

Huckleberries: The Nexus of Collaboration, Economic Development, and Silviculture

BY MATT COMISKY

The Pinchot Partners (Partners) is a stakeholder-driven collaborative working with the U.S. Forest Service on and around the Cowlitz



Valley Ranger District of the Gifford Pinchot National Forest (NF) in southwest Washington State. The Partners was formed in 2003 at a time when significant economic hardships were being experienced in eastern Lewis County, where the collaborative is based. Timber harvest levels on the Gifford Pinchot NF were substantially less than in the 1970s and 1980s. Forest Service volume offered in 1999, 2000, and 2001 had bottomed out at 3.4 mmbf, 1.3 mmbf, and 2.3 mmbf, respectively, and local mills and logging jobs were rapidly declining. Out of those initial formative meetings came a mission to focus on promoting policies and projects that create quality local jobs and recreational opportunities, and benefit watershed health. Initially, the Partners began working with the NF on planning of forest

restoration projects that included commercial timber sales. That work gradually evolved to planning larger watershed forest restoration projects that result in multiple timber sales as well as projects that improve aquatic and terrestrial habitats.

Lewis County, especially its eastern portion, is heavily dependent on a natural resource-based economy. This dependence includes both active forest management (foresters, loggers, mills, contractors, support businesses) and tourism and recreation businesses. The Partners felt the mixture of local social and economic factors created a natural fit to explore enhancing huckleberry management on the Gifford Pinchot NF. The Partners believed that maintaining and enhancing the highly sought-after huckleberries could increase timber jobs and commercial and recreational berry harvests that support the local recreation and tourism businesses. Additionally, there was a strong tribal interest in maintaining and enhancing the traditional huckleberry gathering fields on the Cowlitz Valley Ranger District.

In July of 2009 the Pinchot Partners and Cowlitz Indian Tribe sent a joint letter to the U.S. Forest Service requesting the Gifford Pinchot NF to



PHOTO COURTESY OF USDA FOREST SERVICE ARCHIVES

Big Huckleberry, *Vaccinium membranaceum*, is prized for its taste and productivity.

consider developing a “huckleberry restoration/enhancement project” in cooperation with the Partners and the Tribe. The letter also asked to “work with the Forest Service with research/monitoring of the overall knowledge of huckleberries and other special forest products within the Gifford Pinchot National Forest.” The Gifford Pinchot NF had conducted a couple of previous huckleberry enhancement projects prior to sending this letter, with urging from the Partners, but this was the first formal request for development of an organized and comprehensive huckleberry management strategy.

The first project to come out of this new effort was the Pole Patch Huckleberry Restoration. The planning area for the Pole Patch Environmental Analysis (EA) was located in a tradi-

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tional huckleberry gathering area for both tribal and non-tribal gatherers. On national forests, the National Environmental Policy Act (NEPA) requires an environmental assessment before a project can occur. The EA resulted in two timber sales and a variety of non-commercial projects related to stand density reductions and prescribed fire treatments.

The proposal primarily was designed to focus on big huckleberry, *Vaccinium membranaceum*. This variety is considered the most important commercial huckleberry species in the Pacific Northwest. Big huckleberry is a native shrub that is found throughout the West including Alaska, British Columbia, Montana, Idaho, Oregon, and Washington. It is a frost-tolerant plant with stems that range from 12 to 47 inches in height. Reproduction can be accomplished by seed but is most successful via the rhizomes the plant produces. Vegetative production is relied upon heavily for regeneration after disturbance of growing sites.

While present in all seral stages, big huckleberry fruit development appears to be most productive in the early seral stages. However, shaded environments that limited fruit production and reduced cover in old forest stands did not eliminate huckleberry shrubs, and shrubs continued to grow taller as crowns closed. In addition to shade, weather conditions appear to play a critical role in berry yields. Snow pack depth and duration, drought conditions, and significant cold and wet weather during pollination period all appear to play a factor in berry yields. Also, sites protected from frost have more consistent



PHOTO COURTESY OF JEFF GREEN

Huckleberry monitoring: Volunteers establish a 1 x 1 m plot to examine height, fruit production, and fruit ripeness of huckleberry plants on the Gifford Pinchot National Forest.

fruit production.

Fire suppression and limited timber management has allowed tree cover to encroach many of the traditional and productive huckleberry fields on the Cowlitz Valley Ranger District, including in the Pole Patch area. Based on the known needs of the plants to produce successful yields of berries, the forest and its partners can manage tree density in the berry fields, where management plan guidelines permit such work. In the Pole Patch EA, the forest proposed to reach the “goal of huckleberry sustainability” by “reducing treatment unit canopy cover to approximately 15% to 30%, except on approximately 92 acres where a higher relative canopy cover (40%) would be left to ensure timber production as required by management direction.” Most of the treatment area used ground-based and limited cable logging to accomplish the density reduc-

tion. Non-commercial manual treatment was used to accomplish canopy cover reduction on a small portion of the project, 26 acres.

