



Thornton Munger at work, in 1911.

U.S. FOREST SERVICE

## Thornton Taft Munger 1883–1975

By World Forestry Center

If any one man can be named the father of forest management research in the Pacific Northwest, it is Thornton Taft Munger. Nearly 75 years after he retired from the U.S. Forest Service, his work is still affecting the region and beyond.

Munger was born in North Adams, Massachusetts, a center of progressive religious and social thought, and moved to New Haven, Connecticut, at a young age. He was the only son of a Congregational clergyman, author, and member of the Yale Corporation Board. The boy received a classical education in secondary schools—he

graduated from Hotchkiss Preparatory School, in western Connecticut, in 1901—and showed a keen interest in natural history. His family’s house in New Haven fronted on the Hillhouse Woods, an 18-acre natural park and plant laboratory in the heart of the city, where he collected flowers and plant specimens.

In his undergraduate years at Yale University, he hiked the extensive woods adjoining New Haven, enlarging his interest in the natural sciences and his love of the outdoors. Given the proximity of Yale Forest School, established in 1900 through the efforts of the federal government’s chief forester Gifford Pinchot, it seems only natural that

Munger would become interested in forestry. In 1902, he attended a summer short course in forestry at the Pinchot estate at Milford, Pennsylvania, where he learned “the rudiments of forestry” and met the “magnetic” chief.<sup>1</sup>

After receiving his bachelor of arts degree in 1905, on the recommendation of the Yale forestry school’s dean, Henry Graves, Munger went abroad for nine months to study forestry practices in Europe. Graves provided him with letters of introduction to foresters in Germany. Upon his return, Munger entered the Yale Forest School with more knowledge of forestry than most of his classmates. He received a master of forestry degree in 1908 and began work for the U.S. Forest Service in Washington, D.C., that summer. Assigned to the Division of Silvics (research) under Raphael Zon, he worked on office reports but, inspired by Zon, sought a career in forest management research.

After just two months in the Washington office, Munger was sent on his first field assignment—a study of the encroachment of lodgepole pine on the more valuable ponderosa pine in eastern Oregon. He concluded that the frequency of forest fires caused unwanted changes and recommended the absolute prevention of fires. This led to policies of fire exclusion and frequent light harvests, mistakes that in a way proved the need for long-term research.<sup>2</sup>

In December 1908, while still in Oregon, he was assigned to the silvics section in the newly created North Pacific District (then consisting of Oregon, Washington, and Alaska) of the Forest Service, with a primary

mission of investigating important commercial trees. At the time, silvics was defined as the study of habits and the natural history of forest trees, and it was the basis for all practical silviculture.<sup>3</sup> Munger spent the next several years getting familiar with forest types and tree species throughout the region while launching studies. Just as his research began, the lumber industry was moving in to the area. “Forest science was in a race to catch up with forest industry,” one historian has noted. “It was a race science couldn’t win.”<sup>4</sup> But in the name of conservation, science and the Forest Service would support industry.

With this assignment, Munger became a resident of Portland, home to the district headquarters. Over the next several decades he took an active interest in civic affairs, including becoming a founder of Portland’s Forest Park, a 5,000-acre wooded park that would be, he wrote, “a wilderness [where] the feeling of an extensive, uninterrupted forest sanctuary may be preserved far from the madding crowd.”<sup>5</sup> In 1988, Munger and the other park founders were honored with the planting of memorial trees.

In 1913, the Wind River Experiment Station was established near Carson, Washington, on what would become the Gifford Pinchot National Forest. This installation became the cradle of organized forest research in the Pacific Northwest. Munger was interested in Douglas fir, whose growth habits were not well understood, because he believed it to have commercial potential. According to Margaret Herring and Sarah Greene, in their history of Wind River, “as early as 1911, Munger had identified Douglas fir as the preferred forest crop that would be managed with clearcutting and slash burning to guarantee reproduction as quickly as possible. These methods

would become the tenets for most forest management in the Pacific Northwest for the next 75 years,” when management goals on federal lands shifted from timber production to biological diversity.<sup>6</sup>

Munger provided general supervision over the studies conducted at Wind River and anticipated the complex problems that would arise in managing the extensive, valuable old-growth forest resources of the Pacific Northwest, including reforestation and fire protection. Also at Wind River, plantations of Douglas fir and ponderosa pine were established for study of genetic characteristics of these important trees. Permanent sample growth-and-yield plots and spacing test plantations were established to provide basic data needed for second-growth management. In 1912, Munger initiated an arboretum to test and compare exotic forest tree species with indigenous species, and a Douglas fir natural area was set aside to ensure future ecological studies in an undisturbed condition. During this time, he also conducted genetic studies, established growth plots, and worked on or supervised forest reconnaissance (inventory), the last of which occupied much of his time between 1915 and 1924.<sup>7</sup> Short-term investigations included an avalanche study in Washington and experimental plantings on the Oregon Dunes to stabilize shifting sands.<sup>8</sup>

