



AWARDS

The **California Transportation Foundation** will announce the winners of its 24th annual Transportation Awards on **May 23, 2013**. Among the nominees for Sustainable Environmental Enhancement Project of the Year is the **SR 330 Mountain Yellow-Legged Frog Recovery Project**. This nomination is shared by Caltrans, San Bernadino National Forest, USFWS, San Diego Zoo, Cal Fish and Wildlife, along with **Adam Backlin, Robert Fisher** and colleagues at USGS WERC. The awards luncheon will be in Sacramento.
<http://www.transportationfoundation.org/transportation-awards/>

EVENTS

May 15, 2013 (Davis, CA)

Phil van Mantgem was invited to speak at the **UC Davis Forest Biology Lecture Series** on the pattern and processes of tree mortality across the Western U.S.
<http://www.werc.usgs.gov/Event.aspx?ID=154>

May 15, 2013 (Diamond Bar, CA)

Robert Fisher was invited to speak at the **The 2013 Fire Summit: Water Resources and Watershed Protection Before and After Fire**, hosted by the Southern California Regional Area Task Force. Fisher was invited to speak on wildfire impacts to aquatic species in the region.
<http://www.werc.usgs.gov/Event.aspx?ID=157>

July 16, 2013 (Menlo Park, CA)

The USGS Menlo Park Campus will again host the biennial **Salt Ponds Science Symposium**, showcasing the efforts and progress updates of the South Bay Salt Pond Restoration Project. This year also marks the 10th anniversary of the project's inception and continued collaboration among public and private institutions.
<http://www.werc.usgs.gov/Event.aspx?ID=156>

This Biweekly Update is produced as a service to USGS/WERC staff, colleagues, partners and the interested public. To add your email address to the mailing list or to report errors/suggestions, please contact blandis@usgs.gov. Download this issue at <http://www.werc.usgs.gov/outreach.aspx>.

WERC Scientists Share Symphony of Songbird Science at Cabrillo National Monument

On May 11th, **Barbara Kus, Suellen Lynn**, Katie Allen and **Melanie Madden** were invited to take part in the **Migratory Bird Festival** at **Cabrillo National Monument**, just outside of San Diego, Calif. Many songbird species use Cabrillo National Monument as a stop along their annual migration route from Mexico to Canada, and the Kus Lab conducts migratory songbird bird surveys at Cabrillo on behalf of the National Park Service. Kus and colleagues spent the Saturday sharing their songbird knowledge with visitors. Download the songbird coloring sheet from the event via the link below:
<http://www.werc.usgs.gov/outreach.aspx?RecordID=179>
<http://www.werc.usgs.gov/kus>

NEW JOURNAL ARTICLES

Hartman, CA, JT Ackerman, G Herring, J Isanhart, **M Herzog**. 2013. **Marsh wrens as bioindicators of mercury in wetlands of Great Salt Lake: do blood and feathers reflect site-specific exposure risk to bird reproduction?** *Environmental Science & Technology*. doi: 10.1021/es400910x
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4904>

WERC PUBLICATION BRIEFS

Effect of leaf beetle herbivory on the fire behavior of invasive tamarisk
In a study published in the *International Journal of Wildland Fire*, **Matt Brooks, J.R. Matchett** and colleagues evaluated the potential effects of *Diorhabda carinulata* herbivory on tamarisk fire behavior at a Great Basin and a Mojave Desert site. Fire behavior response was measured with a fire intensity index and with maximum temperature, duration, flame lengths, rates of spread, and proportion of vegetation consumed by fire.
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4899>

WERC PUBLICATION BRIEFS (CONT'D)

Resistance to invasives and altered fire regimes differs between cold and hot desert shrublands

Effective management of desert shrublands relies on a clear understanding of the threats posed by invasive plants and altered fire regimes, mechanism by which they cause undesirable impacts, and management strategies that can prevent or otherwise mitigate their negative effects. An article in *Rangeland Ecology & Management* by **Matt Brooks** of USGS and Jeanne Chambers of USDA Forest Service provides an overview of key factors, concepts and tools to understand the ecological resistance to biological invasion and resilience to fire of desert shrublands of North America.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4900>

