
MAINTAINING OAK GROVES IN COMMUNITIES: A CASE STUDY OF FOREST GROVE, OREGON

by Michael R. Reichenbach

Introduction

Forest Grove, Oregon, is noted for its trees. Magnificent groves of old Oregon white oak (*Quercus garryana*) blend with historic buildings and the Pacific University campus, and large giant sequoia (*Sequoiadendron giganteum*) are scattered throughout the community. All of the giant sequoia and many of the Oregon white oaks were planted or naturally regenerated as a result of original settlement patterns. Most of the Oregon white oaks in Forest Grove's older residential neighborhoods are over 120 years old, and many are likely to die in the next 50 to 75 years. To perpetuate Forest Grove's namesake, the Community Forestry Commission and the City are working to develop programs to protect, maintain and plant Oregon white oak.

History

Forest Grove, Oregon (population 14,000) is located approximately 25 miles west of Portland. It was settled in the mid-1800's and is named for the groves of Oregon white oak common to the area. A study of historic and significant trees indicates that many of the existing trees in Forest Grove's historic residential neighborhood either sprouted and grew as a result of development or were intentionally planted by the early settlers.

Settlers in Forest Grove built their homes, schools and churches within the Oregon white oak groves. It is reasonable to assume that clearing for building and livestock needs during the 1800's resulted in the loss of some trees. Impacts also resulted from the construction of roads and buildings, thus leading to the decline and death of many more trees.

By 1855, all donation land claims were taken within a 3-4 mile circle around present day Forest Grove. A donation land claim was one square mile. This would have limited clearing for buildings to a small portion of the land. The remainder may have been burned occasionally to improve pasture for cattle. Such practices are known to create favorable conditions for Eastern white oak (*Quercus alba*). It is likely that similar practices in the 1800's perpetuated Oregon white oak by creating conditions favorable for acorn germination and seedling establishment. As the community developed, the original land claims were subdivided into a typical rectilinear pattern. During this time period, only one residence occupied each block, leaving room for the further development of the Oregon white oaks already established. The age and location of many of the oaks in relation to historic buildings help substantiate that oaks naturally regenerated during settlement.

Tree planting efforts in Forest Grove can be traced to the 1870's. Inspection of the oak trees in present day Forest Grove generally indicates that the common age of the trees is between 120 and 170 years old. One tree was found that could exceed 300 years. Age was determined by counting tree rings on stumps where tree had been removed and by inspecting photographs taken in the early 1900's. Discussions with local resi-

dents revealed areas where the oaks were distributed linearly at an equal spacing. This strongly suggests that the trees were purposely planted. The ages of these trees were determined to be between 125 and 130, thus placing their planting in the late 1860's or early 1870's. The 1870's were also marked by the planting of giant sequoia. A pioneer nursery owner, John Ramsey Porter, settled in Forest Grove in 1860. He is known for his travels to the Sierra-Nevada Mountains where he collected giant sequoia, which were planted through Oregon's Willamette Valley. However, more giant sequoia were planted in Forest Grove than in other communities.

Evidence of continued efforts to plant Oregon white oak is lacking. Very few Oregon white oak trees that are younger than 80 years old were found in the more historic sections of the community. The planting of Oregon white oak that occurred in the 1870's and earlier may have decreased as a wider variety of species became available for planting. A wide variety of tree species that are younger than 80 years can be found in the older parts of the community. Another reason for the lack of Oregon white oak may be that conditions for natural development of Oregon white oak groves became unfavorable. As Forest Grove was developed, the density of development increased, thus limiting the regeneration of oak to garden plots and unmowed areas of the yard. Discussions with residents indicated that seedling oaks can be found in their yards; however, they usually are pulled with the weeds.

Regulatory efforts to protect the grove

The City of Forest Grove recognized the importance of trees and Oregon white oak as part of their natural heritage. Forest Grove's Significant and Historic Tree Ordinance states, "The trees of Forest Grove, a reminder of the City's namesake, offer historic, aesthetic, spiritual, social, environmental and monetary values to the community." This ordinance prohibited the removal of significant and historic trees on public and private property without a permit, and was passed in January of 1992 as the result of public concern over tree removal. In June 1993, however, public perception that the City of Forest Grove could require residents to spend thousands of dollars to prune, spray and treat trees instead of having them removed resulted in a vote by City Council not to adopt a list of historic and significant trees. This list included 429 trees, 340 of which are Oregon white oak. Most of these are located in Forest Grove's historic residential neighborhood. Therefore, the City has no legal means to prevent the removal of potentially significant trees from private property. For a variety of reasons, an estimated 10 to 20 Oregon white oaks are removed every year. One often cited reason for removal is concern about potential tree failure. The ordinance currently is being reviewed for revisions by the planning department.

