

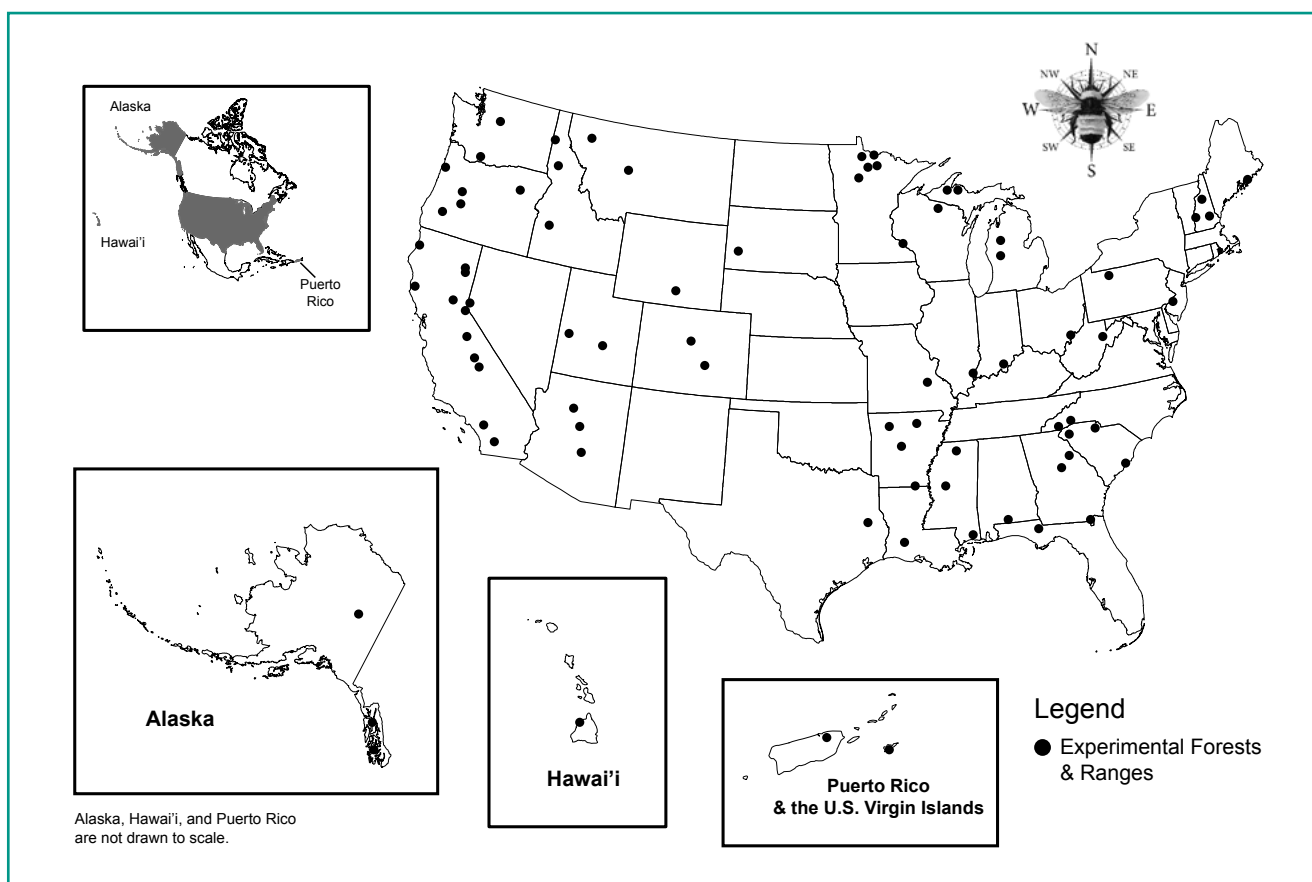
# Spotlight on an Experimental Forest and Range (EFR)

## Fernow Experimental Forest

In 1908, the Forest Service established a system of experimental 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 19). 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. More than 30 of the areas were established at



