



Phil van Mantgem/USGS

EVENTS

March 21, 2015 (Joshua Tree, CA)

Kristin Berry taught her annual **Desert Tortoise Surveying and Monitoring** field course. The workshop is co-hosted by Copper Mountain College and the Desert Institute-Joshua Tree National Park Association.

<http://www.werc.usgs.gov/Event.aspx?ID=216>

March 25-27, 2015 (Berkeley, CA)

Nate Stephenson and **Adrian Das** were at the **Science for Parks, Parks for Science** summit hosted by UC Berkeley, the National Park Service, and National Geographic Society.

<http://www.werc.usgs.gov/Event.aspx?ID=210>

March 27-29, 2015 (Seattle, WA)

Tim Tinker and others joined researchers from around the world to discuss updates in sea otter biology and nearshore marine ecology research at the **Sea Otter Conservation Workshop IX**, hosted at the Seattle Aquarium.

<http://www.werc.usgs.gov/Event.aspx?ID=211>

March 29-April 3, 2015 (Oakland, CA)

Phil van Mantgem is attending the **2015 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites**, discussing long-term fire effects data and research opportunities at this biennial meeting.

<http://www.werc.usgs.gov/Event.aspx?ID=212>

IN THE NEWS

Ten Sinister Parasites That Control Their Hosts' Minds (BBC Earth)

Writer Lucy Jones quotes **Kevin Lafferty** in a description of *Toxoplasma gondii* as part of this list of behavior-altering parasitic organisms.

<http://www.bbc.com/earth/story/20150316-ten-parasites-that-control-minds>

Fighting Drought with Fire?

Can we use prescribed burns as a tool to increase forest resistance to drought impacts? The notion may seem counter-intuitive at first, but it is the focus of a new project led by **Phil van Mantgem** with **Matt Brooks**, **Nate Stephenson**, and **Adrian Das**, supported by the **DOI Southwest Climate Science Center**.

Trees within a forest have to compete with one another for water, nutrients, and sunlight. This competition can be tougher if there are too many trees—such as in areas where humans have improperly managed forests—or if there is not enough water, such as during a drought.

Past research by van Mantgem has suggested that trees already stressed by drought may be more likely to die from wildfires. Imagine if a person was chronically stressed by some constant, long-term ailment: they too would be less resilient and less likely to recover if some acute, traumatic injury suddenly happened to them.

So can this logic be used to our advantage? Across western U.S. states, there are forests that are stressed out by drought. If we use prescribed burns to intentionally eliminate smaller, weaker trees and thin out a forest, will the remaining trees have less competition for resources—therefore growing bigger and healthier, and forming forests that are more resilient and more likely to survive wildfire events?

Making lemonade out of lemons, van Mantgem and colleagues hope to use the current drought in the U.S. West to test this hypothesis, comparing tree survival in forest plots with and without prescribed burns. The research is being conducted in partnership with University of Arizona and the National Park Service, and the findings will be shared with the U.S. Forest Service, national park units, and Landscape Conservation Cooperatives—hopefully providing new insights for forest management and drought preparedness strategies.

<http://www.werc.usgs.gov/DroughtForestFire>

<http://www.werc.usgs.gov/vanmantgem>

<http://www.swcsc.arizona.edu/>

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NEW OPEN-FILE REPORTS

Lynn, S, M Madden, A Houston, BE Kus. 2015. **Monitoring avian productivity and survivorship (MAPS) 5-year summary, Naval Outlying Landing Field, Imperial Beach, southwestern San Diego County, California, 2009–13**: U.S. Geological Survey Open-File Report 2015-1035, 58 p. doi:10.3133/ofr20151035
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5222>

NEW JOURNAL ARTICLES

Sparling, DW, J Bickham, D Cowman, GM Fellers, T Lacher, CW Matson, L McConnell. 2015. **In situ effects of pesticides on amphibians in the Sierra Nevada**. *Ecotoxicology* 24(2):262-278. doi:10.1007/s10646-014-1375-7
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5221>

Ramey, AM, JA Schmutz, JA Reed, G Fujita, BD Scotton, B Casler, JP Fleskes, K Konishi, K Uchida, MJ Yabsley. 2015. **Evidence for intercontinental parasite exchange through molecular detection and characterization of haematozoa in northern pintails (*Anas acuta*) sampled throughout the North Pacific Basin**. *International Journal for Parasitology: Parasites and Wildlife* 4(1):11-21. doi:10.1016/j.ijppaw.2014.12.004
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5216>

Howe, KB, PS Coates. 2015. **Observations of territorial breeding common ravens caching eggs of greater sage-grouse**. *Journal of Fish and Wildlife Management* 5(2):e1944-687X. doi:10.3996/042014-JFWM-030
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5229>

NEW WERC PUBLICATION BRIEFS

Irruptive population and spatial dynamics of introduced island caribou

Large mammalian herbivores introduced to islands without predators are predicted to undergo irruptive population and spatial dynamics—booming and busting as surplus forage supplies are exploited, and then exhausted. But only a few well-documented case studies support this paradigm. Publishing in *Ecosphere*, Mark Ricca and Keith Miles have tackled this question through a novel analysis on data from spatially organized aerial counts conducted on Adak Island caribou population over a 54-year period.
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5212>

OUTREACH NOTES

During the week of March 23, Lisa Lyren volunteered with the Carpinteria Middle School as students attend the Rancho El Chorro Outdoor School in San Luis Obispo. Lyren will share her knowledge of remote cameras used in wildlife studies with 6th grade students.

Katherine Baumberger will be hosting a USGS science booth at this year's Earth Day celebration for kids and families at Marine Corps Base Camp Pendleton on April 22nd.

Later that week on April 24th, Researcher Emeritus Phil Medica will be speaking to local students about his lifetime career as a naturalist in Nevada as part of the College of Southern Nevada's 2015 Science & Technology EXPO.

Then on May 5th, Shannon Waters will be mentoring middle school and high school students at the Dinner with a Scientist event hosted by the Sacramento Area Science Project.

JOBS

We are seeking a student contractor to serve as a Science Communicator for USGS WERC. This contractor will work with center managers and scientists to summarize and convey research news and information tailored to different audiences, including federal offices, outside partners, and the public. Apply before April 2nd.
<http://www.werc.usgs.gov/outreach.aspx?RecordID=230>