the severity of the 1890 storms. The *Tombstone Prospector* reported (TP, 1890a) on July 29:

A tremendous cloudburst occurred in and about Bisbee at half past eight last night. Four houses swept away and several others badly wrecked. The body of a young man . . . was found last midnight.

The next day, the *Tombstone Prospector* stated (TP, 1890b):

The work of destruction and death [in Bisbee] was fully completed in less than twenty minutes after the first drop of rain fell. The storm gathered rapidly and as the rain was soon falling in torrents the people hastened to the shelter of their homes, little anticipating that they would so soon be driven out in the storm, homeless. The lightning was almost a LIVID GLARE, and the peals of thunder were deafening; but soon above the din and crash rose the shrieks of frightened victims, who were obliged to rush from their deluged homes to places of safety further up on the hills. Houses began to give way with a crash and yield to the flood, which carried everything before it.

....

The storm of Monday night seems to have spread over a large portion of the Territory.

The rain that visited Tombstone had spent little of its force before reaching Fairbank, and the water swept down, transforming the entire valley into a lake. The International Hotel, which was so badly damaged by a recent storm, is a complete wreck from the effects of last night's deluge. Several yards of track south of the depot are washed away and nearly all of the houses along the main street were flooded. At the Montezuma Hotel, which stands somewhat higher than the adjoining buildings, the water nearly reached the floor of the porch.

The newspaper noted that on the night of the storm, there was a lot of water passing through Walnut Gulch near Tombstone: "There was quite a river, whose roar could be heard at the outskirts of town."

On July 31 the *Tombstone Prospector* stated (TP, 1890c):

The storm of Tuesday night made sad havoc all along the San Pedro river, which soon rivaled the Mississippi in appearance, the entire valley being flooded. All the bridges south of Charleston are carried away and three of the railroad bridges between Fairbank and Benson.

The *Tombstone Epitaph* wrote on August 2, 1890 (TE, 1890):

The great downpour of the past few days seems to have been pretty general over southern Arizona.

....

The Body of One Man found at Bisbee and Two Others Missing—Much Damage Done.

Last Monday evening. [July 28] about 4 o'clock, rain began falling and in a few minutes increased to a flood and continued about an hour and a half. Old-timers say that more water fell in that time than ever before in their recollection. The storm was circular and seemed to revolve around Tombstone and vicinity. All the gulches were filled with raging torrents and no one ventured across the streets while the storm was at its height. All bridges between here and Fairbank were washed away and those living in the track of the waters suffered the loss of their gardens and fruit trees, in several instances three and four feet of sand being left on their cultivated land. Wells were filled up, reservoirs broken and much other damage done. No loss of life.

....

Fairbank was flooded to a depth of several feet and nearly all the houses partly filled with sand and mud. Considerable damage was done to property but no loss of life is reported. The San Pedro River was higher than ever before known, in many places flooding the valley several feet.

On August 2, 1890 the *Arizona Weekly Citizen* said (AWC, 1890) that in the Benson region, "The valley is nearly all under water as far as can be seen from here."

The *Tombstone Epitaph* reported on August 7, 1890 (as quoted by Martin, 1951, p. 135):

The storm Tuesday night proved to be the most severe ever known in this part of Arizona. Reports from outside districts show the rainfall to have been enormous, and in many places the hail was terrific . . . Nearly every gulch of any size shows a watermark of from eight to twenty-five feet, and in many places bedrock that has not been exposed since the year one is now uncovered . . . [N]o loss of human life . . . but much stock was drowned . . .

The San Pedro has ceased to be a river and is a moving sea of raging and foaming waters, carrying everything within its reach—fences, corrals, trees, orchards, gardens, and in many cases stables and farming implements. No such flood was ever known before...

On August 7, 1890 another heavy rainstorm in the Tombstone area produced severe flooding (TP, 1890d, p. 4):

FAIRBANK GONE

Shortly after midnight a roar of rushing water was heard from the direction of Tombstone and was a warning to the people to get out of their houses and seek higher ground. In many instances

but a few moments elapsed between the flight of the inhabitants and the coming of the water. The volume of the latter was variously estimated and was sufficient to sweep through houses four feet above ground and carry everything before it. At the same time the wind blew a hurricane, and the rain although not heavy added to the terror of the moment. Many persons rushed from their houses in a frantic condition and narrowly escaped being drowned.

....