Future Actions

It is the natural course for trees to grow, mature, decline and die. The current condition of the Oregon white oaks in Forest Grove indicates that many of these trees are declining. While some of Forest Grove's existing trees may survive for another century or more, most will not.

Forest Grove's Community Forestry Commission, a citizen advisory commission, has set a priority to develop a stewardship program for the protection, care and survival of Ore-

gon white oak. This program will ensure the continued presence of these oaks by increasing public awareness, planting new trees, and caring for existing trees. The effort will involve cooperation and partnerships among property owners, local nurseries and the City.

Several actions have been proposed, including:

1. Gain public support for a City Council amendment to the Zoning Ordinance to include the 1993 Forest Grove Significant and Historic Tree Inventory List. This will give protection under the ordinance to all existing mature Oregon white oaks in Forest Grove.
2. Inform residents about the value and benefits of the Oregon white oak byB
 - Increasing awareness of the value of oaks to the community;
 - Educating residents of the historical links to settlement;
 - Providing information about the species and its care and living requirements;
 - Providing tree hazard, pruning and maintenance information;
 - Providing information about propagation, planting and care of seedlings in the landscape;
 - Informing residents about the Oregon white oak stewardship program;
 - Providing public notification for program planning.
3. Provide on-site technical assistance to residents with oaks on their properties.
4. Plant oak seedlings on public and private property to assure replacement of removals and to increase the young population of oak trees for more age diversity.

