



# News Release

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**Southwest Region (Arizona • New Mexico • Oklahoma • Texas) [www.fws.gov/southwest/](http://www.fws.gov/southwest/)**

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## **Southern Arizona's Stephan's Riffle Beetle Believed Extinct**

*Species withdrawn as candidate for Endangered Species Act protection*

Despite repeated thorough searches over the last five years in its last known streams, no sign can be found of the Stephan's riffle, leading the U.S. Fish and Wildlife Service to conclude that this one-tenth-inch aquatic insect is extinct. The beetle had been known only from two isolated locations in Arizona and was last detected in 1993. As a result, the beetle is not eligible for listing under the Endangered Species Act and the Service is withdrawing its candidate status for protection under the Act. The Service's determination will publish in the *Federal Register* on October 6.

Stephan's riffle beetle occurred only in Madera Canyon on the west flank of the Santa Rita Mountains in southeastern Arizona's Coronado National Forest. While its existence likely goes back millennia, the Stephan's riffle beetle was only discovered in 1969 thanks to a leaking water pipe that runs from Bog Spring to the Bog Springs Camp Ground. Those insects were presumed, but not confirmed, to have originated at Bog Spring. Stephan's riffle beetle also occurred at neighboring Sylvester Spring but was last observed there in 1993.

Populations may have started declining when water from springs in Madera Canyon was first captured in concrete boxes and piped to divert water for domestic and recreational water supplies. Our recently completed [Species Status Assessment](#) for the Stephan's riffle beetle did not arrive at a conclusive reason for the decline and loss of the beetle in its very limited historical range.

The Service designated Stephan's riffle beetle as a candidate for listing under the Act in 2002 – nine years after it was last observed in the wild. Since that time, the Service has worked with partners in the effort to locate the beetle.

“Although the beetle was last documented almost a decade prior to being designated as a candidate species under the Endangered Species Act, our dedicated biologists will continue to be vigilant while monitoring Bog and Sylvester springs and any other likely spring locations,” said Dr. Benjamin N. Tuggle, Regional Director for the U.S. Fish and Wildlife's Southwest Region. “Species such as Stephan's riffle beetle that are found in a singular location are highly vulnerable to

extinction. We are saddened by its apparent loss. If the beetle is rediscovered we will reinitiate our consideration of its listing status.”

Between 2012 and 2016, the Service surveyed Sylvester Spring, the one remaining known population location for Stephan’s riffle beetle, and seven other locations with potential habitat. After multiple efforts at Sylvester Spring and the additional locations using three different survey methods, all surveys undertaken from 2012 to 2016 have found no Stephan’s riffle beetles, however the presence of other riffle beetle species and aquatic insects has been detected in abundance.

In 2004, the Center for Biological diversity included the beetle in a listing mega-petition for 225 plants and animals. The Service recently announced a [Listing Workplan](#) that prioritizes the most imperiled species.

We know relatively little about this tiny creature. Riffle beetles spend almost their entire life cycle in the water, leaving streams only to turn from larvae to winged adults. They may immediately return to water or fly to another location. Upon entering water, adult riffle beetles spend the remainder of their lives underwater and eventually lose the ability to fly. Adult riffle beetles depend upon waters with high levels of dissolved oxygen, and riffle beetle presence in a stream is indicative of high water quality. Riffle beetles eat plants or decomposing material and biofilm that grows on hard surfaces such as rocks, submerged wood, and aquatic plants.

Today’s determination that protection for the Stephan’s riffle beetle is not warranted under the Act is included in a national batch of findings that includes nine other species. Additional information and the full Species Status Assessment are available at: <https://www.fws.gov/southwest/es/arizona/Stephens.htm>.

Every species, no matter how small and obscure contributes to the biodiversity that is so critical to the health of our lands and waters – those same lands and waters we rely on for our own health and wellbeing.

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