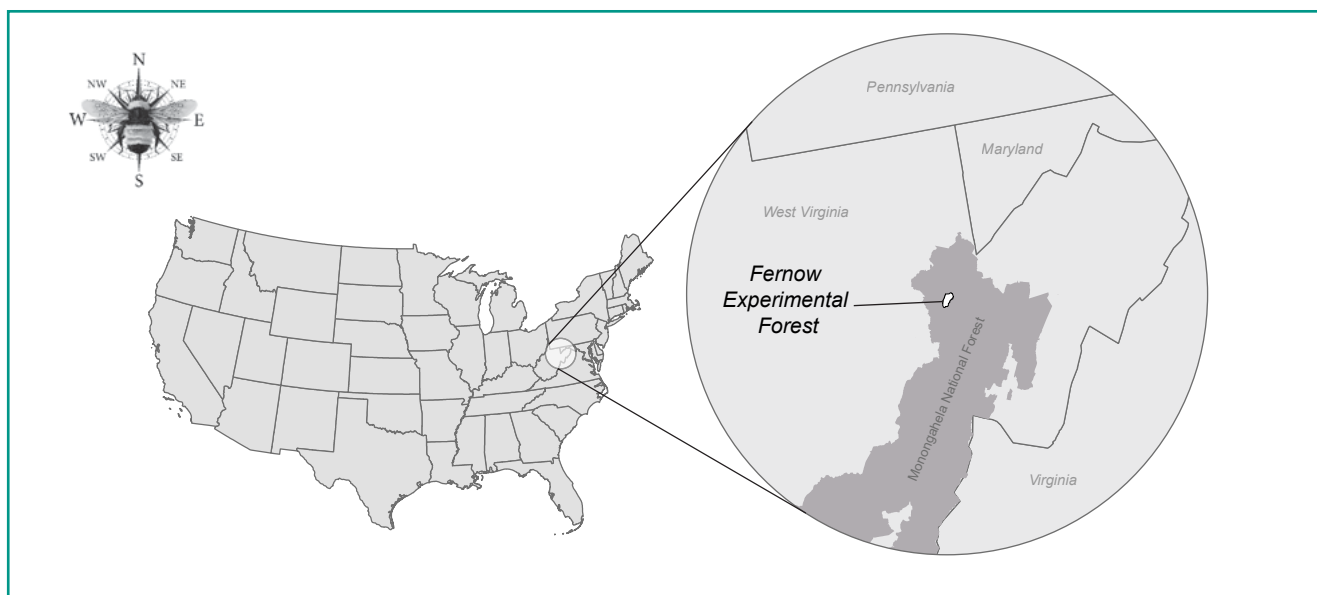
**Figure 19.** Experimental forests and ranges (EFRs) are located across the United States. Where is the one closest to where you live?

Map by Carey Burda.

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 historical research in the Time Warp

1951 took place in Fernow Experimental Forest. This experimental forest is located in the Monongahela (**mə nən gə hē lə**) National Forest in the central Appalachian Mountains of West Virginia (figure 20). Fernow Experimental Forest was established on March 28, 1934, to address water and timber issues.

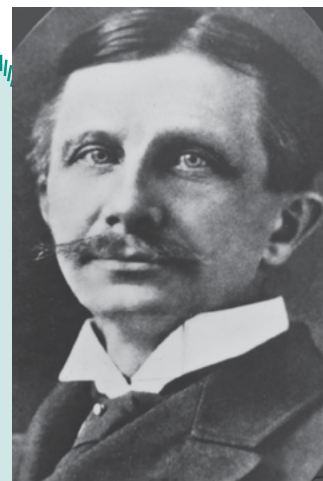


**Figure 20.** Fernow Experimental Forest is located in the central Appalachian Mountains of West Virginia. The forest includes 4,600 acres.

Map by Carey Burda.

### Did You Know?

Fernow Experimental Forest was named after Bernhard E. Fernow. Fernow was one of the first U.S. foresters who followed scientific forestry practices. Bernhard Fernow was the third chief of the U.S. Division of Forestry from 1886-1898, followed by Gifford Pinchot. Gifford Pinchot served as Chief until 1905. In 1905, the U.S. Forest Service was established from the U.S. Division of Forestry. Gifford Pinchot became the first Chief of the Forest Service.



## Spotlight continued

More than 80 years later, water and forest health are still studied in Fernow Experimental Forest (figure 21). However, scientists have also studied biodiversity, endangered species, climate change, and atmospheric deposition (**de pə zi shən**) in Fernow Experimental Forest. Atmospheric deposition includes particles in the air that are dropped on the land and in the water when it rains or snows. Fernow Experimental Forest was the first site in a national network to observe and record how atmospheric deposition affects forest health.

Fernow Experimental Forest is also used for education and outreach. More than 1,200 scientific journal articles have been published based on research from Fernow Experimental Forest. For

general outreach to the visiting public, signs are placed throughout the forest explaining the research that is taking place. Long-term data sets are also available for anyone wishing to use them in a research project.

Fernow Experimental Forest is just one example of an experimental forest and range. To learn more about all the experimental forests and ranges, visit <http://www.fs.fed.us/research/efr/>. To learn more about Fernow Experimental Forest specifically, visit <http://www.nrs.fs.fed.us/ef/locations/wv/fernaw/>. To take a virtual tour of Fernow Experimental Forest, visit <http://www.nrs.fs.fed.us/ef/locations/wv/fernaw/local-resources/docs/FernowVirtualTour.pdf>.



**Figure 21.** Research at Fernow Experimental Forest is focused on forests and water.

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