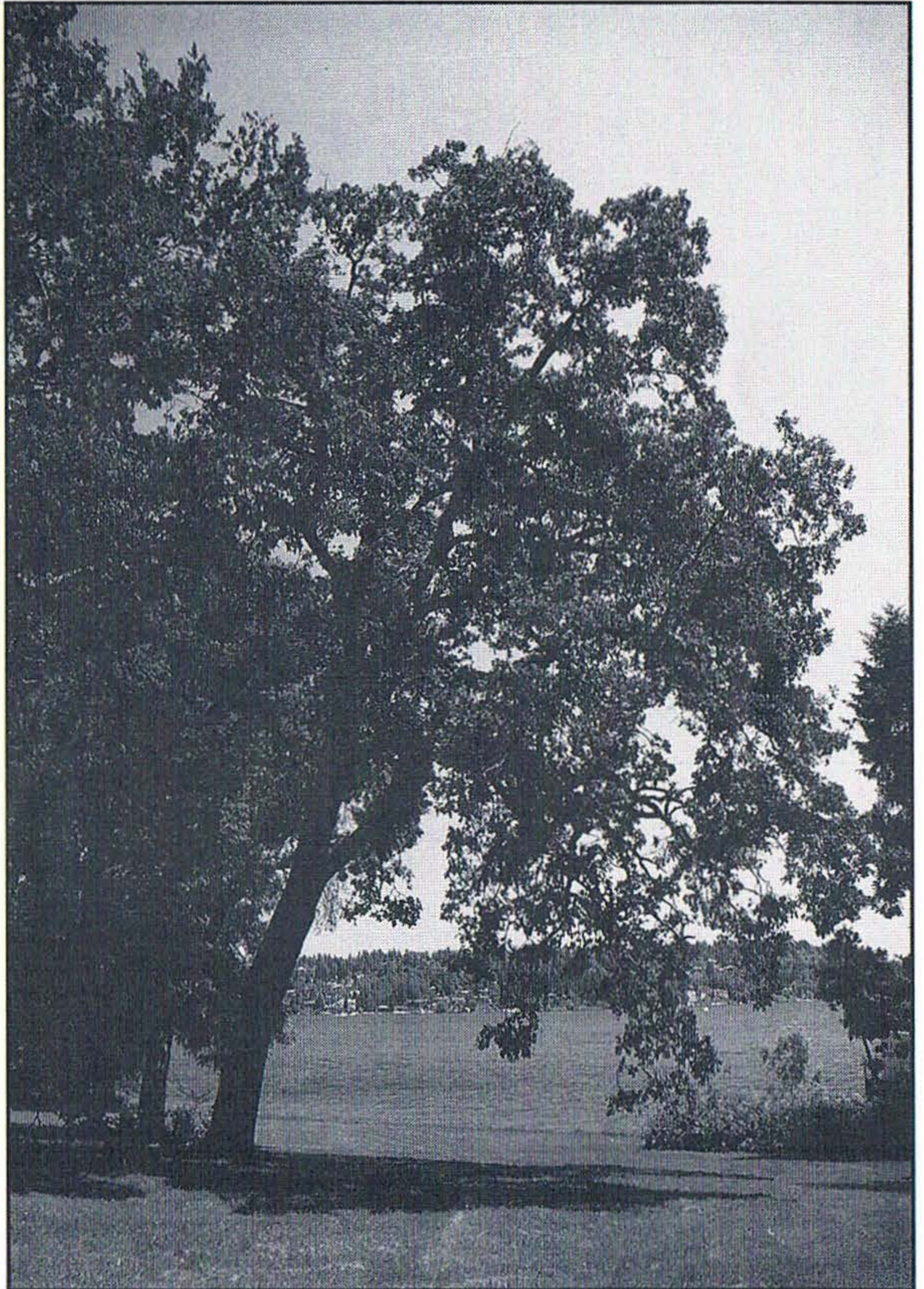


Quercus garryana. Leaf detail, Martha Washington Park, Seattle, Washington, USA. © Guy & Edith Sternberg

5. Start an urban forest and Oregon white oak education program in local schools and organize volunteer urban forestry projects for students.
6. Include local nurseries in the stewardship program to propagate and grow Oregon white oak for community planting projects.

