



COLLEGE OF THE ENVIRONMENT
UNIVERSITY of WASHINGTON

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GRADUATE STUDENT IN
AQUATIC & FISHERY SCIENCES

MERYL
MIMS

With two degrees under her belt and dissertation research to complete, Meryl Mims found herself in southeastern Arizona's Sky Islands in 2013. In a landscape known for the juxtaposition of its sprawling features—where towering, forested mountains seep upward through the desert's dry, cracked surface—a 2-inch long frog captured Mims' attention.

"It's like they were calling us in," Mims said.

Arizona treefrogs are a species of conservation concern that live in just three ranges—two mountainous regions in central Arizona and Mexico, and a smaller, possibly declining group in the Huachuca Mountains along the U.S./Mexico border.

Mims wanted to dig deeper into the status of Arizona treefrogs in the Huachucas, since local extinction there would represent a loss of diversity and create a significant gap between the two larger ranges. Mims hit the ground running after receiving the College of the Environment's first-ever Hall Conservation Genetics Research Award in 2014.

When she arrived in the Huachucas, summer monsoon season was setting in—breeding season for the Arizona treefrog. These nocturnal amphibians breed once a year in the temporary ponds created by summertime deluges. Mims and her research partner jumped into action when they came across a breeding pond, collecting and recording data before the next line of storms approached.

They discovered two additional breeding sites within the range that hadn't been catalogued before and determined that one breeding site extends 4 miles south of what had been previously recorded. Where they had expected to see 30 or fewer Arizona treefrogs at ponds, they found hundreds.

While there are lingering concerns about predation by nonnative bullfrogs, drier conditions due to climate change,

and the increased intensity and frequency of wildfires, the populations of Arizona treefrogs in the Huachuca Mountains appear to be more robust than surveys suggested. Through this work, Mims found that management of breeding habitats, control of nonnative predators, and maintaining connectivity between populations will be important for this small range and for the species as a whole.

In order to study the population genetics of the Arizona treefrog, Mims needed funding support.

Ben Hall, a University of Washington alumnus and co-founder of the Hall Conservation Genetics Award with his wife, Margaret said, "This award arose from my family's multi generational interest in conservation education. It was established to support scholars early in their careers, when research funding is often scarce. Meryl's doctoral research on the Arizona treefrog exemplifies the kind of conservation genetic research the program was designed to support."

On the heels of her findings, Mims and scientists from the University of Idaho and Washington State University are teaming up to take her findings a step further.

"Support from the Halls gave me the freedom to explore something I'm passionate about, something that's important to the future of this species," Mims said.