



Center for Disease Control and Prevention

New Model Suggests Lower Temperature for Optimal Malaria Transmission

A new study in *Ecology Letters* anchored by **Kevin Lafferty** has implications for malaria epidemiology and ecology. The study's model predicts that malaria transmission should peak at 25°C/77°F, and dramatically decrease above 28°C/82°F. The model, based on mosquito thermal physiology, incorporated published data from lab experiments on mosquitoes. Previously published models put the optimal temperature for malaria transmission from mosquitoes to humans at 31°C/88°F, but they assumed that mosquito and malaria parasite vitality continue to increase linearly with temperature. "Clarifying the response of malaria transmission to temperature helps us anticipate how climate change might affect disease risk," says Lafferty. The study was funded by USGS, National Science Foundation, NCEAS and UC Santa Barbara.

<http://www.usgs.gov/newsroom/article.asp?ID=3437>

<http://www.esf.edu/communications/view.asp?newsID=2009>

<http://www.eenews.net/climatewire/2012/10/26/archive/3>

<http://www.newscientist.com/article/dn22419-malaria-study-challenges-warmer-world-predictions.html>

NEW JOURNAL ARTICLES

Hawkes, LA, S Balachandran, N Batbayar, PJ Butler, B Chua, DC Douglas, PG Frappell, Y Hou, WK Milsom, SH Newman, DJ Prosser, P Sathiyaselvam, GR Scott, **JY Takekawa**, T Natsagdorj, M Wikelski, MJ Witt, CM Bishop. 2012. **The paradox of extreme high-altitude migration in bar-headed geese *Anser indicus***. *Proceedings of the Royal Society B* 20122114. doi: 10.1098/rspb.2012.2114
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4826>

Price, OF, RA Bradstock, **JE Keeley**, AD Syphard. 2012. **The impact of antecedent fire area on burned area in southern California coastal ecosystems**. *Journal of Environmental Management* 113: 301-307. doi: 10.1016/j.jenvman.2012.08.042
<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4827>

EVENTS

November 28, 2012 (Long Beach, CA)
Jon Keeley will discuss wildfire risks in southern California to the internal workshop **Preparing Southern California for Extreme Weather-Related Events**, co-hosted by California DWR.
<http://www.werc.usgs.gov/Event.aspx?ID=136>

November 29, 2012 (Placerville, CA)
Steven Schwarzbach will give a guest public lecture at **Folsom Lake College** on the changing landscape of environmental and conservation management.
<http://www.werc.usgs.gov/Event.aspx?ID=137>

December 3-7, 2012 (Portland, OR)
Phil van Mantgem, Todd Esque, Jon Keeley, C.J. Fotheringham and Carlton Rochester are scheduled to attend the **5th International Fire Ecology and Management Congress** in Portland, Oregon.
<http://www.werc.usgs.gov/Event.aspx?ID=138>

December 13, 2012 (webcast)
Robert Fisher will give the the next **USGS Evening Public Lecture and Webcast** out of Menlo Park, CA. Fisher will talk about his Pacific islands reptile research, including newly discovered geckos and iguanas, and nuisance invasive snakes.
<http://www.werc.usgs.gov/Event.aspx?ID=139>

IN THE NEWS

Otter Study to Go On Despite Setback from California Coastal Commission (Monterey County Herald)
Reporter Liz Devitt wrote about research led by **Tim Tinker** focusing on sea otter health in the Morrow Bay region. The study would have also examined the effect of acoustic scans on sea otters, had the PG&E seismic testings been permitted.
http://www.montereyherald.com/local/ci_21999125/pg-e-funded-otter-study-go-despite-coastal

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NEW WERC PUBLICATION BRIEFS

Prescribed Fires Do Not Reduce Future Area Burned in Central and Southern California

A new statistical analysis of historic fires reveals that in central and southern California ecosystems, prescribed fires have no effect on reducing area burned by future fires. The antecedent fire area leverage for central/southern California was found to be zero, which meant that no amount of area burned can inhibit future area burned. The *Journal of Environmental Management* paper was authored by **Jon Keeley** with colleagues from the University of Wollongong and Conservation Biology Institute.

<http://www.werc.usgs.gov/ProductDetails.aspx?ID=4828>

IN THE NEWS (CONT'D)

Climate, Waterfowl and Water (*Pintail Action Group Newsletter*)

In the October 2012 newsletter of the Pintail Action Group, **Joe Fleskes** describes his research projecting impacts of climate, urbanization and water supply management on habitats and ecology of pintails and other waterfowl in the Central Valley of California.

<http://on.doi.gov/Xuqf34>

FROM THE BLOG ARCHIVES

Turkey Day Science: What Do Gobblers Gobble?

As America chows down this week at Thanksgiving on that plump fall fowl, we chew on a nagging question: what do turkeys chow down on? Galliform bird biologist **Mike Casazza** answers a few questions in this blogpost from 2010.

<http://www.werc.usgs.gov/outreach.aspx?RecordID=17>

WERC JOBS

Ecologist (Riverside, CA)

Kristin Berry is seeking a term position ecologist to help manage and conduct field research in desert ecology. Appointment to this position will be for a period not to exceed 13 months, with possible extensions up to a total of 4 years without further competition.

<https://www.usajobs.gov/GetJob/ViewDetails/330402000>

OUTREACH NEWS

WERC Pinterest Boards

If you're a fan of beautiful wildlife photos and landscape scenery, check out the latest WERC outreach experiment. Follow us on **Pinterest**, click on our pins to read our science blogposts from past and present, and repin your favorite images to share with your friends and followers!

<http://pinterest.com/usgswerc/>

USGS Rocks 2012 Bay Area Science Festival

The 2012 Bay Area Science Festival welcomed more than 30,000 attendees to AT&T Park within the span of five short hours on Saturday, November 3. San Francisco mayor Ed Lee joined local residents and visiting families to tour science exhibits from regional scientific agencies and companies. USGS hosted four booths: earthquake science, Alcatraz nesting birds, California sea otters and South Bay Salt Pond Restoration Project. The festival is expected to return for its third year in 2013.

<http://www.bayareascience.org/festival/discovery-days-at-att-park/>

<http://www.sfgate.com/science/article/Bay-Area-Science-Festival-hits-it-out-of-the-park-2324234.php>

<http://www.ucsf.edu/news/2012/11/13072/bay-area-science-festival-draws-more-30000-att-park-interactive-exhibits>