On July 1, 1924, Congress established the Pacific Northwest Forest Experiment Station (now the Pacific Northwest Research Station), to be headquartered in Portland. Named director, Munger assembled a small staff and planned a program that would use the limited funds available to best advantage. His initial goal was an eventual expansion of

research programs, with emphasis on applied research that would benefit both public and private interests. “We have no time now for research for research’s sake,” he wrote. “The selection of projects will depend on their economic importance.”<sup>9</sup>

Within a few years, study programs were expanded and work was underway regionwide. Among Munger’s first hires was Richard E. McArdle, later to become chief of the Forest Service. Others who came to national prominence included Leo A. Isaac in Douglas fir silviculture; Isaac’s assistant Bob Marshall, the future wilderness advocate; Ernest L. Kolbe in ponderosa pine management and private forestry in the West; and Walter H. Meyer in forest mensuration and forest education. Director Munger was a demanding leader who insisted on scientific integrity, precise composition in correspondence and scientific reports, scrupulous use and accounting of public funds, and overall consideration of the public interest.

During his tenure as station director, research activities and programs greatly expanded, additional experimental forests were established throughout the Northwest, and young foresters were recruited and trained in experimental methods. At the height of its activity, the research organization had nearly 100 technical and semi-professional workers. Munger’s policy was to expedite and complete studies, ensuring prompt release and use of information needed by forestland managers. He personally authored many scientific publications, delivered addresses to loggers and landowners, and gave guest lectures at the forestry schools in Washington and Oregon. He gained a reputation for never giving in to political expediency on public forest administrative policies. In recognition of his outstanding contributions, he

was awarded an honorary doctor of science degree by Oregon State College in 1938.

By then, the administrative duties and escalating responsibilities of the job had taken such a toll on his health that he went on sick leave for four months. Later that year, at his own request, he resigned as director to free himself to become chief of the station's forest management research division. This gave him time to direct and conduct research as a climax to his career.

Munger's findings and recommendations were the basis for many changes in forest management practices regionwide. One of those recommendations, which has had an enormous, long-term ecological impact, was his full-throated support of clearcutting to manage Douglas fir instead of selective timber management. The controversy divided researchers at Wind River in the 1930s. In an uncharacteristic step, he openly criticized the selective timber management concept, which was developed by two Wind River researchers assigned to his station in 1931. The concept would have maintained a continuous, sustainable timber supply from a forest of mixed ages and species. The controversy would resurface fifty years later as part of the northern spotted owl debate.<sup>10</sup>

Munger retired in 1946 after nearly forty years in the Forest Service, but he stayed on as a research

collaborator, sharing his knowledge and experience in forest resource problems and procedures.

Munger was known worldwide in scientific and professional circles. He was a fellow in the Society of American Foresters and American Association for the Advancement of Science; a member of the Ecological Society of America, Audubon Society, and Northwest Scientific Association; and a charter member of the Oregon Academy of Science. He was active in conservation organizations, such as the Oregon Roadside Council, Save the Myrtle Woods, Oregon Museum of Science and Industry, Western Forestry and Conservation Association, American Forestry Association (now American Forests), and Western Forestry Center (now the World Forestry Center).

In 1977, two years after his death at age 91, the Forest Service officially designated the Thornton T. Munger Research Natural Area on Wind River Forest lands, a fitting tribute to the man who did more than any other to lay the foundation of forest management research in the Pacific Northwest.

*This tribute was originally prepared for Thornton Munger's entry into the Forestry Leadership Hall at the World Forestry Center. It was updated by James G. Lewis in January 2020.*