The stage road from Tombstone to Fairbank is obliterated, and no evidence of this once smooth driveway can be found.

....

The Storm.

Yesterday was a day by itself, and was characterized by a lack of clouds and signs of rain. Up to 10 o'clock the sky was clear, but a black bank of clouds hung over the horizon in the southeast and the heavens in this particular direction were aglow with perpetual lightning. This cloud at 11 o'clock moved rapidly toward the northwest and at midnight reached Tombstone. The glare of lightning, which was accompanied by thunder, was incessant. The glare was blinding to one's eyes and the fact that no thunder was audible caused a feeling of wonderment.

The wind blew furiously and rain fell in torrents. It was a terrible storm, and one that but few people care to ever witness again. Many persons dressed themselves and prepared for the worst. The streets were knee-deep with water. Many roofs were unable to carry off the water and overflowed the gutters into the rooms below.

....

The fall recorded of 2 and 30/100 of an inch of rain is unprecedented in the history of Tombstone. [emphasis added]

The *St. Johns Herald* reported (SJH, 1890) on August 21, 1890, "The San Pedro was reported to be **two miles** wide at Benson yesterday and higher than ever before known." [emphasis added]

A tongue-in-cheek article illustrated the severity of the 1890 floods (TP, 1890d, p. 1):

LOOKING FORWARD The Situation Ten Years Hence Illustrated. The Survivors of the Flood Gather at Phenix.

Anniversary. Phenix, August 8 – The re-union of the survivors of the flood of 1890 is being held in this city. Speeches are being made and stories related of the time when the San Pedro river was not navigable and ocean steamers were obliged to unload their freight for Tombstone at San Francisco.

Heavy rains in the Upper San Pedro River Valley in July and August 1893 caused floodwater damage to ranches and homes (ASB, 1893; AWC, 1893; Oasis, 1893a, 1893b, 1893c). A severe storm in early August 1894 produced floods that again damaged Fairbank, resulted in water six inches above the rails of the Benson railroad bridge and eight inches deep in the town's train depot, washed away railroad tracks and bridges, and extensively damaged farmland (Dobyns, 1981, p. 141; Oasis, 1894).

Severe monsoon floods occurred along the Upper San Pedro River in 1896. On July 21, 1896, floodwaters washed away a bridge north of Fairbank and covered railroad tracks between Fairbank and Benson (Oasis, 1896). A 10-hour continuous heavy downpour fell in the Upper San Pedro River Valley on July 23, 1896 (TP, 1896a). Very heavy rainfall south of the old town of Charleston on August 4, 1896 (TP, 1896b) resulted in floodwaters damaging railroad tracks between Fairbank and Bisbee and making a sound "whose roaring was as that of a heavy train of cars on trestle work." A 12-mile-wide cloudburst in the Whetstone Mountains on October 1, 1896 produced floods that caused at least six deaths and extensive property destruction in Benson (AR, 1896; AWC, 1896a). The floodwaters were several feet deep in the main street, washed the large express office up against the railroad depot, and left at least three feet of mud in the baggage and waiting rooms of the latter building. On October 13, 1896 heavy rains resulted

(TE, 1896) in floods that in the Benson area washed away track about half a mile east and west of the bridge over the San Pedro River, in some places eroding the ground to a depth as great as four feet. The Lower San Pedro River was constantly changing course, and places that were garden spots a few years ago became portions of the riverbed (AWC, 1896b).

The floods of 1896 and of previous years resulted in the Lower San Pedro River cutting an arroyo along itself. Rancher Charles Bayless reported that within four or five years in the 1890s, erosion in the Redington area cut the San Pedro River channel to a depth varying from three to 20 feet (Griffiths, 2011, p. 13-14, 21-22 abs.). W.A. Cunningham, postmaster of Dudleyville, stated (AWC, 1896c) that with each high flood, the river washed its banks and dug the channel deeper, ruined irrigation ditches, and destroyed much of the bottomland along the river. By December 1896, the bed of the river was several feet below the head of a formerly useful irrigation ditch.

The *Arizona Republican* reported (AR, 1899) on July 15, 1899, "The San Pedro River has been a raging torrent during the past few days, and many ranchers along its banks have been overflowed." On July 21, 1899 the *Tombstone Prospector* noted (TP, 1899) that "Ranchers coming in from the San Pedro, say that the river is running bank full, owing to heavy rains in that region." The phrase "running bank full" suggests that a substantial sized arroyo confined much of the storm water.

