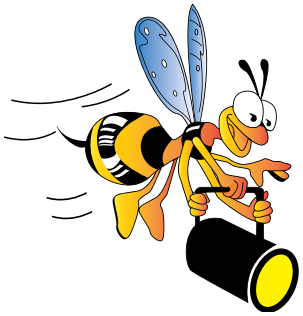

Spotlight on an Experimental Forest and Range (EFR)

Black Hills Experimental Forest

In 1908, the Forest Service established a system of experiment forests and ranges (EFRs) to be set aside for environmental research. More than 100 years later, 80 of these areas are spread across the United States (figure 18). The smallest of these is 47 hectares, and the largest is 22,500 hectares. Multiply the number of hectares by 2.47 to find out the size of these areas in acres.

Much of the research on EFRs is concerned with environmental changes that occur over long periods of time, over large areas, or both. Over 30 of

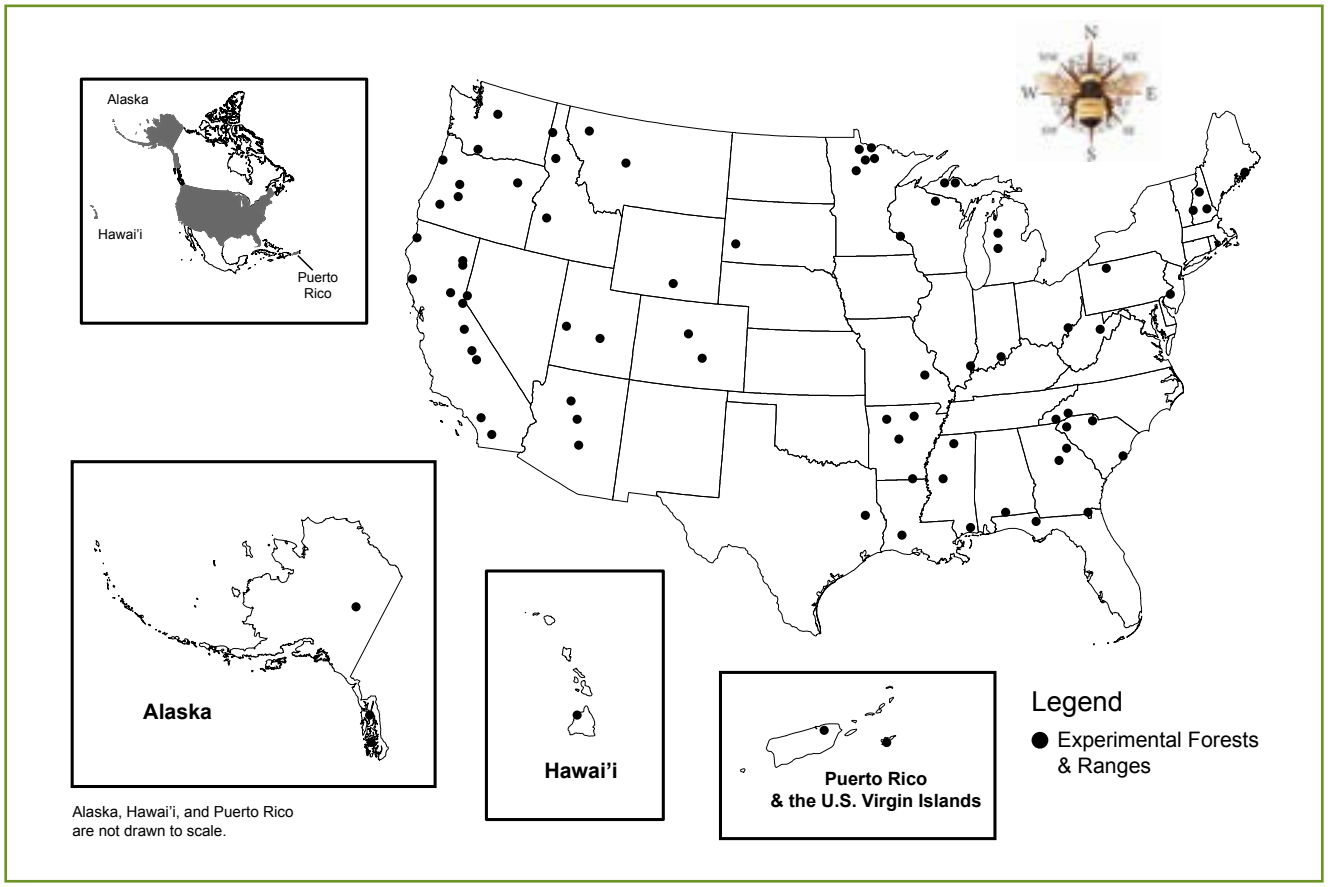

Figure 18. Experimental Forests and Ranges (EFRs) are located all across the United States. Where is the EFR closest to where you live?

