



FOREST AND WILDLIFE ECOLOGY NEWS



A Newsletter for Dept. of Forest and Wildlife Ecology Staff, Students and Alumni

Vol. 14, No. 3

December 2011

News from the Chair

From all of us in the department, a heartfelt wish for happy holidays and a great next year!



Bill Karasov

As we celebrate the holiday season we are happy to recognize some of the many important contributions of our alumni, students, staff and faculty members. As

always, please share your news with us. This month we would like to acknowledge:

- Two scientific teams are laboring hard to expand knowledge about threats to bats, such as an emerging disease (White-nose syndrome) and expansion of wind farms (pg. 2).
- Professor Nancy Langston received a high honor from Sweden (pg. 2).
- Professor David Mladenoff was selected for a leadership position in one of our nation's most important conservation organizations (pg. 2).
- See "Alumni Update" for snapshots of four different career paths from our extended family.

We are ever more grateful for your generous and continuing philanthropy. Recent budget cuts on top of previous, continuous systemic cuts bring us to a total loss of at least 20% of our College's budget over the past 12 years. For the first time, UW-Madison is projecting that future base budgets can no longer be met by general-purpose revenue from the state or from tuition increases. Philanthropy has historically been used to create a margin of excellence at UW-Madison, but in the future may be critical for even the basic mission. - *Bill Karasov, Chair*

Satellite technology enables rapid, accurate mapping of forest harvest in upper Midwest

Using satellite images, Mutlu Ozdogan, assistant professor in FWE, can generate maps showing where trees have been harvested in the form of clear-cut areas over five-year intervals. Wisconsin's forest covers 16 million acres, says Ozdogan, "and it has vast economic, cultural, ecological and recreational benefits." Large-scale harvesting, mainly of softwood for paper, is leading to fragmentation, and changes in forest composition and biodiversity, he says. A first step to understanding what is happening is to make a map using images from NASA's Landsat satellite, which views Earth in several different wavelengths of light. When trees are harvested, more visible red light is reflected and is picked up in the satellite images. To confirm the accuracy of the images, Ozdogan compared his satellite generated maps to hand-drawn maps based on

the same Landsat images. "We correspond at least 90 percent of the time," he says. Ozdogan is developing a series of maps showing changes at five-year intervals, from 1985 through 2010. Once the technique is perfected, Ozdogan plans to extend it to the entire North American forests. "We have the computer resources to do this and once the algorithm is stabilized, we will move in that direction, mapping harvested areas, wall-to-wall for the entire country every few years, using free and open source tools." The computer-generated maps can be merged with other datasets related to water conservation, insect and disease outbreaks, fire, weather, and climate. The maps will also be useful for exploring how Wisconsin's large deer herd finds suitable habitat, since they prefer edge habitat created when trees are harvested. - *David Tenenbaum*

Alumni Update

Michael Weston (B.S. Forest Science 2001) has been promoted to Forest Area Supervisor for the Florida Forest Service. He now supervises 13 people and is in charge of wildfire suppression operations in Lee County, Florida. The county has large amounts of wildland-urban interface. Prescribed burns can be surrounded by millions of dollars in homes. In his new position Michael will continue his involvement with forestry landowner assistance and he hopes to
Alumni Update continues on p. 2

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Alumni Update, continued from p. 1
continue promoting longleaf pine planting and eucalyptus plantations as well as work on the area's major non-native invasive species issues. (Michael.Weston@freshfromflorida.com)

Sara (Moen) Nichols (M.S. Wildlife Ecology 1994) went on to obtain her D.V.M. at the UW School of Veterinary Medicine in 1997. Following a two-year stint as a clinical instructor, she went into small animal emergency and critical care and is now practicing at Veterinary Emergency Service in Madison. In 2010 Sara married Brian Nichols and they live near Deerfield, WI. (nichols2gether@gmail.com)

Susan Wester (B.S. Wildlife Ecology 1973) has returned to her wildlife "roots" after retiring from a career in the medical field. Wester obtained her M.D. in 1977 and practiced as a pathologist for almost 30 years. After retiring she returned to Madison and now combines her wildlife ecology background and her medical expertise to rehab wildlife at the Four Lakes Wildlife Center in Madison. (smwester@mac.com)

David Liska (B.S. Forest Science 1971 and M.S. Forestry 1972) was presented the Lifetime Achievement Award from the Wisconsin Urban Forestry Council. Liska (below, center) received the award at the meeting of the Park Foundation of Waukesha in March 2011. Pictured below with David are Bryan Spencer (left), WI Urban Forestry Council and Dave Burch (right), Park Foundation of Waukesha. Liska recently retired from the City of Waukesha Parks, Recreation and Forestry Department.