## NOTES

1. Thornton T. Munger, "Forest Research in the Northwest," interview by Amelia Fry (Forest History Society and University of California—Berkeley, 1967), 20.
2. Les Joslin, *Ponderosa Promise: A History of U.S. Forest Service Research in Central Oregon*, PNW-GTR-711 (Portland, OR: U.S. Forest Service, Pacific Northwest Research Station, 2007), 8.
3. Margaret Herring and Sarah Greene, *Forest of Time: A Century of Science at Wind River Experimental Forest* (Corvallis: Oregon State University Press, 2007), 24.
4. Joslin, *Ponderosa Promise*, 8.
5. Quoted in Marcy Houle, "Keeping Forest Park Wild—One City's Wilderness: Going, Going, Gone?" *The (Portland) Oregonian*, May 11, 2013, NewsBank: America's News—Historical and Current: <https://infoweb.newsbank.com/apps/news/document-view?p=AMNEWS&docref=news/1463D5634FD2B860>.
6. Herring and Greene, *Forest of Time*, 30, 130.
7. Munger, "Forest Research in the Northwest," 70.
8. Munger, "Forest Research in the Northwest," v.
9. Quoted in Joslin, *Ponderosa Promise*, 10.
10. Herring and Greene, *Forest of Time*, 82–83; Munger, "Forest Research in the Northwest," vi, 123–32.

**In his early years in the Pacific Northwest, Thornton Munger traveled extensively, getting to know the region's forests. In August 1910 he examined the Cascade National Forest (now the Willamette) with Ranger C. T. Beach and Forest Guard Munington (Munger is believed to be on the right).**

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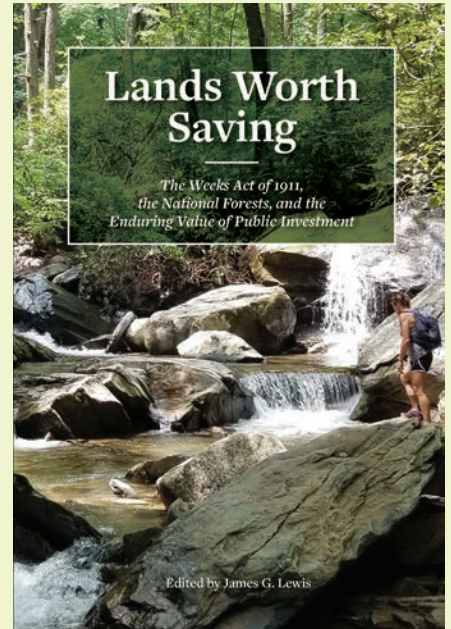
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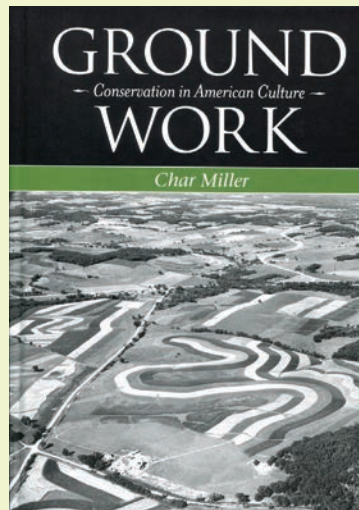
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James G. Lewis is the author of *The Forest Service and the Greatest Good: A Centennial History* and has served as editor of *Forest History Today* since 2007.

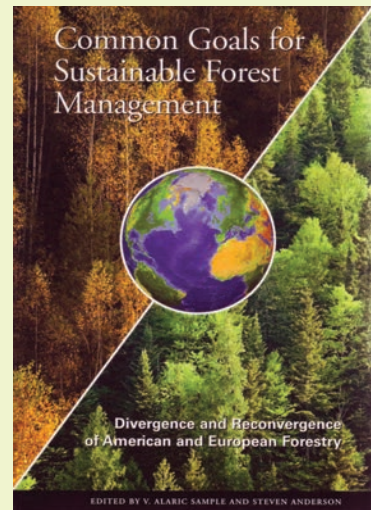


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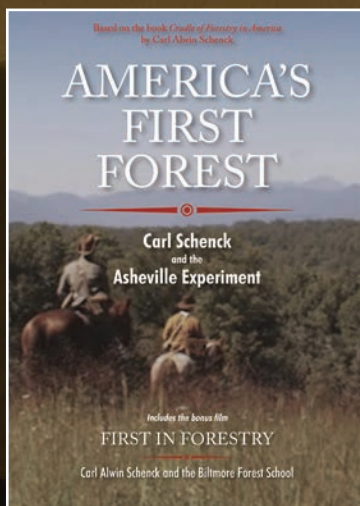
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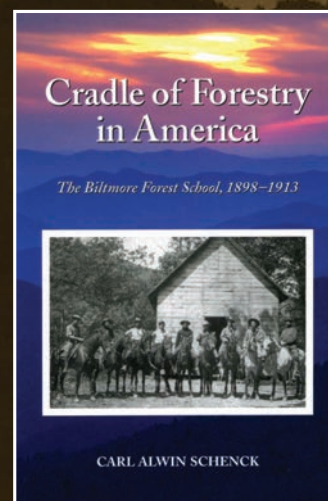
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