Monsoon floods in August 1901 damaged all or almost all ranches along the Lower San Pedro River (FT, 1901a, 1901b, 1901c). The river changed channels, and Mr. Whellock found his ranch was on the opposite side of the river from where it once was.

There were also severe floods along the Upper San Pedro River in August 1901 (ASB, 1901; TE, 1901). A cloudburst in the Huachuca Mountains and the San Pedro River Valley resulted in floodwaters washing away 10 miles of New Mexico and Arizona Railroad tracks. Storm waters washed out the railroad bridge across the San Pedro River near Contention, making it three times that the railroad company lost that structure during the 1901 rainy season. Floodwaters in the Contention area scoured the bed of the river nearly 10 feet deep.

Floodwaters along the Upper San Pedro River did damage and enlarged the arroyo in July and August 1904 (BDR, 1904a, 1904b, 1904c; 1904d). Storm water on July 30 washed away a large railroad bridge across the San Pedro River below Fairbank just a few minutes after a passenger train crossed it. In August, floodwaters caved in the banks of the San Pedro River in the Charleston area, resulting in the enlarged river channel being dangerously near to railroad tracks.

Floods occurred along the San Pedro River in January and March 1905 (BDR, 1905; CS, 1905). The storm waters in January did considerable damage to farms in the Dudleyville area. In mid-March, floodwaters carried away a small railroad bridge in the Fairbank region.

On August 17, 1914, a severe rain caused damage along the Upper San Pedro River. The *Tombstone Epitaph* reported (TE, 1914):

TUESDAY

Rain Causes Big Flood

The severe rain had in southern parts of the state on Monday evening seems to have been general . . . the Chinese gardens, located about a mile from Fairbank suffered heavy losses from the flood. Their entire crop of vegetable were entirely ruined by the waters, which uprooted trees and left a layer of mud and water over all the land. . . .

The water came up to the bottom of the new state bridge at Fairbank and much of the approaches were washed away and are being repaired. The railroad bridge at Contention was also washed away. . . .

A week of practically unbroken rainfall in southeastern Arizona produced great flood damage in late December 1914 (BDR, 1914). Storm water caused great damage to railroad tracks and farms from Hereford to Benson and washed away dams.

*[at] several points along the river the raging torrent pouring down the valley was . . . in the neighborhood of **one mile wide** [emphasis added]*

....

Several families in the neighborhood of St. David . . . spent yesterday in the trees in their yards or on the tops their homes or barns. Water in their farms and residences was from three to ten feet deep

....

*The state highway bridge at Fairbanks was completely under water. At this point the water in the San Pedro valley was estimated as **over one mile in width**. . . [emphasis added]*

On February 6, 1915, a storm in Cochise County resulted in an eight-foot-high bank of water rushing down the Upper San Pedro River and damaging the aqueduct pipe from the Huachuca Mountains to Tombstone where it crossed the San Pedro River between Lewis Springs and Charleston (TE, 1915). Roads in Cochise County then were still mostly nearly impassible because of flood damage in late December 1914 (BDR, 1915). The bridge across the San Pedro River at Hereford could support only lightly laden vehicles. Damage in early 1915 from “unusual floods” resulted in Cochise County deciding in March 1915 to spend \$12,753 to replace the badly damaged bridge across the river at St. David.

A flood on August 3, 1919 washed away a new \$30,000 concrete bridge across the San Pedro River at Benson (BDR, 1919).

Severe flooding occurred along the San Pedro River in late September and early October 1926. U.S. Geological Survey data indicated that between 1916 and 2013, the highest flow of water in cubic feet per second at the Charleston gauge occurred on October 9, 1926 (USGS, 2015). The *Arizona Daily Star* (as quoted by Tellman and Hadley, 2006, p. 47) reported:

Roads and bridges were frequently destroyed in the early days. The flood of 1926 was the greatest flood ever. Most of the water came down in the river over a 3-day period, knocking down bridges throughout the area. Every highway and railroad bridge on the San Pedro river from the International boundary line to where it flows into the Gila River below Mammoth were either destroyed or rendered useless last Monday evening and Tuesday morning when the San Pedro River, swollen by a three day rain, went on the most destructive rampage in its entire history.

Floods continued to enlarge the arroyo along the San Pedro River until approximately the 1930s, when climate change resulted in the river starting to deposit sediments that later were to provide habitats for riparian forests (Webb, et al. 2014, p. 34).