The commercial treatment areas were broken into two categories, heavy thinning and moderate thinning. The heavy thin areas would have a residual canopy cover between 15 and 20 percent. The units treated commercially with the moderate thinning prescription would have a residual canopy cover range between 21 and 27 percent. There is also a portion of the project area proposed for use of prescribed fire for treatment. These units have the same residual canopy cover targets as the moderate thinning but are locations that are inaccessible by ground-based logging equipment and too costly for cable operations. These thinning prescriptions create a range of average

(CONTINUED ON NEXT PAGE)

For Further Reading

Factors Influencing Globe Huckleberry Fruit Production in Northwestern Montana, P. Martin (<https://bit.ly/2AlmdnH>)

Minore, Don; Smart, Alan W.; Dubrasich, Michael E. 1979. Huckleberry ecology and management research in the Pacific Northwest. Gen. Tech. Rep. PNW-93. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 50 p. [6336] (<https://bit.ly/2LQDOZ2>)

Ingersoll, Cheryl A.; Wilson, Mark V. 1990. Buried propagules in an old-growth forest and their response to experimental disturbances. Canadian Journal of Botany. 68: 1156-1162. [11767]

Ecology and Management of Big Huckleberry: <https://bit.ly/2vdKwhw> (A summary of links to papers related to huckleberry management and ecology)



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residual tree spacing of 29 to 54 feet. In most cases, the site conditions in the treated units will be reviewed 30 years after treatment to assess need for a potential future moderate thinning treatment.

The commercial aspects of the Pole Patch project are in the process of being implemented through the Pinto and Veta Stewardship sales. These two sales created a sold volume of approximately 7,177 mbf. One of the sales was purchased by Hampton Lumber, the local mill, while the other successful bidder was a local logging contractor. These two sales not only enhanced the potential for future huckleberry picking, but also maintained and enhanced critical jobs in the local community, one of the Partners' goals.

The Pinchot Partners, in cooperation with the Forest Service and Cascade Forest Conservancy, a member of the Partners collaborative, has been conducting ongoing monitoring of the response of huckleberries from these treatments. One summer of monitoring has been completed. However, because of the variability associated with response time to treatment, picking impacts, and the influence of weather conditions on annual

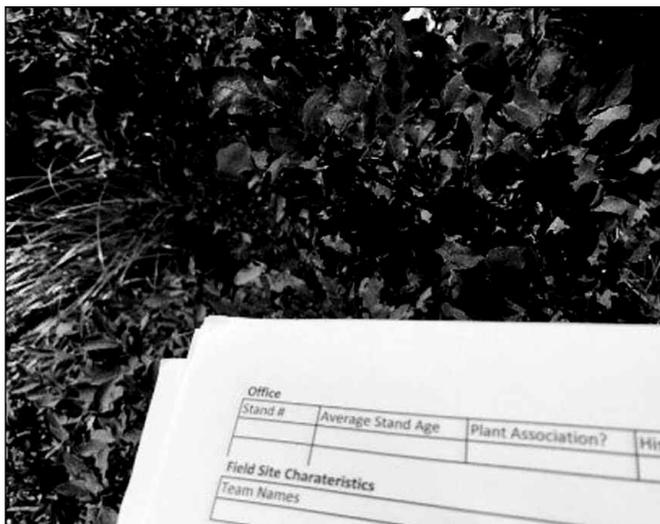


PHOTO COURTESY OF AMY BOYD

A huckleberry plant and ground verification data sheet is used to record data used to establish statistical relationships between elevation, shading, plant presence, and fruiting characteristics.

berry production, ongoing monitoring will occur.

The results of the monitoring will not only be used to inform the effectiveness of the Pole Patch project but will be used to provide data for a larger huckleberry management strategy across the Gifford Pinchot National Forest. Funding for this larger strategy effort was secured by the Pinchot Partners through three consecutive grants from the Weyerhaeuser Family Foundation. The *Gifford Pinchot National Forest Huckleberry Restoration Strategy* includes a synthesis of existing huckleberry ecology and manage-

ment studies, information on huckleberry enhancement projects, and potential huckleberry habitat and management suitability mapping. The strategy also includes traditional and current uses of huckleberries, current status of huckleberries and associated habitat, and management recommendations. Combined with field verification of mapping and ongoing monitoring, the strategy will be helpful in suggesting priority locations for management based on ecological, practical, and sociocultural suitability; describing potential techniques to expand and improve the quality of huckleberry habitat; and

examining economic feasibility of huckleberry management.

Funding for management focused solely on huckleberry enhancement is not available at a sustainable level. Therefore, as stated in the strategy: "An integrated approach to vegetation management that includes huckleberry enhancement as a value-added product is likely to be the most sustainable and economically viable option." This approach is well suited to the Partners and the Gifford Pinchot National Forest.

Ongoing collaboration and use of silvicultural tools will help the Partners continue supporting huckleberry enhancement and reach their broader goal of enhancing watershed health and local economic benefit for the area served by the Cowlitz Valley Ranger District. To learn more about the Partners or to obtain a copy of the Gifford Pinchot National Forest Huckleberry Management Strategy please visit pinchotpartners.org. ♦

Matt Comisky, an SAF member, is the Washington State Manager for the American Forest Resource Council. He also serves as a board member of the Pinchot Partners. Matt can be reached at mcomisky@amforest.org or 360-352-3910.

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