

# The San Pedro River

One of the most important riparian areas in the United States, runs through the Chihuahuan Desert and the Sonoran Desert in southeastern Arizona. The San Pedro is one of the most-studied, best known rivers in the United States, yet many misconceptions persist about the river.



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The riparian area, where some 40 miles of the upper San Pedro River meanders, was designated by Congress as a Riparian National Conservation Area on November 18, 1988. The primary purpose for the special designation is to protect and enhance the desert riparian ecosystem, a rare remnant of what was once an extensive network of similar riparian systems throughout the American Southwest.

The river's stretch is home to more than 80 species of mammals, two native species and several introduced species of fish, more than 40 species of amphibians and reptiles, and 100 species of breeding birds. It also provides invaluable habitat for 250 species of migrant and wintering birds and contains archaeological sites representing the remains of human occupation from 13,000 years ago.



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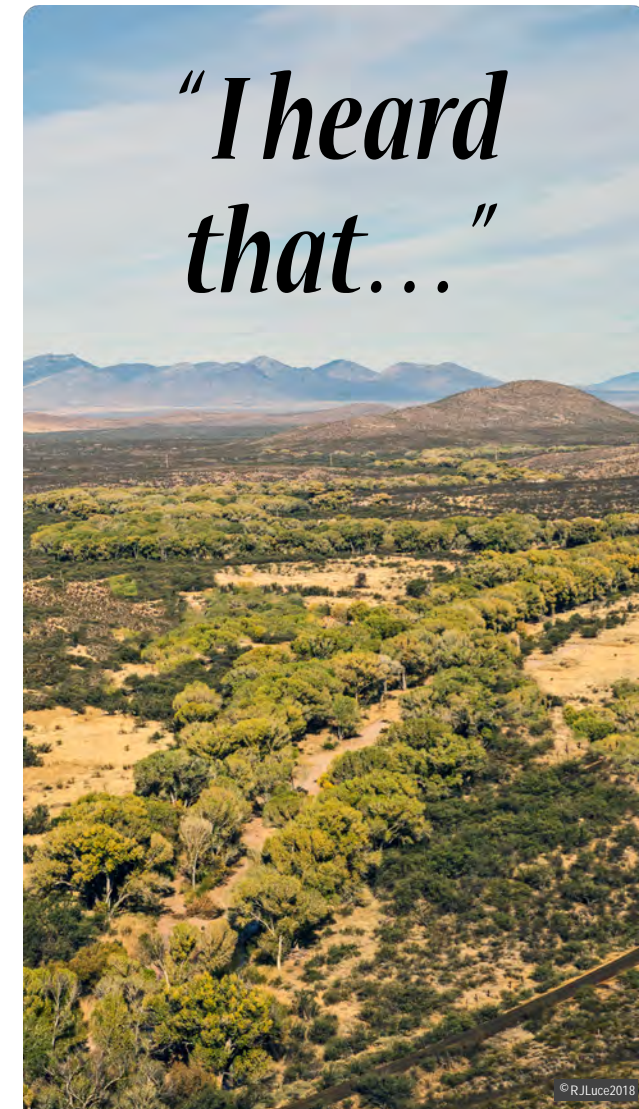


The Friends of the San Pedro River (FSPR), founded in 1987, is a mostly volunteer, non-profit organization dedicated to the conservation and restoration of the river through advocacy, education, and interpretation. FSPR coordinates its activities with the BLM, the land manager of the San Pedro Riparian National Conservation Area (SPRNCA) and the National Conservation Lands.

The FSR operates two Visitor Centers/ gift shops at San Pedro House and Fairbank Schoolhouse, leads guided interpretive walks within the SPRNCA, presents educational programs to schools and community groups, and assists the BLM in a variety of other programs. Event information is published on the FSPR website and the FSPR Facebook page.

For more information call the BLM San Pedro Riparian National Conservation Area office at (520) 439-6400 or the Tucson Field Office at (520) 258-7200 or contact the Friends of the San Pedro River at (520) 459-2555. You may write to the Friends of the San Pedro River at 9800 E. Highway 90, Sierra Vista, AZ 85635 or email [fspr@sanpedroriver.org](mailto:fspr@sanpedroriver.org). The website for Friends of the San Pedro River is [www.sanpedroriver.org](http://www.sanpedroriver.org).

