

U.S. Forest Service R&D Newsletter - June 2018

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U.S. Forest Service

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FEATURED NEWS

Science for Northwest Forest Planning Synthesized

On June 11, the USDA Forest Service released the Northwest Forest Plan [science synthesis](#), which will serve as the scientific foundation for land management planning in western Washington, western Oregon, and northern California. The synthesis considers science information that has become available since the Northwest Forest Plan was implemented in 1994.

One of the most significant findings of the science synthesis is that the Plan has protected old-growth forests as habitat for important species. At the same time, the report found that restoration of fire and other active forest management activities at landscape scales can promote ecological integrity and rebuild forest resilience to disturbance and stressors.



RESEARCH ACCOMPLISHMENTS

Celebrating a Commitment to Science-Based Resource Management

A [report](#) from the Charles Valentine Riley Memorial Foundation, which promotes advancements in agriculture through scientific knowledge, highlights the importance of a strong national forest research program and highlights 57 of the Forest Service's recent research accomplishments.



CRIME PREVENTION

USA Today: Could Reclaimed Wood Help Make Baltimore a Safer City?

The Forest Service has launched a "matchmaking" [project](#) to connect nonprofits employing previously incarcerated workers with private companies looking for reclaimed lumber. By deconstructing abandoned buildings in cities such as Baltimore, the [project](#) could simultaneously clear out crime hubs, provide job opportunities to help former inmates build new lives, and keep good wood from going to waste.



TROPICAL FOREST ECOLOGY

Hurricane Maria May Help Scientists Predict How Rainforests Respond to Warming Conditions

Forest Service scientists developed the world's first tropical forest warming [experiment](#), gathering data in Puerto Rico's El Yunque National Forest for about a year before Hurricane Maria hit. The storm devastated the island, but it hasn't stopped the experiment. In fact, the team is using this disaster as an unprecedented opportunity to study tropical ecosystem resilience in a warming world.



FOREST WATERSHEDS

Forests in Puerto Rico Supply Water to 3.6 Million People

Forest Service research [revealed](#) that public and private forest lands in Puerto Rico provide about 40 percent of the island's total water supply. A drainage basin downstream from El Yunque National Forest provides about 50 percent of the water supply for the San Juan metro area.



SOCIAL JUSTICE

Who Uses National Forests?

Forest Service researchers compared data from the 2010 U.S. Census and the Forest Service National Visitor Use Monitoring Survey and [found](#) that African Americans, who make up 13 percent of the population, only accounted for 1 percent of National Forest visits. Hispanics or Latinos, who make up 17 percent of the population, accounted for less than 7 percent.



WATER QUALITY

New Method of Measuring Contaminants Can Help Restore Chesapeake Bay

UV-filters from sunscreens, estrogens and other pharmaceuticals have been found in many U.S. aquatic ecosystems. Some of these chemicals are of concern because of their potential impacts on ecosystem health, and some are of concern because of their potential impacts on human health.

Forest Service scientists developed the first [method](#) to simultaneously detect multiple hormones and UV-filters from sunscreens in aquatic and marine environments. This method will help managers prioritize oyster restoration in the Chesapeake Bay.



ECOLOGY

Brown Bats Hungry for Mosquitoes

Forest Service scientists and their partners [discovered](#) that bats chow down on mosquitoes even more than expected. They found mosquitoes in 71.9 percent of fecal matter samples from little brown bats and in 33.3 percent of samples from big brown bats in Wisconsin. Research on the relationship between bats and mosquitoes is especially important in light of globally declining bat populations.



HERPETOLOGY

Reptiles and Amphibians Unharmred by Prescribed Fires in Early Growing Season

Forest Service researchers conducted the first [study](#) of how prescribed fires affect amphibians and reptiles in different seasons. They found that burns conducted during the growing season created small canopy openings that increased lizard abundance.



INVASIVE SPECIES

Alien Ants Just Keep on Invading

A successfully established invasive population may serve as a source of colonists for new invasions and thereby give rise to "secondary introductions". However, the frequency and overall importance of secondary introductions remains largely unknown.

In the most comprehensive global [assessment](#) of secondary insect introductions, scientists including Forest Service researchers analyzed 70 years of data on ant interceptions at air and sea ports in the U.S. and New Zealand. Their findings show that the majority of intercepted ants arrived through secondary introductions. These results reveal that secondary introductions are critical drivers of increasing global insect invasions.



FOREST MANAGEMENT

Forest Management Protects Spotted Owls and Fishers

Forest service [research](#) shows that management strategies that help forests become resilient to droughts and wildfires, such as reducing understory cover while preserving tall trees, can also benefit forest dwellers such as the California fisher (a small mammal) and the spotted owl. (Scroll down for spotted owl infographic.)



SCIENCE EDUCATION

Book on Ecological Lessons after Mount St. Helens' Eruption

A [book](#) co-edited by a Forest Service research ecologist reveals ecological findings almost 40 years after the infamous eruption of Mount St. Helens. The book is intended for scientists, students, and anyone interested in the resilience of ecosystems following a major disturbance.



HISTORY

Smokejumper Went to Space and Brought Back Moon Trees

In January 1971, astronaut and former Forest Service smokejumper Stuart Roosa traveled to the moon aboard Apollo 14, carrying in his flight suit 400-500 tree seeds as part of a Forest Service [experiment](#). After Roosa's safe return to Earth, the Forest Service germinated the seeds and successfully planted "moon trees" all around the country--including the White House grounds.



DID YOU KNOW?

How Long Does It Take Forest Rainwater to Reach a Stream?

According to research conducted at the Hubbard Brook Experimental Forest in New Hampshire, a raindrop can make its [journey](#) from soil to stream in only 50 days during wet periods, while in dry periods it can take 190 days for the rain to reach its destination.

Recent Blogs



Every Sip You Take: Why You Might be Drinking Forest Service Research

More than 60 million Americans rely on National Forest System lands for drinking water. Forest Service research promotes the quality and quantity of water from forests.



A Living Memorial to Mitigate Wildfire Risk

After the deadly 2013 Yarnell Hill Fire, local residents and land managers in Yavapai County, Arizona are caring for the forest that remains.



**R&D Deputy Chief Carlos Rodriguez-Franco
Receives Lifetime Achievement Award**

Forest Service Research and Development Deputy Chief Carlos Rodríguez-Franco was honored by Chapingo Autonomous University with a lifetime achievement award on May 3rd.



In Conversation with #WomenInAg: Susan Stein

An interview with the Director of the National Agroforestry Center features insightful career advice.

A Roost with a View

Do spotted owls prefer a penthouse or a ground-floor home?

Forest Service research reveals that spotted owls favor forests with high concentrations of trees that are

at least 105 feet tall—

and avoid dense stands of trees that are

52 feet or shorter.



Application of this discovery may help improve protection of spotted owl habitat.

[Learn more about Spotted Owl Habitats](#)

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