



United States Department of Agriculture

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Forest Service  
**Research  
and Development**  
Monthly News and Highlights from  
the World Leader in Forestry Research

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The banner features a green and gold color scheme. On the left, the Forest Service logo is followed by the text "Forest Service" and "Research and Development" in large, bold, white letters. Below this, a gold box contains the text "Monthly News and Highlights from the World Leader in Forestry Research". On the right, there is a stylized white graphic of a globe with leaves. At the bottom right, the hashtag "#SoundScience" is displayed, along with social media icons for Twitter, Instagram, Facebook, and YouTube.

**USDA Forest Service R&D Newsletter - July 2019**  
*News from the Washington Office and Research Stations*

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## FEATURED NEWS

### Wildfires Know No Boundaries

For the first time, Forest Service and Oregon State University scientists have [assessed](#) cross-boundary wildfire exposure in the western United States by mapping potential fire transmission among public and private lands, and identifying areas where ignitions are most likely to expose communities to wildfire.



## CUSTOMER SERVICE

### Natural Resource Stewardship Helps Communities Prepare For And Recover From Disaster

When communities come together to recover from destruction caused by anything from hurricanes to violence to invasive insects, nature is often part of the program. A [report](#) edited by Forest Service scientists offers accounts of environmental stewardship that served as a springboard to collective recovery and resilience.



## INVASIVE SPECIES

### Do Roads Drive Forest Plant Invasions?

Roads provide a means for moving people and products, but they can also allow hitchhiking organisms to spread. Some exotic invasive plants thrive on the disturbance created by road construction that displaces native plants, but researchers [found](#) that the presence of a road may be less important than the presence of farms and other human activities nearby.



## RESTORATION

### Restoring Longleaf Pine on National Forest Lands

Forest Service scientists and managers have teamed up to study the impacts of replacing existing loblolly pine stands with longleaf pine on national forests in the South. Longleaf pine was once the dominant tree species in the region. Research to date suggests that water yield from longleaf pine landscapes may be greater than from loblolly pine and hardwood stands. [Research](#) on the Santee National Forest in South Carolina is advancing the current science on longleaf pine restoration while supporting the work of Forest Service managers.



## RESTORATION

### Spicing Up Restoration: Using Chili Powder to Keep Rodents from Eating Native Plant Seeds

Recently, a team of researchers and managers led by Forest Service scientists [demonstrated](#) that applying chili powder to bluebunch wheatgrass and other native plant seeds could reduce rodent seed predation enough to substantially increase

seedling recruitment. The reason this trick works is that the active ingredient in chili powder, capsaicin, burns the mouths of mice the same as it does humans.



## SHARED STEWARDSHIP

### Promoting Forest Health in Kentucky

Most bourbon whiskey is made in Kentucky, and federal law requires all bourbon to be aged in white oak barrels. Forest Service researchers and their partners are teaming up to [advance](#) the sustainability and restoration of white oak resources across the South. This research, along with research on the American chestnut and other important tree species, is happening at the Forest Health Research and Education Center, at the University of Kentucky.



## SHARED STEWARDSHIP

### Changing Alaskan Shorelines and Resources

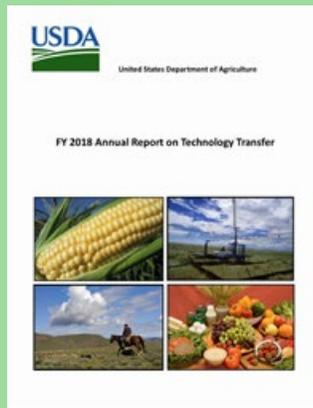
Climate change is altering the coastal environment in southeast Alaska, with direct impacts on valued coastal resources. From sea level rise to glacial retreat, the shoreline itself is undergoing dynamic changes. Forest Service scientists and their partners are [working](#) to predict future shoreline change and what it will mean for certain coastal habitats and species in southeast Alaska.



## WILDLIFE HABITAT

### Where in the World is the Pacific Marten?

The Pacific marten is a small mammal native to forested areas along the coast of the Pacific Northwest. These elusive, rare carnivores were thought to be extinct for over 50 years until some were spotted in northern California in 1996. Now, a Forest Service researcher is [working](#) to find out how many Pacific marten are currently left in the wild and their habitat needs.



## TECHNOLOGY TRANSFER

### USDA Research is Driving Technological Innovation

USDA released its annual [Technology Transfer Report](#), which highlights innovations from scientists and researchers that are solving problems for farmers, ranchers, foresters, and producers; and creating opportunities for American businesses to thrive.



## FARMS AND FORESTS

### Quantifying the Tree Resource in the Great Plains

Forests in the Great Plains are not like traditional forests. Their placement is often intended to provide an ecological service, such as conserving soil, protecting crops, livestock and humans, or enhancing water quality. Windbreaks are a prime example, yet little information describing their extent and location is available. Forest Service researchers developed a [mapping process](#) using aerial photography that delivers spatial information about trees in agroecosystems to land managers and decision-makers.

## More News



### Peter Lahm Earns Award for Protecting Human Health

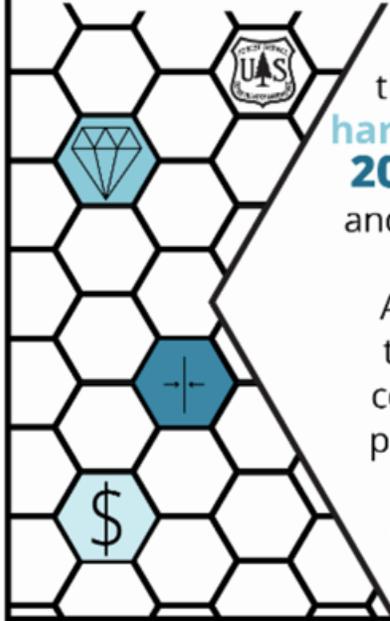
Forest Service Air Resource Specialist Pete Lahm (left) recently received a [medal](#) from the U.S. Environmental Protection Agency "for prescient research on wildfire smoke and for constructive tools used by public health officials, health providers and the public to protect human health."



### Bats, People, and Buildings: Issues and Opportunities

Bats consume large quantities of insects, which helps hold down populations of pests that could otherwise destroy agricultural crops and forests. Bats also pollinate plants that provide us with food and medicine. A new [publication](#) provides an overview of resources available to help people who want to support bats with their existing structures or new building projects.

## FOREST SERVICE RESEARCH BY-THE-NUMBERS



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