



FWS

Teaming Up to Understand Wildfire: Two New Open-File Reports on Greater Sage-grouse

The sagebrush steppe that supports the Greater Sage-grouse and some 400 other species is in trouble. Invasive grasses like cheatgrass and more frequent and severe wildfires threaten to destroy much of sagebrush habitat. Wildfire threats to sagebrush are especially dire in the western part of the sage-grouse's range, says a new **Open-File Report** led by supervisory research ecologist **Matthew Brooks**. A corresponding **Open-File Report** led by research wildlife biologist **Pete Coates** warns that uncontrolled wildfires could halve current sage-grouse populations across the Great Basin by the mid-2040s.

"Management of cheatgrass is definitely a key," says Brooks in an interview with *The Associated Press* (AP). Both reports refer to cycles in which fires render burned land vulnerable to invasive cheatgrass, which spreads and burns faster than sagebrush.

The AP article, reprinted with *The Seattle Times*, states that the Coates report addresses Interior Secretary Sally Jewell's order for a new "science-based" wildfire-fighting strategy to protect remaining sagebrush habitat. Just last week, Secretary Jewell cited unprecedented collaborative efforts between ranchers, scientists, and others to conserve sage-grouse habitat as a driving force behind **the decision not to list** the bird under the Endangered Species Act.

<http://www.seattletimes.com/seattle-news/feds-sage-grouse-populations-threatened-by-wildfires/>

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

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

NEW OPEN-FILE REPORTS

Coates, PS, MA Ricca, BG Prochazka, KE Doherty, ML Brooks, ML Casazza. 2015. **Long-term effects of wildfire on greater sage-grouse—Integrating population and ecosystem concepts for management in the Great Basin: U.S. Geological Survey Open-File Report 2015–1165, 42 p., doi:10.3133/ofr20151165**
<http://pubs.er.usgs.gov/publication/ofr20151165>

EVENTS

October 22, 2015 (Mountain View, CA)
Laura Valoppi, Susan De La Cruz, Josh Ackerman, and Alex Hartman will speak at the **Biennial South Bay Science Symposium** at the Computer History Museum in Mountain View, CA.
<http://www.werc.usgs.gov/Event.aspx?ID=220>

November 2-3, 2015 (Sacramento, CA)
WERC researchers **Phil van Mantgem, Adrian Das, Laura Valoppi, Elliott Matchett, and Karen Thorne** will attend the **2015 Southwest Climate Summit**.
<http://www.werc.usgs.gov/Event.aspx?ID=223>

IN THE NEWS

The Most Endangered Resource is Trust When It Comes to Wildlife Issues (*Idaho Statesman*)

Writer Rocky Barker tells how a friendship between **Katelyn Andrlé** and an 11-year-old girl helped foster partnership between a rancher and the government.
http://www.idahostatesman.com/2015/09/25/4003931_rocky-barker-the-most-endangered.html?rh=1

The Forests of the World are in Serious Trouble, Scientists Report (*The Washington Post*)

Writer Chris Mooney quotes lead author Constance Millar and co-author **Nate Stephenson** in a comprehensive article about the threats that global forests face.
<http://www.washingtonpost.com/news/energy-environment/wp/2015/08/20/the-worlds-forests-are-in-major-trouble-scientists-report/>

Is the Drought Killing California's Giant Sequoias? (*The Los Angeles Times*)

Nate Stephenson's work on the drought and giant sequoias was featured on the front page of *The LA Times*.
<http://www.latimes.com/local/california/la-me-sequoia-drought-20150828-story.html>

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NEW OPEN-FILE REPORTS CONT'D

Brooks, ML, JR Matchett, DJ Shinneman, PS Coates. 2015. **Fire patterns in the range of greater sage-grouse, 1984–2013—Implications for conservation and management: U.S. Geological Survey Open-File Report 2015-1167**, 66 p., doi:10.3133/ofr20151167
<http://pubs.er.usgs.gov/publication/ofr20151167>

NEW JOURNAL ARTICLES

Roberts, SL, DA Kelt, JW van Wagtenonk, AK Miles, MD Meyer. 2015. **Effects of fire on small mammal communities in frequent-fire forests in California**. *Journal of Mammalogy* 96(1): 107-199. doi:10.1093/jmammal/gyu011
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5344>