*"I heard that..."*



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Common myths and misconceptions about the San Pedro River



# Common Myths and Misconceptions About the San Pedro River

## ***Myth #1: The San Pedro River is dry mostly because of the 1887 earthquake.***

Like many myths, there is a tiny kernel of truth here. There was a large (7.2 on the Richter scale) earthquake on May 3, 1887, centered 45 miles south of Douglas in northern Sonora. In the absence of scientific monitoring of the environmental effect, newspaper articles furnish the only accounts of the event:

"When the earth opened, water was thrown to great height. One spring in that vicinity went dry and three others doubled their volume of water, but on cessation of the disturbance, the dry spring recommenced flowing." - El Paso Times, May 10, 1887

"There was a raise [sic] of nearly four feet in the San Pedro River." - Tucson Daily Star, May 5, 1887

"The river suddenly ceased to flow and for a short time was completely dry, only to resume its course again with a volume at least two feet higher than before." [emphasis added] - Tucson Weekly Citizen, May 7, 1887

Dr. George Goodfellow of the U. S. Geologic Survey conducted a study of the affected area in 1888, and reported: "A number of new springs were started. In fact, over the entire central seismic region, the water supply has visibly augmented." This is attributed to a process called

liquefaction where the saturated unconsolidated soils near the rivers settle with the shaking accompanying an earthquake. Thus the earthquake, by all accounts increased, not decreased, the flow of water in the river.

## ***Myth #2: The cottonwoods and willows along the river are not native and are using up all the water.***

There is a kernel of truth to this myth. Cottonwoods and willows are native to the river and have increased since cessation of grazing and wood-cutting 30 years ago, in fact all vegetation has increased since the SPRNCA was created in 1989. Historical accounts describe the river as mostly a slow moving, meandering, marshy waterway, but in some areas it was entrenched. Cottonwoods, willows, and other trees occurred in scattered places, and mesquite bosques grew along the river in some locales.

Floods at the end of the 1800s scoured the riverbed, causing down-cutting and loss of marshlands, creating more favorable conditions for cottonwoods and other trees. Today a riparian gallery forest of cottonwoods, willows, walnuts, and other trees and shrubs flanks the river.

Trees and other plants draw water from the soil and lose it through the leaves, a process called transpiration. Water

loss by transpiration is significant, but this usage is offset by vegetation shading the water, lowering the temperature and increasing humidity, thus substantially reducing evaporation. Plants and debris in the river channel slow runoff and retain water, allowing it to soak into the soil and aquifer.

The gallery forest along the river is habitat for an incredible variety of animals and a very important migratory route for birds. The SPRNCA was created to protect the important riparian area along the river, including the trees and plants that use water to nourish the river ecosystem.

## ***Myth #3: We have a deep aquifer so there is no need to worry about our water supply or the river.***

The kernel of truth here is that the aquifer beneath the San Pedro Valley is indeed deep. For millions of years the water from the mountains has run down into the valley and saturated the deep alluvium along the river. The top of the aquifer is so close to the surface that the San Pedro River can store water in wet times and draw from the aquifer in dry times to allow the river to be a rare and precious habitat, a perennial stream in the arid Southwest.

As we use more water than is being replenished to the aquifer, that water level drops. When it drops below the

level of the river, the river becomes a dry stream. The Santa Cruz River in Tucson once looked very similar to the San Pedro before lowering of the water table caused the river to dry and the trees to die. There is still water in the aquifer, but it is below the level where trees and the river can access it. As we drill deeper and deeper wells, the cost to pump water increases as the water quality decreases. Dissolved solids increase, making the deep water from the aquifer unsuitable for use without expensive treatment. So it is the top of the aquifer we should be concerned with, not the bottom.

## ***Myth #4: There used to be riverboats on the river and huge fish in its pools.***

Only the fish story here has a kernel of truth. The river has a relatively small watershed in an arid region so, even though it can be impressive in flood stage, it has never been a large river. Ferries may have operated to help folks get across the river in the rainy season before the construction of durable bridges, but no riverboats. Early accounts do mention 3- to 4-foot "salmon" which were native pike-minnows once found in the river. Accounts of San Pedro fish in the markets of Tucson, Bisbee and Tombstone attest to the rich variety of native fish once found in this desert river. Of the 13 species of native fish once found in the San Pedro, only two remain and neither is considered a food fish.