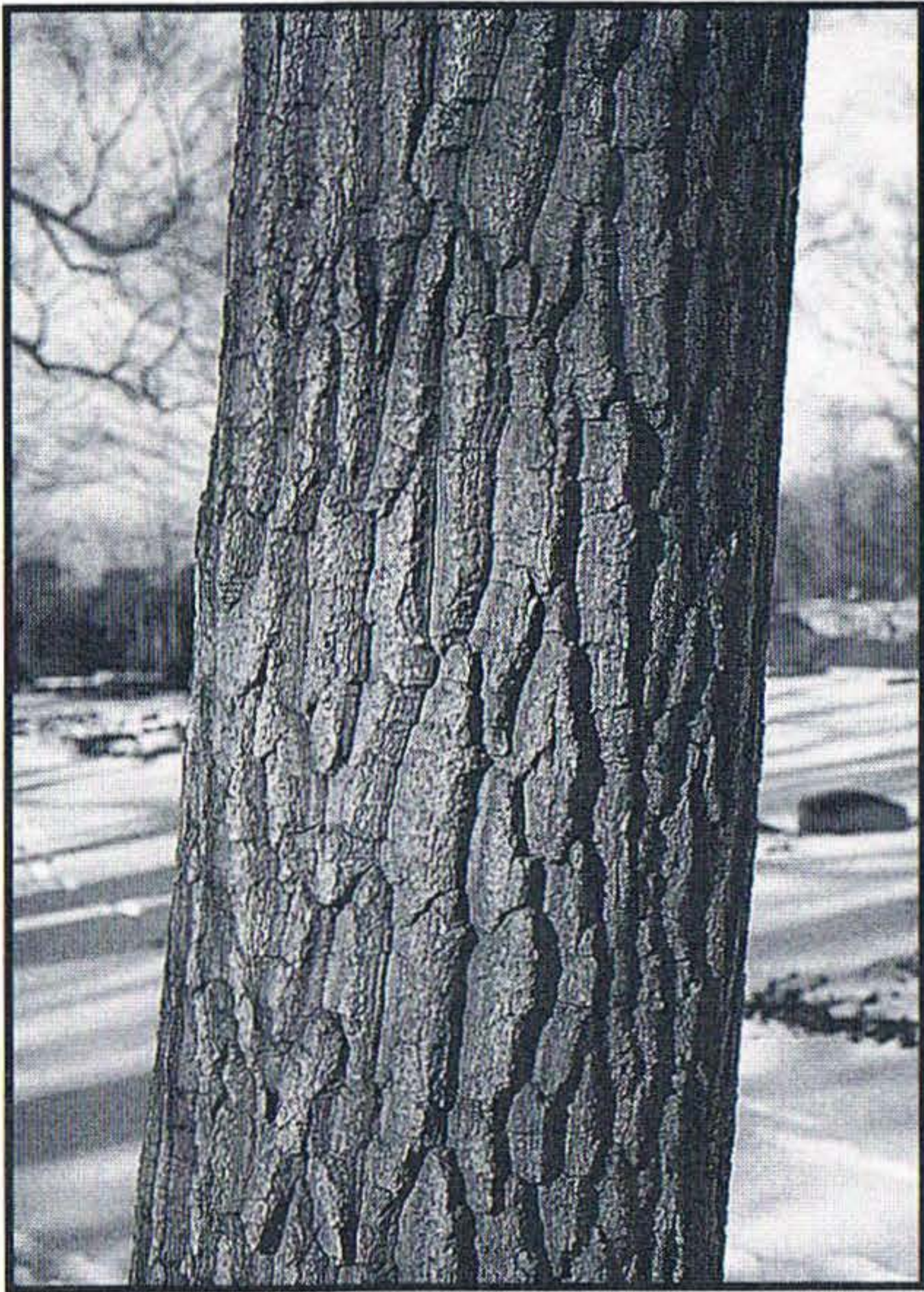
Conclusion

Forest Grove's historic record of tree planting should provide encouragement to communities throughout the world that wish to maintain populations of native trees within areas impacted by urban growth. Forest Grove is also an example of a community that, like many others, is actively seeking methods to protect and perpetuate significant native tree populations. Actions toward maintaining Forest Grove's namesake have been initiated by the City and the Community Forestry Commission. Although it is too soon to measure the success of these actions, the Community Forestry Commission has started a seedling project to provide planting stock and the City is working with a local nursery to grow Oregon white oak.



Quercus garryana. Martha Washington Park, Seattle, Washington, USA. © Guy & Edith Sternberg

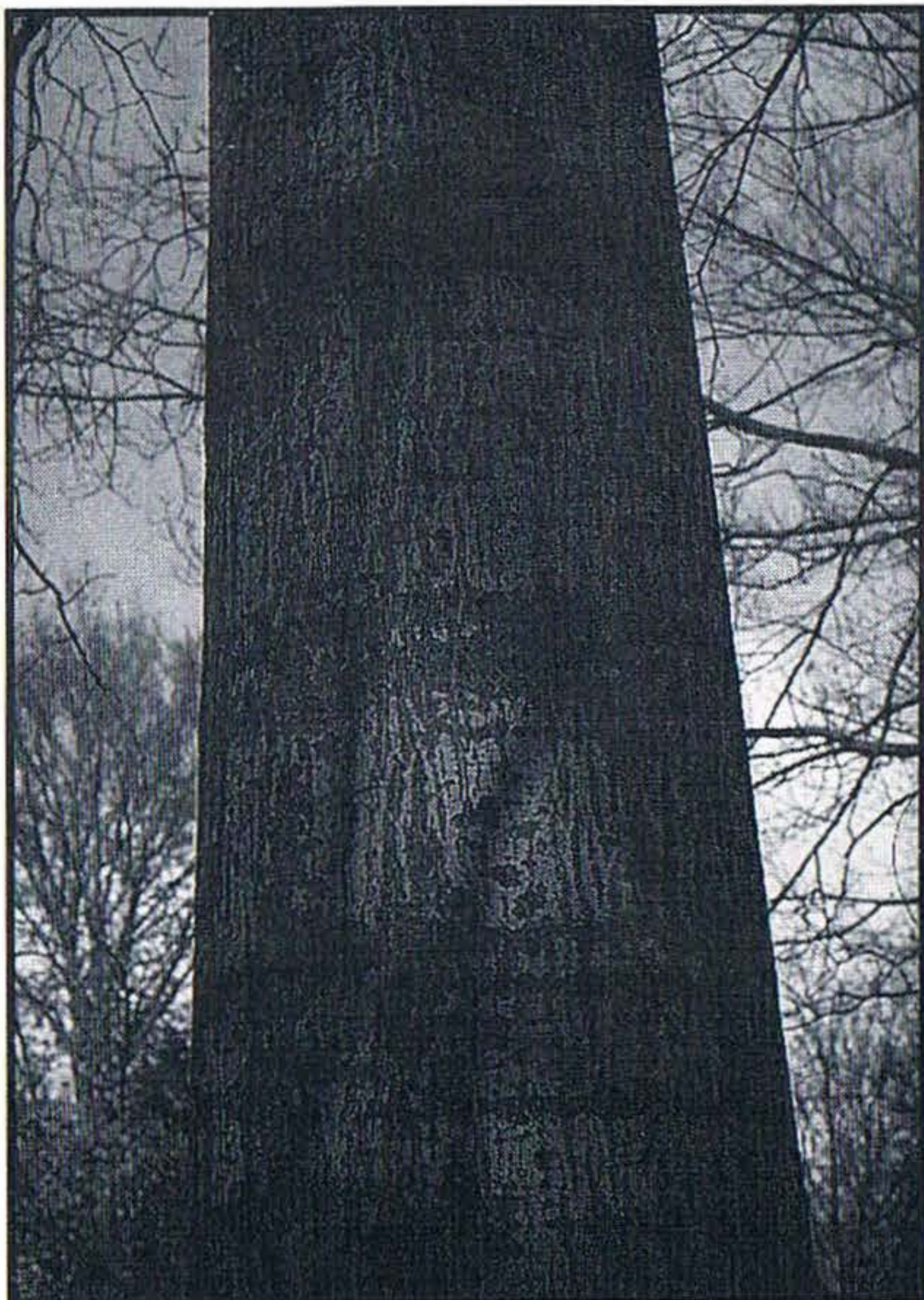
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Quercus prinus. Bark Detail