Map by Carey Burda.

the areas were established at least 70 years ago. In some cases, experiments are designed to last 40 or more years.

On EFRs, scientists continually collect information about the weather, the amount of snowfall and rainfall, the soil, and the ecosystem in that location. The research in this monograph called "On the Fence: Which Barriers Protect Quaking Aspen From Ungulates?" focuses on quaking aspen and the role of barriers in protecting quaking aspen from damage by ungulates. Scientists completed their research in Black Hills National Forest in Western South Dakota.

Black Hills Experimental Forest is 1,376 hectares in the northeastern portion of Black Hills National Forest (figure 19). Black Hills Experimental Forest was founded in 1961.

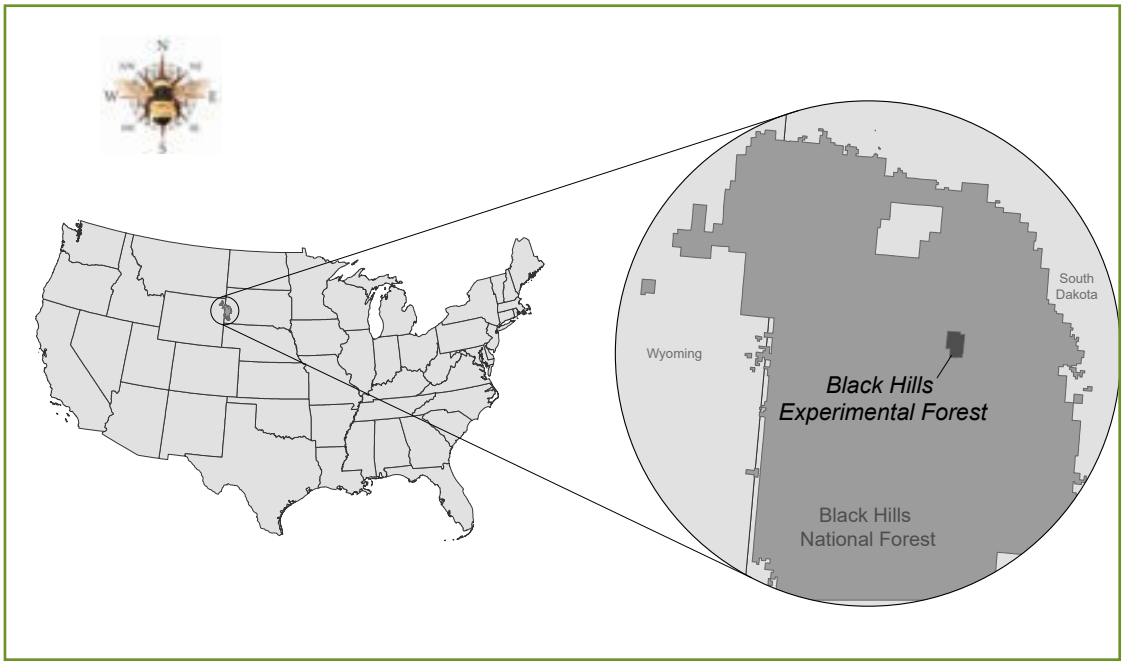

Figure 19. Black Hills Experimental Forest is located near Rapid City in Western South Dakota.

Map by Carey Burda.

Black Hills Experimental Forest and the larger Black Hills National Forest consist mostly of ponderosa pine, white spruce, and quaking aspen trees (figure 20). In many areas surrounding these forests, however, grasslands are common. Higher elevations, reaching over 7,000 feet on Harney Peak, are common in Black Hills Experimental Forest.

Research first conducted at Black Hills Experimental Forest focused on the production of timber. While studying timber production, scientists also

Figure 20. Ponderosa pine is common in the Black Hills Experimental Forest.
Photo by Mike Battaglia, Forest Service.

explored how timber production affected soil, habitat for animals, and forage for livestock. Like many EFRs, the research done at Black Hills Experimental Forest provides scientists a place to conduct research and highlight the best land management practices.

Scientists are still studying many of the original research topics. New research at Black Hills Experimental Forest includes a study of different forestry techniques. The scientists are hoping that these different forestry techniques will help the forest withstand wildfire, insect, and disease issues. During these experiments, the scientists also hope to learn more about techniques used to manage plant material that burns during wildfires.

Black Hills Experimental Forest is the only EFR in South Dakota and the easternmost EFR managed by the Rocky Mountain Research Station. To learn more about this EFR, visit https://www.fs.fed.us/rmrs/experimental-forests-and-ranges/black-hills-experimental-forest. However, Black Hills Experimental Forest is just one example of an Experimental Forest and Range. To learn more about all the Experimental Forests and Ranges, visit https://www.fs.fed.us/research/efr/.