Peterson, SH, EA McHuron, SN Kennedy, JT Ackerman, LD Rea, JM Castellini, TM O'Hara, DP Costa. **Evaluating hair as a predictor of blood mercury: The influence of ontogenetic phase and life history in pinnipeds**. *Archives of Environmental Contamination and Toxicology*. In press. doi:10.1007/s00244-015-0174-3
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5339>

Seney, J and MA Madej. 2015. **Soil carbon storage following road removal and timber harvesting in redwood forests**. *Earth Surface Processes and Landforms*. In press. doi:10.1002/esp.3781

Berry, KH, JF Weigand, TA Gowan, JS Mack. 2015. **Bidirectional recovery patterns of Mojave Desert vegetation in an aqueduct pipeline corridor after 36 years: I. Perennial shrubs and grasses**. *Journal of Arid Environments*. In press. doi:10.1016/j.jaridenv.2015.03.004
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5288>

Brennan, TJ, and JE Keeley. 2015. **Effect of mastication and other mechanical treatments on fuel structure in chaparral**. *International Journal of Wildland Fire*. In press. doi:10.1071/WF14140
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5346>

Krusor, C, WA Smith, MT Tinker, M Silver, PA Conrad, K Shapiro. 2015. **Concentration and retention of *Toxoplasma gondii* oocysts by marine snails demonstrate a novel mechanism for transmission of terrestrial zoonotic pathogens in coastal ecosystems**. *Environmental Microbiology*. In press. doi:10.1111/1462-2920.12927
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5294>

McHuron, EA, SH Peterson, JT Ackerman, SR Melin, JD Harris, DP Costa. 2015. **Effects of age, colony, and sex on mercury concentrations in California sea lions**. *Archives of Environmental Contamination and Toxicology*. In press. doi:10.1007/s00244-015-0201-4.
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5338>

Tinker, MT, BB Hatfield, MD Harris, JA Ames. 2015. **Dramatic increase in sea otter mortality from white sharks in California**. *Marine Mammal Science*. In press. doi:10.1111/mms.12261
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5342>

Lafferty, KD, G DeLeo, CJ Briggs, AP Dobson, T Gross, AM Kuris. 2015. **A general consumer-resource population model**. *Science* 349(6250): 854-857. doi:10.1126/science.aaa6224
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=5384>

IN THE NEWS CONT'D

Le Séquoia En Californie, le Général Sherman a soif (*Le Monde*)
Le Monde's Corine Lesnes composed an article on **Nate Stephenson's** research on drought stress in giant sequoias.
http://www.lemonde.fr/festival/article/2015/08/14/en-californie-le-general-sherman-a-soif_4724551_4415198.html

More Dry Days Mean Deepening Threat for State's Wildlife (*The Press Enterprise*)
Writer Janet Zimmerman interviewed **Adam Backlin** on the California drought's impact on endangered arroyo toads in San Diego County. Less moisture in the sand where the toads burrow puts them at risk of drying out during their long hibernation through summer and fall.
<http://www.pe.com/articles/water-777640-california-drought.html>

Dying California Forests Offer a Glimpse into Climate Change (*CBC News*)
Reporter Kim Brunhuber narrates a short video featuring **Nate Stephenson** and colleagues' research on the combined effects of warming temperatures and intense drought.
<http://www.cbc.ca/news/technology/dying-california-forests-offer-a-glimpse-into-climate-change-1.3187672>

Researchers Map Effects of Drought on Giant Sequoias (*The Daily Californian*)
Writer Jamie Nguyen describes the results of studies on the prolonged drought's effects on giant sequoias.
<http://www.dailycal.org/2015/08/12/researchers-map-effects-of-drought-on-giant-sequoias/>

Great White Sharks are Killing More and More Threatened Sea Otters—But Not Eating Them (*Newsweek*)
Writer Douglas Main highlights **Tim Tinker's** recent study on great white sharks biting and killing, but not eating, southern sea otters off the coast of California.
<http://www.newsweek.com/great-white-sharks-are-killing-more-and-more-endangered-otters-not-eating-them-364854>