



Eric Knapp/USGS/USFS

Climate Change Trends: Drought-Weakened Trees More Likely to Die in Fires

Climate change is expected to amplify both droughts and wildfires across the western United States. A new study from **Phil van Mantgem**, WERC alumnus Eric Knapp and colleagues on forests throughout the U.S. West shows that the effects of drought and fire work in combination, such that forests experiencing drought will see more dead trees in the aftermath of wildfires. Study partners included USFS and NPS.

<http://www.usgs.gov/newsroom/article.asp?ID=3649>
<http://www.werc.usgs.gov/outreach.aspx?RecordID=191>
<http://www.livescience.com/38548-drought-wildfires-kill-trees.html>

NEW JOURNAL ARTICLES

van Mantgem, PJ, JCB Nesmith, M Keifer, EE Knapp, A Flint, L Flint. 2013. **Climatic stress increases forest fire severity across the western United States.** *Ecology Letters*. doi: 10.1111/ele.12151
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4926>

Smalling, KL, **GM Fellers**, **PM Kleeman**, KM Kuivila. 2013. **Accumulation of pesticides in Pacific chorus frogs (*Pseudacris regilla*) from California's Sierra Nevada Mountains, USA.** *Environmental Toxicology and Chemistry* 32(9): 2026-2034. doi: 10.1002/etc.2308
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4927>

Das, AJ, **NL Stephenson**, A Flint, T Das, **PJ van Mantgem**. 2013. **Climatic correlates of tree mortality in water- and energy-limited forests.** *PLOS ONE* 8(7): e69917. doi: 10.1371/journal.pone.0069917
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4929>

EVENTS

July 18, 2013 (Los Feliz, CA)

Erin Boydston spoke at a public science talk hosted by **Friends of Griffith Park** on the collaborative research project with National Park Service on mammalian wildlife connectivity in the Griffith Park region. Among the project highlights so far is the detection of mountain lion P-22.
<http://www.friendsofgriffithpark.org/programs-lecture7-18-13.php>

July 31, 2013 (Webinar)

Phil van Mantgem presented an online lecture co-sponsored by the **Joint Fire Science Program**, on the complexities of climate warming, wildfire and forest mortality in the Western United States.
<http://www.werc.usgs.gov/Event.aspx?ID=159>

IN THE NEWS



Nick Buckmaster/UC Davis

Leopard Sharks Flourishing in South San Francisco Bay as Wetlands Are Restored (*San Jose Mercury News*)
Reporter Paul Rogers attended the **2013 South Bay Science Symposium** and filed this story on one success story from the South Bay Salt Pond Restoration Project: the increase in fish population in Alviso ponds, especially leopard sharks.
http://www.mercurynews.com/ci_23709144/

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Patrick Kleeman/USGS

Pesticides Accumulating in Sierra Nevada Frogs

A study on Pacific chorus frogs (*Pseudacris regilla*) in remote Sierra Nevada habitats — including Yosemite National Park and Lassen Volcanic National Park — detected concentrations of pesticides in frogs that potentially came from Central Valley sources. Coauthored by **Gary Fellers** and **Patrick Kleeman**, the study was led by USGS California Water Science Center hydrologist Kelly Smalling, whose analysis detected the fungicides pyraclostrobin and tebuconazole — a first in Sierra Nevada frogs.

<http://www.usgs.gov/newsroom/article.asp?ID=3650>

http://www.mercurynews.com/california/ci_23739040/study-scientists-name-pesticides-sierra-frogs

<http://www.nbcnews.com/science/frogs-high-mountains-are-contaminated-farm-chemicals-study-says-6C10758082>

<http://storify.com/lgordon/chorus-frogs-and-pesticides-news-clips>

NEW WERC PUBLICATION BRIEFS

Tree mortality in water- and energy-limited forests

Tree mortality has been increasing in forests across the western U.S., apparently in response to a warming climate. However, the mechanisms driving such changes remain unresolved. **Adrian Das** explains how temperature could increase tree mortality in two different, but not mutually exclusive, ways: by decreasing tree health through drought stress; or by increasing the effectiveness of tree-killing insects and pathogens.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4928>

IN THE NEWS (CONT'D)

Bay Area Sea Gull Population Explodes, Bringing Flocks of Problems (*San Jose Mercury News*)

Reporter Paul Rogers filed another story related to the **South Bay Salt Pond Restoration Project**: the continued problem of California gull populations in South San Francisco Bay and their impact on other breeding waterbird species.

http://www.mercurynews.com/ci_23709144/



Karyl Carmignani/San Diego Zoo

San Diego Zoo



Kevin Lafferty by Kevin Lafferty

Turtles Given New Life in San Diego Reserve

California's only native freshwater turtle species got a "headstart" when five iPhone-sized juveniles were released into Sycuan Peak Ecological Reserve on July 17. The effort is part of a project led by **Chris Brown**, **Denise Clark** and San Diego Zoo's Tommy Owens to remove invasive species from Sycuan Peak and help restore the dwindling population of western pond turtles (*Emys marmorata*). Support came from SANDAG, and the reserve is operated by California Department of Fish and Wildlife.

http://scoopsandiego.com/news/local/article_5e73aec6-efda-11e2-bbf5-001a4bcf6878.html

<http://www.utsandiego.com/news/2013/jul/25/western-pond-turtles-sycuan-restoration-reserve/>

One Minute With... Kevin Lafferty (*NewScientist*)

Reporter Rachel Nuwer talks with **Kevin Lafferty**, who tells a fun summer camp story and explains why scientists should pay more attention to parasite ecology.

<http://www.newscientist.com/article/mg21929270.300>