



Mike Moran/USGS

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Lesley DeFalco/USGS

## AWARDS

**Nate Stephenson** was the keynote speaker at the **International Society of Arboriculture Western Chapter's 81st Annual Conference**, held April 27th through May 1st near Yosemite National Park. Stephenson spoke about the nature and science of tree growth, and was also presented with the WCISA's 2014 **Award of Arboricultural Research**.  
<http://www.werc.usgs.gov/Event.aspx?ID=218>

## IN THE NEWS

**The Untold Story of How Scientists and Citizens Are Saving This Unique Desert Critter From Extinction (TakePart.com)**  
 Writer **Todd Woody** dives into "impenetrable thickets" and a "marshy fortress" with **Rob Klinger**—and into the world of Amargosa voles, the little known endangered rodent of Death Valley.  
<http://www.takepart.com/feature/2015/04/08/last-chance-save-amargosa-vole-most-critically-endangered-mammal>

## OUTREACH NOTES



USGS Researcher Emeritus **Mary Ann Madej** visited Hoopa High School of the **Hoopa Valley Tribe** on April 24th for the **13th Annual Klamath-Trinity Fish Fair**. Madej gave a talk titled "Taking the Pulse of a River" and led students through a demonstration of water quality monitoring instruments and methods.

## "Can the Tortoise Come Out of the Shell?"

On April 24th, the USGS Western Ecological Research Center and Nevada Water Science Center participated in the **2015 Science & Technology EXPO**, hosted by the College of Southern Nevada as part of the **Las Vegas Science & Technology Festival**. Students from area middle and high schools, as well as families with younger children, toured the many educational booths hosted by local organizations and government offices. The USGS table was staffed by ecologist **Lesley DeFalco**, hydrologists **Megan Poff** and **Wayne Belcher**, and biologist emeritus **Phil Medica**.

"We had several hundred kids come by, from fourth graders to college juniors," says Medica, who spent four decades studying desert tortoises and continues to volunteer at outreach events. "The hands-on stuff really interested the kids."

Poff and Belcher brought hydrological monitoring instruments, like flow meters, for students to hold real research tools and get a sense of the day-to-day lives of scientists. One older student proudly professed her decision to pursue a scientific career, says Medica. "She already made up her mind, but was on the fence about being in geology or in water!"

To showcase USGS wildlife research in the Mojave Desert, DeFalco and Medica brought X-ray images of an egg-bearing female tortoise and a preserved tortoise shell. The eerie, hollowed skeleton made for a learning moment for two younger visitors.

"The little one asked, 'Can the tortoise come out of the shell?'" says Medica, who used the specimen to show how the shell of tortoises and turtles are connected, fixed parts of their skeleton and backbone, and not detachable like the adopted shells of hermit crabs. "It was a really cute question, but they learned something from it."

## NEW OPEN-FILE REPORTS

**Shryock, DF, TC Esque, F Chen**. 2015. **A 30-year chronosequence of burned areas in Arizona—Effects of wildfires on vegetation in Sonoran Desert Tortoise (*Gopherus morafkai*) habitats**: U.S. Geological Survey Open-File Report 2015-1060, 61 p. doi:10.3133/ofr20151060.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5241>

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## NEW JOURNAL ARTICLES

Adams, J, WA Walker, EJ Burton, JT Harvey. 2015. **Stomach Contents of a Cuvier's Beaked Whale (*Ziphius cavirostris*) Stranded in Monterey Bay, California.** *Northwestern Naturalist* 96:93-98. doi:10.1898/NWN14-10.1  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5259>

Bui, TD, JY Takekawa, CT Overton, ER Schultz, JM Hull, ML Casazza. 2015. **Movements of radio-marked California Ridgway's rails during monitoring surveys: implications for population monitoring.** *Journal of Fish and Wildlife Management*. doi:10.3996/092014-JFWM-069  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5266>

Edwards, T, KH Berry, RD Inman, TC Esque, KE Nussear, CA Jones, M Culver. 2015. **Testing taxon tenacity of tortoises: evidence for a geographical selection gradient at a secondary contact zone.** *Ecology and Evolution*. doi:10.1002/ece3.1500  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5268>

## NEW BOOK CHAPTERS

Johnson, LR, KD Lafferty, A McNally, E Mordecai, K Paaijmans, S Pawar, SJ Ryan. 2015. **Mapping the Distribution of Malaria: Current Approaches and Future Directions. Chapter 10.** In: Chen, D, B Moulin, J Wu (editors). *Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases*, 1st ed. John Wiley and Sons, ISBN: 978-1-118-62993-2. pp. 189-209.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5261>

## NEW WERC PUBLICATION BRIEFS

**Remaining populations of giant gartersnake form five different genetic clusters**  
Cryptic in behavior and relatively limited in mobility, giant gartersnakes (*Thamnophis gigas*) have likely experienced genetic bottlenecks and isolation across its remaining populations. A study from Dustin Wood, Brian Halstead, Mike Casazza, Glenn Wylie, and Amy Vandergast published in *Conservation Genetics* sought to uncover such patterns in the population genetics of this species. The study provides a first-glimpse into the population genetic health of this listed snake across its remaining range.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5258>

### Genetic isolation of coastal cactus wren follows habitat fragmentation patterns in Southern California

Habitat fragmentation resulting from urban development and increased wildfire disturbance is pervasive in coastal southern California, and the effects of this extensive habitat loss have yet to be analyzed in a landscape genetic framework for the coastal cactus wren (*Campylorhynchus brunneicapillus*). In a study published in *Molecular Ecology*, Barbara Kus, Kris Preston, Scarlett Howell, Emily Perkins, and Amy Vandergast sampled and analyzed 371 individual wrens throughout their coastal southern California range to assess population structure and genetic patterns.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5265>

### Call-count surveys may be under-estimating California Ridgway's rail populations

Call-count surveys have been conducted throughout the San Francisco Bay since 2005 to monitor population size and distribution of the California Ridgway's rail (*Rallus obsoletus obsoletus*). However, call-count surveys are difficult to evaluate for efficacy or accuracy. A study by Vivian Bui, Cory Overton, and Mike Casazza published in the *Journal of Fish and Wildlife Management* assessed the accuracy of call-count surveys, and investigated whether radio-marked California Ridgway's rails moved in response to call-count surveys.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5220>



## Pinkies From Chile Take to the Sky

Together with Oikonos and other collaborators, Josh Adams and Jonathan Felis deployed satellite tags on 10 pink-footed shearwaters on Isla Mocha, Chile. Two of these highly migratory birds have already begun flying north, potentially to California, Oregon, or Washington. The movement data will contribute to USGS research for BOEM planning needs. See daily GPS location updates from these birds at this link:  
[http://www.seaturtle.org/tracking/?project\\_id=1007](http://www.seaturtle.org/tracking/?project_id=1007)



## Ghost Dogs and Wild Cats on Malibu Stage

Erin Boydston attended the 6th Annual UCLA La Kretz Center Public Lecture on April 18th held at Pepperdine University for the public. Following the featured presentation on coyotes as urban carnivores, host Brad Shaffer convened guests Stan Gerht, Niamh Quinn, Seth Riley, and Boydston for an expert discussion panel on the future of wildlife species in the urban environs of Southern California.  
<http://www.environment.ucla.edu/lakretz/events/339>