Department News

UW-Madison collaborates on new federal Climate Science Center

UW-Madison is among several institutions that will collaborate through a new federal Northeast Climate Science Center (CSC) to study the effects of climate change on ecosystems, wildlife, water, and other resources. William Karasov, chair of FWE, and Lewis Gilbert, associate director of the Nelson Institute for Environmental Studies, led the UW-Madison collaboration effort. The center will produce data to help managers of natural, cultural, and historic resources plan for challenges posed by climate change and other landscape-scale stressors, including fire, invasive species and changing land use.

Mladenoff to serve on Nature Conservancy board

Professor David Mladenoff was selected to serve on the Board of Trustees for The Nature Conservancy in Wisconsin. The Nature Conservancy is a leading conservation organization working around the world to protect ecologically important lands and waters. The Conservancy and its more than 1 million members have protected nearly 120 million acres worldwide.

Langston receives honorary professorship from Sweden

Professor Nancy Langston was named the King Carl XVI Gustaf Professor of Environmental Sciences for the 2012-13 academic year at Umeå University in Sweden. The professorship, established in 1996, is awarded each year to an eminent non-Swedish scholar selected by the King of Sweden and the Swedish Royal Academy of Sciences. Langston, whose current research explores ways to sustain Lake Superior forests and watersheds in the face of climate change, says the award will allow her to explore similar issues in northern Europe.

Bats in the news

Those small, night-flying, insect-eating bats have been in the news quite a bit lately. And researchers here in the department are right in the thick of research involving bats.

White-nose syndrome

Graduate student Jeffrey Lorch was part of a team of scientists that recently published an article in the journal *Nature* that proves the fungus *Geomyces destructans* causes the deadly white-nose syndrome in bats. "By identifying the causative agent of white-nose syndrome, this study provides information that is critical for developing management strategies to preserve vulnerable bat populations..." says co-author David Blehert, a microbiologist at the Wildlife Health Center.

Bats and wind turbines

In another "bat study" Professor David Drake is trying to solve the puzzle of what is killing bats near wind farms. Drake, former master's student Steven Grodsky, and Melissa Behr at the UW-Madison School of Veterinary Medicine teamed up to look for clues in bat carcasses found near turbines. The researchers focused on two deadly suspects: blunt-force trauma from colliding with the turbine blades or poles and barotrauma caused by flying through areas of different pressure created by spinning turbine blades. "There's certainly barotrauma going on, but there is definitely also blunt-force trauma...our results suggest bat deaths are the combination of both," says Drake. With the results of the study, researchers can now work on redesigning turbine blades to have a smaller pressure differential or identify other cost-effective mitigation strategies to minimize damage to bats.

Check out these videos:

Pine beetles and climate change featuring UW-Madison forest entomologist Ken Raffa:
<http://www.nbclearn.com/climate/cuecard/54762>

UW Forestry Club's 2011 Christmas tree sale:
<http://www.youtube.com/watch?v=jgSs7UwxQqQ>



Photo by Gene Summers

Billings *Jay Jones*
John Walker *Jeff Larson* *Nancy Langatz* *Scott Bowe*
John Fiedler *Samuel*
Happy Holidays!
Jim Berbalog *Michael N. Samuel* *William Karasw*
Christie Riebe *William Karasw*
Carol Bergman *William Karasw*
Craig Leimer *William Karasw*
Sara Rodde *William Karasw*
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From all of us in the Department of Forest and Wildlife Ecology

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We enjoy hearing from you!

We'd like to hear what's new with you, your career, family, etc. Drop us a note and include your name, degree and year, and any news you'd like to share with us. Please send your email to Mary Miron at:

<mjmiron@wisc.edu>

or drop a hard copy in the mail to the return address above.

Forest and Wildlife Ecology Fund

We invite you to join us in our efforts to provide support for important department priorities. Proceeds will be used to support student travel to professional meetings, help cover the costs of the summer field camp and the southern trip, and to renovate work space in Russell Labs.

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