



## EVENTS

### July 15-19, 2015 (Reno, CA)

Brian Halstead, Michael Casazza, Glenn Wylie, Robert Fisher, Shannon Skalos, Todd Esque, Lizabeth Bowen, Shannon Waters, Keith Miles, Jonathan Richmond, Dustin Wood, Carlton Rochester, Amy Vandergast and Chris Brown had research presented at the **Joint Meeting of Ichthyologists and Herpetologists**.  
<http://www.werc.usgs.gov/Event.aspx?ID=222>

### August 9-14, 2015 (Baltimore, MD)

WERC scientists, including Erin Boydston, Michael Casazza, Peter Coates, Kristy Howe, Jon Keeley, Robert Klinger, Kevin Lafferty, Lisa Lyren, and Tim Tinker will have research presented at the **100th Annual Meeting of the Ecological Society of America**.  
<http://www.werc.usgs.gov/Event.aspx?ID=219>

### September 17-18, 2015 (Oakland, CA)

Laura Valoppi and others will speak at the **12th Biennial State of the San Francisco Estuary Conference**.  
<http://www.werc.usgs.gov/Event.aspx?ID=221>

### October 22, 2015 (Mountain View, CA)

The **Biennial South Bay Science Symposium** will be held at the Computer History Museum in Mountain View, CA.  
<http://www.werc.usgs.gov/Event.aspx?ID=220>

## IN THE NEWS

### Threatened Desert Tortoises Good at Weathering Wildfires (*The Wildlife Society*)

Writer Joshua Learn talks with Todd Esque to learn about how desert tortoises cope with drastic changes to their habitat due to wildfires.  
<http://wildlife.org/threatened-desert-tortoises-good-at-weathering-wildfires/#prettyPhoto>

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## Drought Could Threaten Ancient Sequoias In Sierra Nevadas

Are giant sequoias—these massive, ancient survivors—meeting their match in the historic drought? To answer this question, KSEE 24, a local television station in Fresno, interviewed USGS WERC researcher Nate Stephenson in a clip that aired July 18th. Stephenson explains that even though the sequoias can live through thousands of years punctuated by environmental stressors like drought, they still rely on several feet of snowfall to moisten the soil around them. With the drought, the sequoias have only gotten inches of snow instead.

“Without that snowpack buildup, there’s a drier soil here now and that’s putting stress on them,” says Stephenson. Stephenson’s research investigates the causes behind forest mortality. He monitors these trees’ health in response to climate change and other stressors, like the drought.

<http://www.yourcentralvalley.com/news/giant-sequoias-feeling-impacts-of-drought>  
<http://www.werc.usgs.gov/stephenson>

## NEW OPEN-FILE REPORTS

Ackerman, JT, MP Herzog, C Brady, JM Eadie, GS Yarris. 2015. **Archiving California’s historical duck nesting data**: U.S. Geological Survey Open-File Report 2015-1131, 26 p., doi:10.3133/ofr20151131  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5324>

## NEW JOURNAL ARTICLES

Lafferty, KD. 2015. **Sea otter health: Challenging a pet hypothesis**. *International Journal for Parasitology: Parasites and Wildlife*. 4(3): 291-294.  
doi:10.1016/j.ijppaw.2015.05.005  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5315>

## NEW JOURNAL ARTICLES (CONT'D)

Nogeire, TM, FW Davis, KR Crooks, BH McRae, **LM Lyren**, **EE Boydston**. 2015. **Can orchards help connect Mediterranean ecosystems? Animal movement data alter conservation priorities.** *The American Midland Naturalist*. 174(1): 105-116. doi:10.1674/0003-0031-174.1.105  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5327>

Emblidge, PG, KE Nussear, **TC Esque**, **CM Aiello**, AD Walde. 2015. **Severe mortality of a population of threatened Agassiz's desert tortoises: the American badger as a potential predator.** *Endangered Species Research* 28:109-116. doi:10.3354/esr00680  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5325>

Gordon, L, RW Halsey, **JE Keeley**, JP Rebman, D Wiens, A Johanson. 2015. **Mission manzanita, queen of the elfin forest: Is this species in decline?** *Fremontia* 43(2):23-28.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5323>

**Bui, TVD, J Takekawa, CT Overton**, ER Schultz, J 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* 6(1):227-237. doi:10.3996/092014-JFWM-069  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5266>

**Das, AJ, NL Stephenson**. 2015. **Improving estimates of tree mortality probability using potential growth rate.** *Canadian Journal of Forest Research* 45:920-928. doi:10.1139/cjfr-2014-0368  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5302>

## NEW WERC PUBLICATION BRIEFS

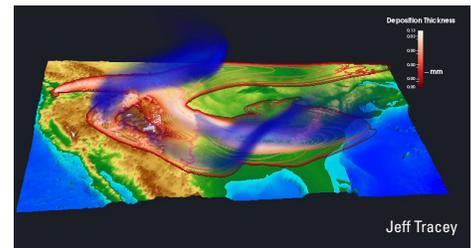
**A statistical approach to understand the impacts of rare stressors on rare species**  
Conservation efforts can be complicated when observations of a managed species are very rare, and the occurrence of stressor variables are also rare. To address this challenge, USGS researchers **JR Matchett** and **Matt Brooks** innovated a new methodology with two case studies involving the endangered Sierra Nevada yellow-legged frog (*Rana sierrae*) and the threatened Yosemite toad (*Anaxyrus canorus*).  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5283>

### **Pack stock in Sequoia and Kings Canyon parks have minimal overlap with Sierra Nevada bighorn sheep**

Sequoia and Kings Canyon National Parks have received complaints that pack stock may affect Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), a federally endangered species. **Robert Klinger** and **Brian Hatfield** conducted an “association analysis” to test for potential spatial overlap in meadow use between sheep and pack stock, and to compare differences in community composition, structure, and diversity of vegetation among meadows with different levels of use by sheep and pack stock.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5301>

### **Wildfires impact carbon storage differently across Sierra Nevada forest types**

Forest biomass on Sierra Nevada landscapes constitutes one of the largest carbon stocks in California, and research suggests that a history of human activity—including fire suppression, logging, and management practices—have altered the Sierra Nevada's historic fire regimes, and in turn, its historic patterns of landscape carbon storage. Researchers **JR Matchett** and **Matt Brooks** assessed the influence of recent fire patterns on aboveground tree carbon stocks, using forest plots in Yosemite, Sequoia, and Kings Canyon national parks.  
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5319>



## Scientists and supercomputers

From June 23-25th, the USGS Core Science Analytics, Synthesis, and Libraries Applied Research Computing program offered workshop sessions for those interested in using the USGS Yeti supercomputer. Along with members of other USGS research centers, **Jeff Tracey** learned how to work with Python and create 3D visuals (pictured above) with USGS data on walruses and volcano eruptions. Tracey hopes to use these new skills to create 3D maps of golden eagles' the habitat ranges. There are plans for similar workshop sessions in the future.

[http://www.usgs.gov/core\\_science\\_systems/csas/](http://www.usgs.gov/core_science_systems/csas/)