



United States Department of Agriculture

[Home](#) [Publications](#) [Locations](#) [Blog](#) [About Us](#)

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

#SoundScience

Twitter Instagram Facebook YouTube

[CLICK HERE TO SUBSCRIBE](#)

U.S. Forest Service R&D Newsletter: May 2020 *News from the Washington Office and Research Stations*



FEATURED STORY

Forestry as a Natural Climate Solution

Information about how much carbon is absorbed and stored in Alaska's 129 million acres of forests has long been needed. Recent [research](#) from the Forest Service and partners includes estimates of the carbon content of the state's forests, and analyses of their role in mitigating climate change. This

INVASIVE SPECIES



New Way to Identify Devastating Pests

From *Science*: Researchers all over the world are trying a new approach to prevent costly damage to forests from invasive pests: planting “sentinel trees” from their own regions in distant nations and then observing which insects attack. Results should help managers recognize and snuff out threatening introduced insects if they arrive in the trees’ native countries. The Forest Service is funding several [projects](#) involving sentinel trees.

INVASIVE SPECIES



In the Weeds: Fighting Invasive Grasses

Two recent Forest Service studies advance the battle against damaging invasive grasses. One Forest Service-led [study](#) identified ecological threats from invasive grasses that were previously unrecognized. Another [study](#) conducted by the Forest Service and collaborators indicates that the post-fire planting of seed mixes of native species in the Great Basin can suppress cheatgrass—a highly flammable, fast-growing invasive. (Scroll down for infographic on cheat grass.)

PROVIDING BENEFITS TO THE PUBLIC



Lessons on Healthy Social Living From Unlikely Teachers

Social living has increased humanity’s ability to transmit pathogens—as demonstrated by the coronavirus pandemic. The Forest Service [researches](#) disease management in insect communities that are less complex than human communities but are similarly challenged by pathogen transmission. Such research advances understanding of how pathogens spread and microbes promote immune responses in dense populations of social organisms. Results may have implications for management of human pathogens.

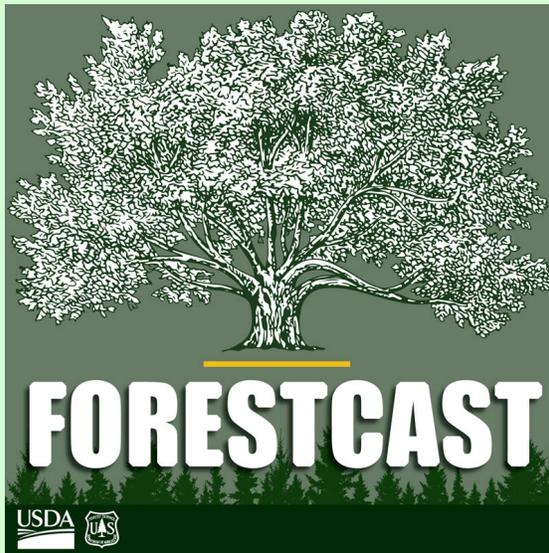
PROVIDING BENEFITS TO THE PUBLIC



Data on Carbon Offsets by U.S. Forests

Forest land, harvested wood products and urban trees collectively represent the largest net carbon sink in the U.S., annually offsetting more than 11 percent of total U.S. greenhouse gas emissions. This estimate, which is included in EPA’s [2020 Inventory of U.S. Greenhouse Gas Emissions and Sinks](#), was compiled by the Forest Service and is primarily based on data from the Forest Service’s Forest Inventory and Analysis program. To increase the accessibility of Forest Service data

contributed to EPA's greenhouse gas reporting the Forest Service now publishes state-by-state estimates of carbon uptake and emissions.



INVASIVE SPECIES

Forestcast: A New Podcast Series

Tune into Forestcast: A new Forest Service podcast series explores how forests affect us and how we affect forests. Season one is entitled "Balance and Barriers"; it covers invasive species, one of the most significant threats to forests.



URBAN FORESTRY

Planting More Trees in Washington, D.C.

From *The Washington Post*: Forest Service research on the varied benefits of urban trees is discussed in an article about Washington, D.C.'s struggle to reach its goal of covering 40 percent of the city by tree canopy by 2032. (Photo courtesy District Department of Transportation.)



FOREST PRODUCTS

A Forest of Invisible Trees

Transparent wood—a potential alternative to glass—is among the most promising and feasible materials of the future. The Forest Service and partners developed a process for producing a clear, strong and thermally insulated transparent wood that could potentially be used to construct energy efficient, sustainable windows.



