FEATURED STORY

Greater than the Sum of its Parts: The Southern Experimental Forest Network

The Forest Service's Experimental Forest and Range sites are all regional assets, providing decades of data on environmental variables like temperature and precipitation and forest composition that inform
academic and applied research efforts. The 19 sites in the southern region have now combined forces to form the Southern Research Station Experimental Forest Network, enabling greater coordination across sites. This effort enhances the ability of researchers to conduct landscape-scale research and align data collection approaches and priorities.

WILDLAND FIRE

Fire Response Planning using 'PODs'

To better plan for fire events, Forest Service scientists developed the Potential Operational Delineations (PODs) approach. PODs are spatial units or containers defined by potential fire control features, such as roads and ridge tops, within which relevant information on forest conditions, ecology, and fire potential can be summarized. This provides land managers a formal process for developing landscape-scale wildfire response options before fires start.

Lessons from Cultural Fire Practices

Fire has been a land management tool for Native American tribes for centuries. In a recent article published in Eos*, Forest Service work on cultural fire practices was featured, including the role of fire in hazelnut shrub for basketweaving and California black oak preservation. Their work illustrates how cultural fire practices can benefit tribal economies while reducing regional wildfire risks.

FOREST MANAGEMENT & RESTORATION

New Video Series on the American Chestnut

Once abundant in the eastern U.S., the American chestnut (Castanea dentata) has been decimated over the past century by exotic pests. A new set of online videos produced by the Forest Service explain the history and value of the American chestnut and efforts being undertaken to restore it. Part I offers an introduction and Part II showcases Forest Service and partner research on the tree.
Trees on Farms: A Review of the Many Benefits of Windbreaks

Trees, when integrated into agricultural systems as windbreaks, provide economic, environmental and social benefits. A new review of windbreak adoption across U.S. farms offers a synthesis of drivers for windbreak adoption and removal. The primary perceived benefits are economic (soil erosion control, livestock protection, wind protection and snow control), followed by direct agricultural benefits (increased crop and livestock production) and intrinsic values (aesthetics and wildlife habitat).

Evaluating Sustainable Harvest Levels in the Black Hills National Forest

Over the past two decades, disturbances from insects and fire have changed the productivity of the Black Hills National Forest. Forest Service scientists have published a report that applies forest census data to provide context, rationale, and evaluate a range of harvest level scenarios. It offers scientific information that can inform discussions concerning future harvest levels in this National Forest. Scientists discussed the report in a recorded webinar now available online.

CONSERVING WILDLIFE

New Landowner Guidance for Bat Conservation

Almost all North American bats rely on forests for survival. Individual forest landowners can play a large role in supporting these important animals, and a new publication co-authored by a Forest Service scientist offers guidance on how. Forest Management and Bats describes how active forest management can improve forest health and productivity while maintaining and enhancing bat habitat.

Shedding Light on Owl Behavior Using Emerging Tagging Technologies

Owl ecology is often poorly understood due to owl's nocturnal, reclusive nature. This hinders the implementation of effective conservation measures. Forest Service scientists and partners fitted owls with next-generation GPS tags -- capable of recording high-precision, minute-by-minute locations -- paired with other technologies to resolve some of these uncertainties. They
demonstrated it as an effective approach that can be applied to other species whose behavior inhibits direct observation.

**A Fresh Look at Fish Passage Goals**

A better understanding of the impact stream barriers have on fish populations can help address trade-offs between fish population management and other resource management goals. Forest Service researchers recently explored these dynamics in a study in which they used models to simulate a stream network with widespread barriers and their impact on salmon and trout populations.

**FOREST PRODUCTS**

**From the Vault: Priceless Mahogany for U.S. Capitol Building Restoration**

The attack on the U.S. Capitol Building in January 2021 left the historic structure damaged, including doors and wood fixtures made of priceless old-growth mahogany. The Forest Service Forest Products Lab has stepped in to help, supplying mahogany boards that had been in long-term storage for nearly 100 years. This type of wood would otherwise be nearly impossible to source due to its internationally protected status.

**RESOURCES FOR YOUNG NATURALISTS**

**The Natural Inquirer Features Experimental Forests and Ranges**

The Natural Inquirer is a free science education journal written for middle through high school age students. Check out the Natural Inquirer's spotlights on Experimental Forests and Ranges, along with games and other web resources. A wealth of educational products on Experimental Forests and Ranges are also available, including lesson plans, research briefs and fact sheets, multimedia stories, videos, and scientist cards.
DID YOU KNOW?

The Forest Service’s Experimental Forest and Range network is the largest and oldest ecological research network in the U.S.

The current network of 81 Experimental Forests and Ranges has been established progressively since 1908; many sites are more than 60 years old. They span 280,000 hectares, representing nearly all U.S. forest types.

Learn More!

The Forest Service’s Northern Research Station hosts a Rooted in Research webinar series, scheduled for 12:30 PM Eastern on the first Wednesday of each month. This series features the latest research with a direct land management application.

The Forest Service’s Rocky Mountain Research Station hosts a Science You Can Use webinar series, with one hour webinars held twice each month. They feature the latest research from its scientists covering a wide range of topics, including wildland fire, forest restoration, rangeland management, and wildlife conservation.

The Forest Service Urban Forest Connections webinar series brings together experts to discuss the latest science, practice, and policy on urban forestry and the environment. Tune in on May 12 at 1 p.m. EST for the next webinar titled, "Taking Flight: Urban Forest Stewardship for Bird Conservation using i-Tree Eco."

The Forest Service co-hosts a monthly biochar webinar series that covers basic information about biochar, its applications, and environmental benefits Tune in on May 13 at 11 a.m. EST for the next webinar titled “Strategic forest operations for forest management and biochar production."

Message from the Forest Service R&D Deputy Chief

Cashing in Where Data is the Currency of Research and Management

The value of the Forest Service’s Experimental Forests and Ranges is hard to overstate. Sometimes referred to as the ‘crown jewels’ of the Forest Service, they have been fueling formative scientific research for over a century. Like an investment that accrues value over time, their datasets expand with each passing year, shaping long-term perspectives on forest dynamics across the country.

The Experimental Forest and Range sites are among the few areas in the U.S. where such long-term research has been carried out by generations of scientists. Datasets up to 100 years old provide a larger and more complete picture than the
typical 5-year study, and provide answers to questions study designers had not even imagined.

In addition to providing underlying data for countless scientific papers and forest management policy decisions, the Experimental Forests and Ranges offer a tangible way for the public and partners to engage in science. Students and managers of all backgrounds, policy makers, collaborative members, stakeholders, and the general public have received educational opportunities and research experience from Experimental Forests and Ranges.

I invite you to explore the many Experimental Forest and Ranges and consider their value to you. Visit https://www.fs.fed.us/research/efr/ for an interactive map and a full listing of Experimental Forests and Range websites.
The Society of American Foresters (SAF) publishes The E-Forester*, a free weekly e-newsletter, with information about top forestry and natural resources-related news. Topic areas covered include wildfire, state lands, federal lands, research, innovation, forest products, international forestry, educational opportunities, and more. Click here to subscribe today!

Need additional reading material? Check out SAF’s latest book America’s Family Forest Owners* by author Brett J. Butler, PhD, and learn more about the largest forest-owning population in the country. Visit our store to buy your copy!

*The appearance of external hyperlinks does not constitute endorsement by the Department of Agriculture of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, the Department does not exercise any editorial control over the information you may find at these locations.

Click here for dozens of infographics on R&D research.

Click here for the archives of the U.S. Forest Service R&D Monthly Newsletter

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