Humans regarded the down-cutting of the San Pedro River into an arroyo as a catastrophe. However, without the formation of the current arroyo, there would have been few habitats for the beautiful cottonwood and Goodding’s willows forests that line much of the river. The down-cutting of Southwestern arroyos during prehistoric and historic times were processes of nature. Southwestern waterways cut down into arroyos, filled in with sediments, and then cut down again into arroyos at least six times prehistorically. Riparian habitats prehistorically changed and changed and changed. These beautiful habitats will continue to change if humans respect and preserve the natural processes that occur along waterways.

[NOTE: A future article will examine some of the hypotheses that scientists have debated about arroyo formation, including how humans influenced arroyo formation during the 18th and 19th centuries.]

References Cited

- AR. 1896. Arizona Republican, p. 1. Big Floods at Benson. Cloudburst in the Whetstone Range. Damage Done to the Southern Pacific. Buildings Washed Away and Several Lives Reported Lost. Friday October 2, 1896. (PDF downloaded July 21, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84020558/1896-10-02/ed-1/>).
- AR. 1899. Arizona Republican, p. 3. Saturday July 15, 1899. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84020558/1899-07-15/ed-1/seq-3/>).

- ASB. 1890. Arizona Silver Belt, p. 3. Saturday, August 30, 1890. (PDF downloaded November 14, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84021913/1890-08-30/ed-1/seq-3/>).
- ASB. 1893. The Arizona Silver Belt, p. 1. Saturday, September 2, 1893. (PDF downloaded December 4, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84021913/1893-09-02/ed-1/seq-1/>).
- ASB. 1901. The Arizona Silver Belt, p. 1. Flood Damages in Arizona. Thursday, August 15, 1901. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84021913/1901-08-15/ed-1/seq-1/>).
- AWC. 1889. Arizona Weekly Citizen, p. 3. Saturday, July 27, 1889. (PDF downloaded November 4, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1889-07-27/ed-1/seq-3/>).
- AWC. 1890. Arizona Weekly Citizen, p. 2. Saturday August 2, 1890. (PDF downloaded November 13, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1890-08-02/ed-1/seq-2/>).
- AWC. 1891. Arizona Weekly Citizen, p. 2. San Pedro Notes. March 14, 1891. (PDF downloaded November 20, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1891-03-14/ed-1/seq-2/>).
- AWC. 1893. Arizona Weekly Citizen, p. 1. Territorial News. July 15, 1893. (PDF downloaded November 29, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1893-07-15/ed-1/seq-1/>).
- AWC. 1896a. Arizona Weekly Citizen, p. 4. October 10, 1896. (PDF downloaded December 13, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1896-10-10/ed-1/seq-4/>).
- AWC. 1896b. Arizona Weekly Citizen, p. 4. October 24, 1896. (PDF downloaded December 13, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1896-10-24/ed-1/seq-4/>).
- AWC. 1896c. Arizona Weekly Citizen, p. 3. December 19, 1896. (PDF downloaded December 14, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn82015133/1896-12-19/ed-1/seq-3/>).
- AWE. 1887a. Arizona Weekly Enterprise, p. 3. September 3, 1887. (PDF downloaded October 28, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn94052364/1887-09-03/ed-1/seq-3/>).
- AWE. 1887b. Arizona Weekly Enterprise, p. 2. September 17, 1887. (PDF downloaded October 28, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn94052364/1887-09-17/ed-1/seq-2/>).
- AWE. 1890a. Arizona Weekly Enterprise, p. 1., 3. Saturday, August 23, 1890. (PDF downloaded November 14, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn94052364/1890-08-23/ed-1/seq-1/> and <http://chroniclingamerica.loc.gov/lccn/sn94052364/1890-08-23/ed-1/seq-3/>).
- AWE. 1890b. Arizona Weekly Enterprise, p. 3. Riverside Items, p. 4. From Dudleyville. [Via Tucson Citizen] September 6, 1890. (PDF downloaded November 16, 2014 and January 5, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn94052364/1890-09-06/ed-1/seq-3/> & <http://chroniclingamerica.loc.gov/lccn/sn94052364/1890-09-06/ed-1/seq-4/>).
- AWJM, 1887. Arizona Weekly Journal-Miner, p. 2. Wednesday, September 21, 1887. (PDF downloaded August 29, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn85032938/1887-09-21/ed-1/seq-2/>).
- BDR. 1904a. Bisbee Daily Review, p. 1. Campers Caught in the Raging San Pedro. Wagon Boggs Down in Mid Stream, and Cow Punchers Come to Rescue of Bisbeeites. & Radical Measure to Improve Range. J.J. Riggs, of Cattle Sanitary Board, Favors Driving off Cattle. Cattle Stealing at an End—Riggs Would Have All Cattle Taken from Ranges for Next Ten Years to Re-seed Ground. Saturday, July 23, 1904. (PDF downloaded January 3, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1904-07-23/ed-1/seq-1/>).
- BDR. 1904b. Bisbee Daily Review, p. 1. San Pedro Bridges Gone . River Highest Stage Yesterday in Recollection of Oldest Inhabitant. Heaviest Flood Yet. Doubtful if Train from Benson Will Arrive in Bisbee before Monday. S. P. Branch to Nogales Tied Up— All Bridges on San Pedro Washed Away. Sunday, July 31, 1904. (PDF downloaded August 15, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1904-07-31/ed-1/seq-1/>).
- BDR. 1904c. Bisbee Daily Review, p. 2. Destroyed the Crop. Friday, August 5, 1904. (PDF downloaded January 3, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1904-08-05/ed-1/seq-2/>).
- BDR. 1904d. Bisbee Daily Review, p. 7. Douglas Express Business Growing E. P. & S. W. Compelled to Add Another Car to Accommodate the Constantly Growing Volume. Douglas, Aug. 26. . . . Pile Driver Outfit. August 27, 1904. (PDF downloaded January 4, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1904-08-27/ed-1/seq-7/>).

