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Thornton T. Munger Old-Growth Forest Study

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Long-term studies of forest change in the Pacific Northwest are few; due to the long-lived nature of many of our Northwest tree species, the dynamics of tree death are still poorly understood. A large set of plots totaling 48.6 hectares was established in 1947 in what is now the Thornton T. Munger Research Natural Area at the Wind River Experimental Forest in southern Washington. The age and extent of the plot system make it a valuable source of data on the dynamics of tree populations in an old-growth forest. The forest is 450-years old with Douglas-fir (*Pseudotsuga menziesii*) and western hemlock (*Tsuga heterophylla*) comprising 86% of the volume. The remaining volume is made up of Pacific silver fir (*Abies amabilis*), grand fir (*Abies grandis*), noble fir (*Abies procera*), western redcedar (*Thuja plicata*), western white pine (*Pinus monticola*), and Pacific yew (*Taxus brevifolia*). The study area is distributed from 335 to 610 m in elevation and represents an intergrade between western hemlock/salal (*Gaultheria shallon*) and Pacific silver fir/salal plant associations. Scientists and students from the University of Washington, Oregon State University, and the USDA Forest Service are collaborating on the large task of re-measuring growth and mortality on the 48.6-ha-plot network. Growth and mortality summaries were prepared from the data collected at 6-, 12-, and 36-year intervals on a subset of plots within the larger network. Primary emphasis will be on the 43-year growth record of individual overstory trees, as well as all Douglas-fir mortality for the same period. The results will be helpful in interpreting long-range population dynamics that occur in our old-growth Douglas-fir forests.

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