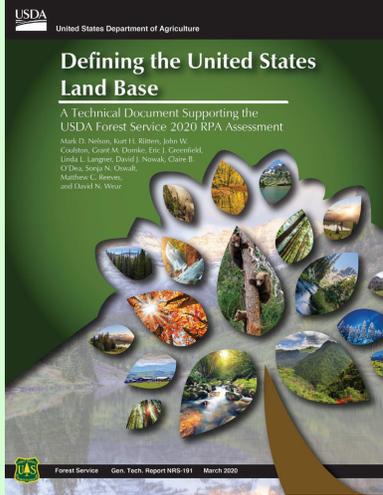
INVASIVE SPECIES

Impacts of Mountain Pine Beetles

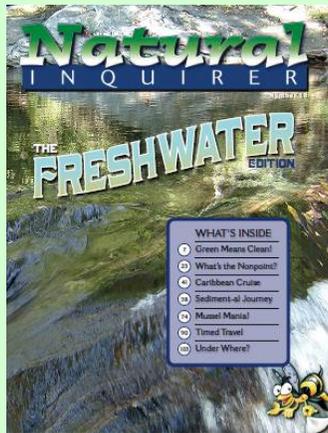
The recent epidemic of Mountain Pine Beetles, which lasted from the late 1990s to about 2012, hit Colorado particularly hard. A Forest Service summary of impacts of this epidemic on Colorado examines its negative as well as positive impacts on habitats of some species.

FOREST MANAGEMENT

Defining the United States Land Base



Every 10 years, the Forest Service publishes the Resources Planning Act (RPA) Assessment, which summarizes the status and trends in the nation's renewable resources in forests and rangelands. As a precursor to the upcoming release of the 2020 RPA Assessment, a new report—[Defining the United States Land Base](#)—explains how various data on land use and land cover are used to produce the RPA analyses of forest trends.



SCIENCE EDUCATION

Quarantine Special! New Resource for Kids at Home

Every day, the [Natural Inquirer](#) program posts "Science Hour," which highlights a new article and activity for kids. This is just one of many science education resources produced by the Natural Inquirer for Pre-K through grade 12 students.



TECHNOLOGY TRANSFER

Mite Collection Accessible to Researchers

A unique collection of mites, including 55,000 slide-mounted specimens, will soon be housed in Ohio State University's Museum of Biological Diversity through an agreement between Ohio State University and the Forest Service. The collection is accessible for viewing and research. It was amassed by the late [John Conrad Moser](#), a Forest Service entomologist who discovered that mites transmit Dutch elm disease.



ORAL HISTORY

Wisdom from Forest Service Retirees

The National Forest Service Library is hosting a new online [repository](#) of digital oral histories (along with transcripts) from more than 120 interviews with Forest Service retirees, which were conducted at three successive Forest Service retiree reunions. These oral histories are relevant to research on topics ranging from natural resources management to legislative affairs and will also interest friends and family of interviewees.



Woodpeckers Are Post-Fire Restoration Engineers

Forest Service research shows that [woodpeckers](#) are important ecological engineers that help restore burned landscapes. For example, they produce cavities in burned forests that may later be used by other animals, such as seed dispersers, that promote forest growth. Managers can support a diversity of woodpeckers by leaving behind a range of densities and sizes of fire-killed trees.

Webinars



The Forest Service co-hosts a monthly [webinar](#) on applications of biochar and their ecological benefits. Check out a [recording](#) of May's webinar "Biochar from Forest to the Farm".



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

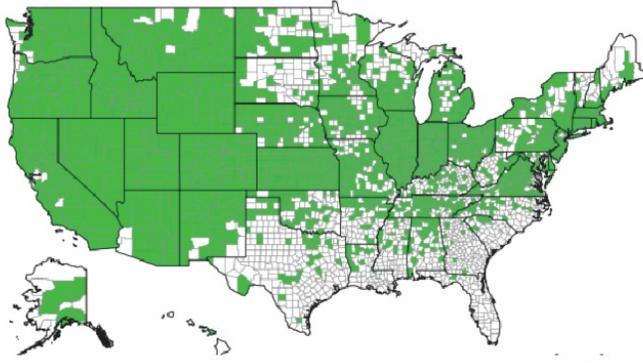


RESILIENCE AND RENEWAL IN THE TIME OF COVID-19

"As a scientist, I am fascinated by this stunning environmental response to the pandemic. As an agency leader, I am awed at the creativity, resolve, and good humor our staff have demonstrated, responding to maladapted and new technologies, concurrent working and home-schooling, and physical isolation. More than ever, I feel a sense of pride in our workforce, who have exemplified increased patience, openness, and support for colleagues in response to the pandemic and its impacts on our private and professional lives." Read the full [message](#) from Alexander Friend, Forest Service Deputy Chief for R&D, on the value of research in coping with the COVID-19 pandemic.

MAY INFOGRAPHIC

BY-THE-NUMBERS



No Data Species Reported

Cheatgrass – a highly flammable invasive species – is present in every U.S. state. It dominates about 25 million acres in the Great Basin region of the Intermountain West.

[Learn More >>](#)



NEW FEATURE! [Click here to download the May infographic and dozens of other infographics on forestry](#)

[Click here for the archives of the U.S. Forest Service R&D Monthly Newsletter](#)



Forest Service

STAY CONNECTED