- BDR. 1905. Bisbee Daily Review, p. 8. Railroads Knocked Out By Rains. E.P. & S.W. Loses Bridge beyond Fairbank and Takes to S.P. Track. Saturday, March 18, 1905. (PDF downloaded January 4, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1905-03-18/ed-1/seq-8/>).
- BDR. 1914. Bisbee Daily Review, p. 1, p. 3. Water Damage on San Pedro River to Farms, Railroads and Highways Is Great—Floods Over Mile Wide. El Paso & Southwestern Tracks Washed Out in Two Places and S. P. Burro Line Broken; Farmers and Families Spend Day in Trees; Farm Dams Washed Out; Lands Inundated and Crops Taken Away in Water; State Bridge Submerged. December 24, 1914. (PDF downloaded August 15, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1914-12-24/ed-1/seq-1/>).
- BDR. 1915. Bisbee Daily Review, p. 5. Road Condition Causes Much Complaint. Hereford Bridge Still in Bad Shape—San Pedro Practically in Floods—Valley Highways Impassable. February 7, 1915. (PDF downloaded January 9, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1915-02-07/ed-1/seq-5/>).
- BDR. 1919. Bisbee Daily Review, p. 3. Wash Out of \$30,000 Bridge Cause of Row. Wednesday, August 6, 1919. (PDF downloaded August 15, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn84024827/1919-08-06/ed-1/seq-3/>).
- CC. 1887. Clifton Clarion, p. 2. Wednesday, September 28, 1887. (PDF downloaded October 28, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn94050557/1887-09-28/ed-1/seq-2/>).
- CS. 1905. Coconino Sun, p 5. Arizona Happenings. January 28, 1905. (PDF downloaded August 15, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn87062055/1905-01-28/ed-1/seq-5/>).
- Dobyns, H.F. 1981. From Fire to Flood: Historic Human Destruction of Sonoran Desert Riverine Oases. Ballena Press Anthropological Papers No. 20. 222 p.
- FT. 1901a. The Florence Tribune, p. 3. Predicted the Rain. Saturday, August 3, 1901. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn94050572/1901-08-03/ed-1/seq-3/>).
- FT. 1901b. The Florence Tribune, p. 3. Saturday, August 10, 1901. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn94050572/1901-08-10/ed-1/seq-3/>).
- FT. 1901c. The Florence Tribune, p. 2. August 24, 1901. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn94050572/1901-08-24/ed-1/seq-2/>).
- Griffiths, D. 1901. Range Improvement in Arizona. (Cooperative Experiments with the Arizona Experiment Station.) U. S. Department of Agriculture. Bureau of Plant Industry. Bulletin No. 4. 31 p. (PDF downloaded August 14, 2013 from <http://archive.org/details/rangeimprovement04grif/>).
- Martin, D.D. 1951. Tombstone's Epitaph. The University of New Mexico Press. xii + 272 p.
- Oasis. 1893a. The Oasis, p. 2. Thursday, August 10, 1893. (PDF downloaded December 4, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn85032933/1893-08-10/ed-1/seq-2/>).
- Oasis. 1893b. The Oasis, p. 6. Thursday, August 31, 1893. (PDF downloaded December 4, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn85032933/1893-08-31/ed-1/seq-6/>).
- Oasis. 1893c. The Oasis, p. 5. September 21, 1893. (PDF downloaded July 20, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn85032933/1893-09-21/ed-1/seq-5/>).
- Oasis. 1894. The Oasis, p. 5. August 9, 1894. (PDF downloaded July 6, 2014 from <http://adnp.azlibrary.gov/cdm/compoundobject/collection/sn85032933/id/584/rec/8>).
- Oasis. 1896. The Oasis, p. 5. Saturday, July 25, 1896. (PDF downloaded December 11, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn85032933/1896-07-25/ed-1/seq-5/>).
- Rose, J.D. 2012. Charleston & Millville, A.T., Hell on the San Pedro. CreateSpace Independent Publishing Platform. xviii + 330 p.
- SJH. 1890. The St. Johns Herald, p. 2. Extensive Washouts. August 21, 1890. (PDF downloaded November 14, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn94051692/1890-08-21/ed-1/seq-2/>).
- TE. 1890. Tombstone Epitaph, p. 2-3. Saturday, August 2, 1890. (PDF downloaded June 26, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060905/1890-08-02/ed-1/seq-3/>).
- TE. 1896. Tombstone Epitaph, p. 2. The Floods. More Rains and Washouts at Benson. Wednesday, October 18, 1896. (PDF downloaded December 13, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060905/1896-10-18/ed-1/seq-2/>).