Mapping behavioral landscapes: predicting how bobcats respond to urban barriers

Understanding how wildlife react to urban barriers is therefore an important aspect of assessing whether habitat connectivity measures are sufficient. In a study published in *Ecological Applications*, researchers at USGS, University of Wisconsin and Colorado State University employed a finite mixture modeling approach to describe the behavioral responses of bobcats (*Lynx rufus*) to urban development.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4891>

LiDAR survey helps discern fire severity impacts on Yosemite conifer forests

Understanding how fire modifies forest structure requires the ability to map both fire severity and forest structure with high resolution. Light detection and ranging (LiDAR) technology can efficiently survey large swaths of forests and provide three-dimensional surveys. A study published in *Forest Ecology and Management* demonstrates the consideration of both satellite-based remote sensing and airborne LiDAR data to assess landscape-scale effects of fire severity on forest structure.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4898>

Israel's Carmel Fire and the shifting baselines of fire in the Mediterranean region

The "Carmel 2010 Fire" was the largest in Israel's history, burning 2,500 hectares of forest, destroying 81 homes and damaging 173 more, and incurring human casualties. But can these results be explained simply by extraordinary weather conditions at the time of the fire? A special issue of the *Israel Journal of Ecology & Evolution*, with invited papers by **Jon Keeley**, presents a review of fire impacts on the flora and fauna of the Mediterranean region, and ways to recognize the shifting needs of fire management.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4903>

A new model for predicting wildfire risk in northeastern Mojave Desert landscapes

Wildfire prediction in the southwestern U.S. is of specific concern, given the increasing prevalence of severe fire on desert shrublands, as well as a lack of accurate fire prediction tools. But USGS Western Ecological Research Center researchers have now developed a fire risk GIS model to predict fire occurrence in southeastern Nevada.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4901>

A comparative overview of fire and flora in Mediterranean climate ecosystem

Four regions of the world share a similar climate and structurally similar plant communities with the Mediterranean Basin. These five areas, known collectively as "Mediterranean-type climate (MTC) regions", are the focus of a review by **Jon Keeley** published in the *Israel Journal of Ecology and Evolution*.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4902>

IN THE NEWS

Assessing Birds' Mercury Risks More Complicated Than Previously Thought (*Chemical & Engineering News*)

Reporter Erika Gebel interviewed **Alex Hartman** about the **Ackerman Lab's** new paper on assessing marsh wrens as bioindicators of mercury in Great Salt Lake.

<http://cen.acs.org/articles/91/web/2013/05/Assessing-BirdsMercury-Risks-Complicated-Previously.html>

The Few, the Proud, the Tortoises: Marines Protect Endangered Species (*Wall Street Journal*)

Reporter Ben Kesling quotes **Christine Aiello** of the **Nussear Lab** in a story on endangered species conservation research on Marine Corps and other military lands, including WERC projects on desert tortoises in the Mojave Desert.

<http://on.wsj.com/10mJwTx>

Adapting To The New Reality Of Increased Wildfire Danger (KPBS)

Reporter Maureen Cavanaugh interviews Alexandra Syphard of Conservation Biology Institute. Syphard is a co-investigator on the **USGS Southern California Wildfire Risk Scenario Project**, and she spoke on the importance of land-use planning in southern California wildfire management.

<http://www.kpbs.org/audioclips/17913>

Good brush clearance by Glendale residents key in quick fire containment (89.3 KPCC)

Reporter Deepa Fernandes quotes **Jon Keeley** in this story about the Chevy Chase Canyon Fire near Glendale. Keeley cautions that there is no way to predict where the next fire might pop up in the region, saying "all of Southern California ought to be on alert. We've had a very dry spring, so the vegetation is unusually dry for this time of year."

<http://www.scpr.org/news/2013/05/05/37127/good-brush-clearance-by-glendale-residents-key-in/>

OUTREACH NEWS

Keith Miles participated in the **Dinner with a Scientist** event hosted by Sac State and UC Davis on May 2 in Sacramento, CA. The event offers middle school and high school students a chance to meet a working scientist to hear about their research and their career path.