Quercus velutina. Bark Detail

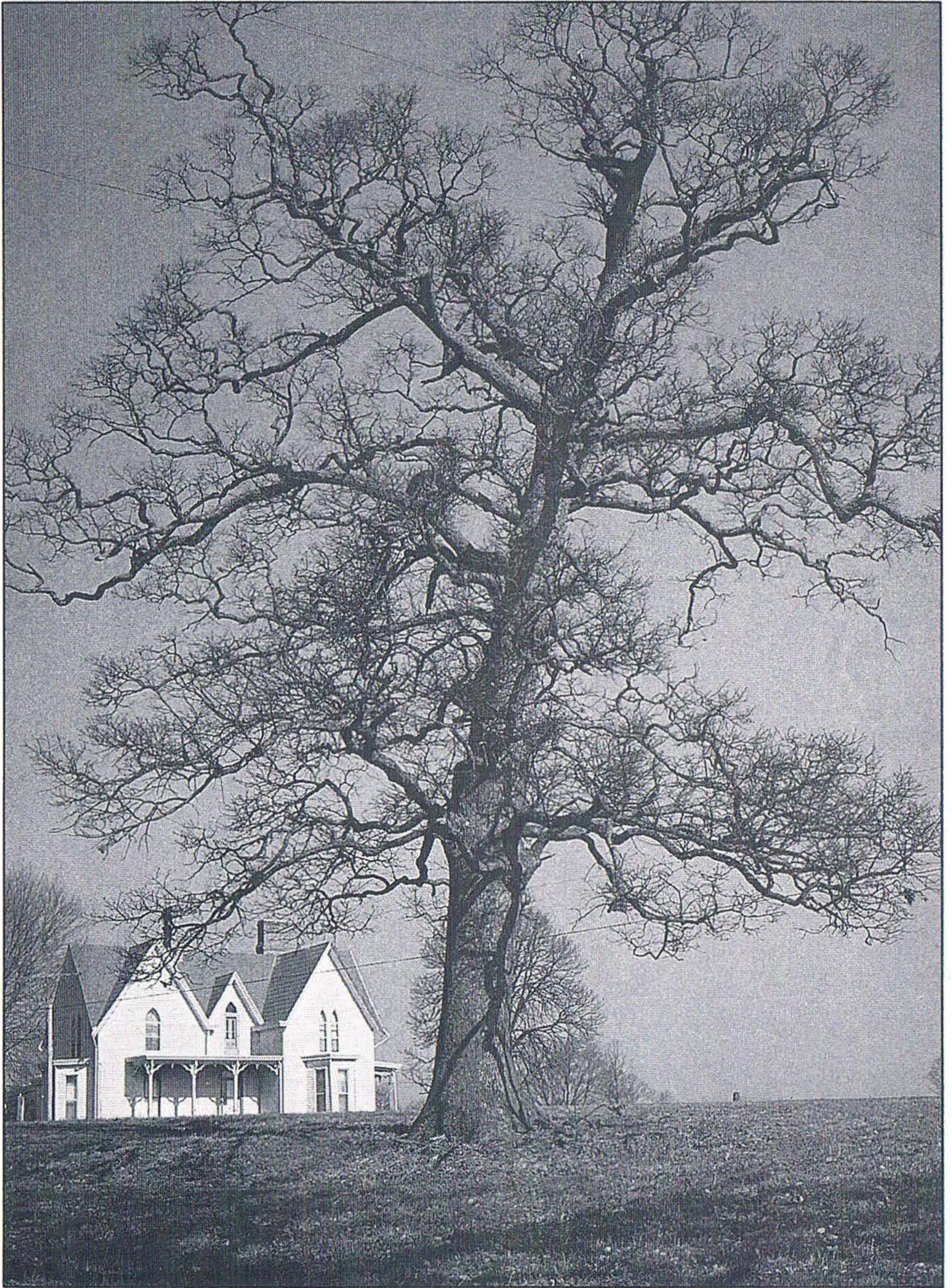


Quercus rubra. Bark Detail



Quercus macrocarpa. Bark Detail

All photographs by Curt Hanson



Quercus muhlenbergii. A majestic specimen of Chinkapin Oak in Kentucky. Curt Hanson.