- TE. 1901. Tombstone Epitaph, p. 2. Continued Washouts. The Railroads Suffering Much from the Flood Waters. Sunday, August 18, 1901. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn95060905/1901-08-18/ed-1/seq-2/>).
- TE. 1914. Tombstone Epitaph, p. 2. Tuesday. Rain Causes Big Flood. Sunday, August 23, 1914. (PDF downloaded January 4, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn95060905/1914-08-23/ed-1/seq-2/>).
- TE. 1915. Tombstone Epitaph, p. 4. Huachuca Pipe Line Is Out Again. Sunday, February 7, 1915. (PDF downloaded January 9, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn95060905/1915-02-07/ed-1/seq-4/>).
- Tellman, B. and Hadley, D. 2006. Crossing Boundaries: An Environmental History of the Upper San Pedro River Watershed, Arizona and Sonora. 53 p. Sponsored by the U.S. Department of Interior's United States-Mexico Border Field Coordinating Committee Through the Bureau of Land Management and the Cochise County Department of Highway and Flood Control.
- TP. 1890a. Tombstone Prospector, p. 1. Tuesday, July 29 1890. (PDF downloaded June 26, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060902/1890-07-29/ed-1/seq-1/>).
- TP. 1890b. Tombstone Prospector, p.1. Wednesday, July 30 1890. (PDF downloaded June 26, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060902/1890-07-30/ed-1/seq-1/>).
- TP. 1890c. Tombstone Prospector, p. 4. Thursday, July 31 1890. (PDF downloaded June 26, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060902/1890-07-31/ed-1/seq-1/>).
- TP. 1890d. Tombstone Prospector. Friday, August 8, 1890. (PDF downloaded June 27, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060902/1890-08-08/ed-1/>).
- TP. 1896a. Tombstone Prospector, p. 4. July 24, 1896. The Rain. Heavy Downpour Last Night for Ten Hours. (PDF downloaded December 11, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060903/1896-07-24/ed-1/seq-4/>).
- TP. 1896b. Tombstone Prospector, p. 3. Heavy Washout On the A. & S.E. Between Fairbank and Bisbee. August 5, 1896. (PDF downloaded December 13, 2014 from <http://chroniclingamerica.loc.gov/lccn/sn95060903/1896-08-05/ed-1/seq-3/>).
- TP. 1899. Tombstone Prospector, p. 3. July 21, 1899. (PDF downloaded January 1, 2015 from <http://chroniclingamerica.loc.gov/lccn/sn95060903/1899-07-21/ed-1/seq-3/>).
- Turner, R.M., Webb, R.H., Bowers, J.E., and Hastings, J.R. 2003. The Changing Mile Revisited. An Ecological Study of Vegetation Change with Time in the Lower Mile of an Arid and Semiarid Region. The University of Arizona Press, Tucson. xvi + 334 p.
- USGS. 2015. Peak Streamflow for Arizona. USGS 09471000 San Pedro River at Charleston, AZ. (Website accessed February 18, 2015 at http://nwis.waterdata.usgs.gov/az/nwis/peak?site_no=09471000&agency_cd=USGS&format=gif).
- Webb, R.H., Betancourt, J.L., Johnson, R.R., and Turner, R.M. 2014. Requiem for the Santa Cruz. An Environmental History of and Arizona River. The University of Arizona Press, Tucson. xv + 280 p.

