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

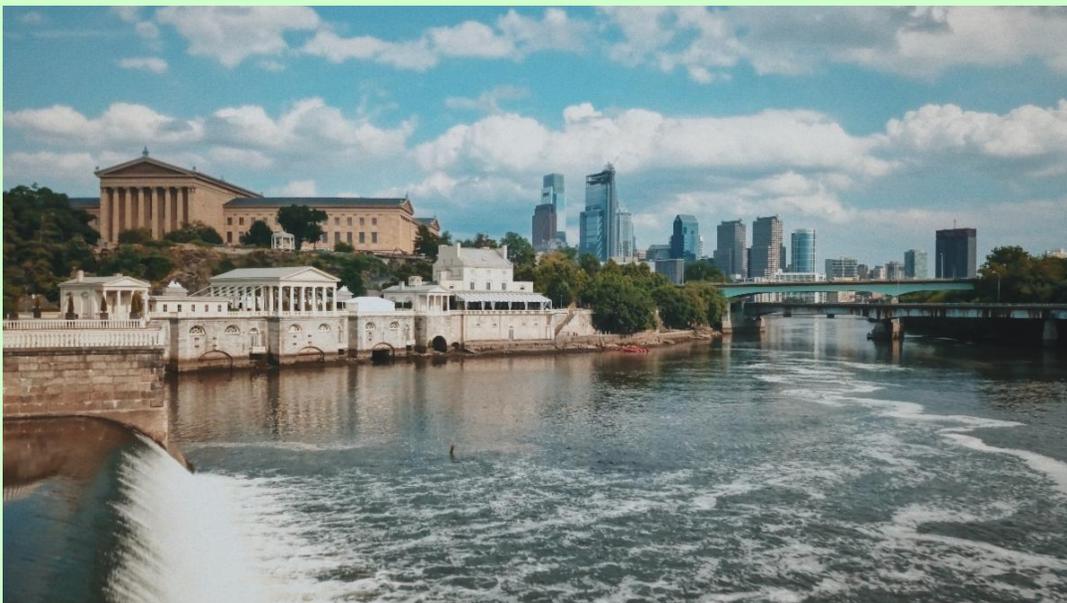
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U.S. Forest Service R&D Newsletter: June 2020

News from the Washington Office and Research Stations



FEATURED STORY

Increasing Tree Canopy in Philadelphia Could Lengthen Lives

Philadelphia's goal to increase tree canopy up to 30 percent in all the city's neighborhoods could lead to significant health benefits, including reductions in mortality according to a recent Forest Service [study](#). The researchers found that increasing canopy cover from 20 to 30 percent could prevent hundreds of premature deaths annually and offer a projected economic value ranging from \$2.6 billion (reduction of 271 deaths) to \$3.9 billion (reduction of 376 deaths). The health and economic benefits would be most pronounced in areas with lower socioeconomic status and lower urban tree canopy. *(Image Credit: Chris Murray)*



CONSERVING WILDLIFE

Studying Endangered Plants with Drones

In the first published [study](#) assessing the feasibility of using drone-based imagery for a census of an endangered plant species, Forest Service scientists studied the dwarf bear poppy population in the White Dome Nature Preserve, Utah. Using the drone technology, they were able to successfully study this plant that lives in a remote and inhospitable area with no damage to its habitat.



FIRE AND FUELS

Fighting Fire with Fire

After more than a century of working to keep fire out of forests, prescribed burns are now an important part of fire management. New Forest Service [research](#) conducted in the Malheur National Forest in Oregon assessed how season and time influence forest recovery after prescribed burns in ponderosa pine forests. These findings may support forest managers to design more effective fire treatments.



CONSERVING WILDLIFE

Counting Wolves: A New Approach

Forest Service biologists have published the [results](#) of an approach using noninvasive hair snaring and spatially explicit capture-recapture to estimate elusive wolf populations on Alaska's Prince of Wales Island. This approach produced robust population estimates and could even be applicable for studying other carnivorous species. *(Image Credit: Eva Blue)*



FOREST MANAGEMENT

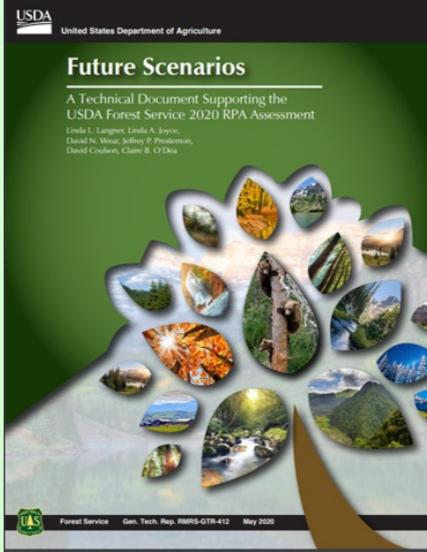
Resurrecting the Great American Chestnut

The American Chestnut tree was once the giant of the eastern forests of the United States. Decimated by disease over the past 200 years, only a handful of mature specimens remain. Forest Service scientists are leading new [studies](#) in the Allegheny National Forest to successfully reintroduce blight-resistant seedlings.