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* = New member

Events Calendar, March-May

[SPH = San Pedro House; FSH = Fairbank School House; HAS = Huachuca Audubon Society; SABO = Southeastern Arizona Bird Observatory]

SPH Open as Visitor Center (Daily), 9:30 am-4:30 pm

FSH Open as a Visitor Center (Friday-Sunday), 9:30 am-4:30 pm

Understanding the River Interpretive Walks Every Saturday at SPH

- » 9 am—March 7, 14, 21, 28
- » 8 am—April 4, 11, 18, 25
- » 8 am—May 2, 9, 16, 23, 30

FSPR Bird Walks

Every Wednesday [through April, then every 2nd Wednesday] & 4th Saturday at SPH

- » 8 am—March 4, 11, 18, 25, 28
- » 7 am—April 1, 8, 15, 22, 25, 29
- » 7 am—May 13, 23

FSPR/HAS/SABO Bird Walks

Every Sunday at Sierra Vista Environmental Operations Park (EOP)

- » 8 am—March 1, 8, 15, 22, 29
- » 7 am—April 5, 12, 19, 26
- » 7 am—May 3, 10, 17, 24, 31

Special Events

- » March 7, 8 am—Hereford Bridge Birding Hike
- » March 14, 9 am—Members-Only Hike to Charleston Ruins
- » March 21, 1 pm—Fairbank Townsite History Walk
- » March 28, 9 am—Murray Springs Clovis Site History Walk
- » April 11, 9 am—South Fairbank History Walk
- » May 9, 9 am—Murray Springs Clovis Site History Walk



Volunteer Jobs Still Need Filling

The last issue of *River Roundup* sought help for several types of activities. Each would require a few hours a month and most of the work could be done from your home. They are:

» **Bookkeeping.** Enter data into Quickbooks. Contact Renell Stewart at 520-378-6318 or stewartr3@cox.net.

» **Communications/Advertising.** Send out monthly public service announcements. Post events to outside websites. Mail monthly event flyers. Monitor and manage our Facebook page. Contact Ron Stewart at 520-378-6318 or ronscylinderlounge@me.com.

» **Membership.** Send welcome letters to new members/thank yous to renewals. Mail renewal reminders. Enter membership info in database. Contact Robert Weissler at 520-803-0794 or weissler@aves.org.

Contact List

- President—Tom Wood
- Vice-President—Robert Weissler
- Treasurer—Renell Stewart
- Secretary—Sally Rosén
- Directors—Steve Ogle, Sally Rosén, Ron Serviss, Renell Stewart, Ron Stewart, Robert Weissler, Tom Wood
- Docent Activities—Tom Clancy, Ron Stewart
- Education—John Rose
- Membership—Vacant
- Communications Coordinator—Vacant
- Newsletter Editor—Sue Leskiw
- Bookstore Manager—Laura Mackin

To contact any of the above individuals, please call the office at 520-459-2555 or send us e-mail at fspr@sanpedroriver.org or sanpedrohouse@sanpedroriver.org.

Mailing address: 4070 East Avenida Saracino, Hereford, AZ 85615; Fax: 520-459-7334

Website: www.sanpedroriver.org

Friends of the San Pedro River (FSPR) is a nonprofit, volunteer organization dedicated to the conservation of the River and the health of its ecosystems through advocacy, educational programs, and interpretive events.

Friends of the San Pedro River

4070 East Avenida Saracino

Hereford AZ 85615