FOREST MANAGEMENT

2020 RPA Assessment Scenarios Released

Every 10 years, the Forest Service publishes the



Resources Planning Act (RPA) Assessment. The upcoming 2020 RPA Assessment will apply a set of scenarios and assumptions that have been described in detail in the following recently published reports:

- [Future scenarios: A technical document supporting the USDA Forest Service 2020 RPA Assessment](#)
- [Climate Scenarios and Projections: A Technical Document Supporting the USDA Forest Service 2020 RPA Assessment](#)



CONSERVING WILDLIFE

Citizen Scientists Support Lamprey Research

Forest Service researchers are teaming up with citizen scientists to [study](#) lamprey species distributions in Oregon. Rather than using electrofishing equipment to survey these eel-like fish, environmental DNA or 'eDNA' are collected from water samples. Citizen scientists will help the researchers gather water samples from over 170 sites to better understand the environmental conditions different lamprey species favor.



DELIVERING BENEFITS TO THE PUBLIC

Building Better Building Standards

Balconies are the most vulnerable building element because of exposure to weather damage. Forest Service researchers, along with partners from [Home Innovation Research Labs](#), are working to create [safer](#) building standards for mid-rise wood-frame buildings by reviewing and testing a range of deck and balcony designs. *(Image credit: [Kim Siever](#))*



WATER QUALITY

Pandemic Drives Urban Water Quality Improvements

In a [letter](#) published in the journal *Ecological Processes*, Forest Service scientists discuss how the economic slowdown caused by COVID-19 may improve surface water quality in the short-term. They highlight the importance of understanding how nature is responding to less pollution and seizing the opportunity to improve urban water quality going forward. *(Image credit: [Prateek Pisat](#))*

CONSERVING WILDLIFE



Scale Matters when Evaluating Salmon Habitat Restoration

Forest Service researchers recently published a [study](#) that indicates the mixed results seen in evaluations of salmon restoration efforts are a function of scale. They developed a technique to confirm restoration in the Entiat River was successful in improving habitat for Chinook salmon.



CONSERVING WILDLIFE

Promising New Tool for Wildlife Monitoring

Remote video cameras are an invaluable tool for wildlife monitoring, but viewing the tape is time intensive and viewer fatigue can result in errors. Forest Service researchers tested an automated motion-detection open-source software system called "[MotionMeerkat](#)" that detects wildlife movement in footage. Though manual review of results is still necessary, the researchers [found](#) the software offers significant time savings and reduces viewer error.

DID YOU KNOW?

National Forests Are Dinosaur Graveyards

When most folks think about national forests, they probably don't conjure up images of huge dinosaurs like the gentle Brachiosaurus chewing enough leaves to nearly fell a small forest just to fill its vegetarian stomach. But millions of years ago, this was [happening](#) on lands that today comprise national forests and grasslands like the Thunder Basin National Grassland.



Webinars



The Forest Service is co-hosting a monthly [webinar](#) series that covers basic information about biochar, and its applications and environmental benefits. Tune in on June 25 at 11 a.m. EST for the next webinar: "Forest woody biomass operations and biomass production."



The Forest Service's Urban Forest Connections [webinar](#) series brings together experts to discuss the latest science, practice, and policy on urban forestry and the environment.

Message from the Forest Service R&D Deputy Chief



MAKING OUR CORE VALUES COUNT

"This year has brought forth seismic changes in our personal and professional lives. While we continue to face the **impacts** of COVID-19, countless people have raised their voices over the past month to protest systemic racism. As a society and as an agency, we must take this impetus to recognize and evaluate our deep racial and social inequities and make this country a safer and more just place for all. My **work** with the Diversity and Inclusion Team and my own childhood experiences have led me to be deeply invested in our agency's commitment to make the work environment welcoming and inclusive for everyone. *Diversity and Safety* are Forest Service core values which we must live, not just talk about, and maintain constant vigilance in watching out for the behaviors and attitudes that do not reflect them."

JUNE INFOGRAPHIC

1934
PAST FORESTS WERE PATCHY
DUE TO FREQUENT, NATURAL FIRE.
REINO R. SARLIN

2010
DENSE FORESTS HAVE MORE FUEL
TO BURN, CREATING MEGAFIRES.
JOHN F. MARSHALL

SUPPRESSING ALL FIRE CREATES UNNATURALLY DENSE FORESTS.

GOOD FIRES PREVENT BAD ONES.

USDA Pacific Northwest Research Station

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