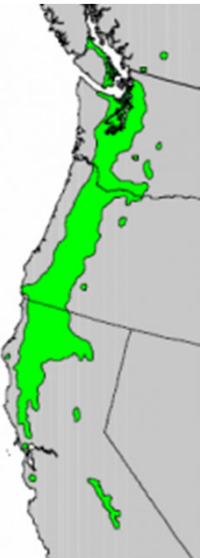




Tree Care for Urban Forest Resilience

Arboriculture International

1



Quercus garryana, native range

Developing a Species Profile (*Quercus garryana*)

Health

1. **Suitable environment**
 - USDA Zone 8b (Hardiness)
 - Soil profile
 - Slope aspect
 - Drainage
 - Urban conditions
 - Other conditions
2. **Susceptibility**
 - Drought tolerance
 - Wet tolerance
 - Disease resistance
 - Distribution range

Structure

3. **Form**
 - Excurrent vs decurrent
 - Emergent vs understory
 - Dominant vs codominant
4. **Tree pruning and structural care**
 - Size potential and age
 - Species characteristics
 - Stem and branch diameter to length ratios
 - Included bark

Arboriculture International

2

Species Profile (*Quercus garryana*)

USDA Zone: 6-9

Deciduous: yes

Native range: Oregon, Washington, California and western British Columbia

Light requirements: Full sun

Soil: Well drained to poor drainage, slightly acidic pH of 4.8-5.9

Form/Size: de-current, 70-100 feet

Age: 300-500 years

Associated flora: Oregon white ash, ponderosa pine, snowberry, Oregon grape, hawthorn, fescue, cammas,

Considerations:

Larger mature trees can have stem and/or large branch failure during summer Conditions, known as summer limb drop.

Recommendation: Weight reduction pruning

Wet conditions can lead to Armillaria Root Rot and cause whole tree failure.

Recommendation: Reduce or eliminate irrigation



Developing Species Profile

James R. Clark, Nelda Matheny and Joe McNeil

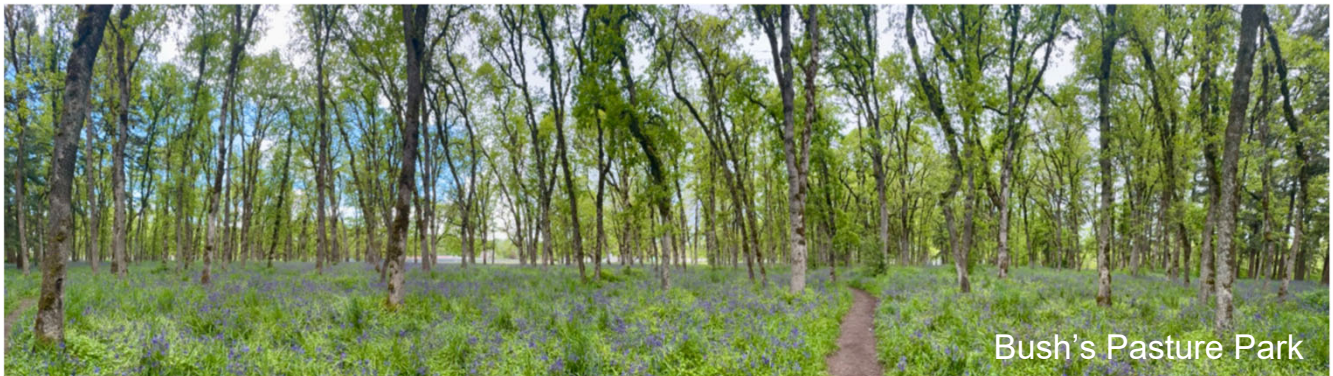
Center for Urban Horticulture, G-15, University of Washington, Seattle, WA 98195

Arboriculture International

3



Sauvie Island



Bush's Pasture Park

4



5

Crown Retrenchment and Crown Succession

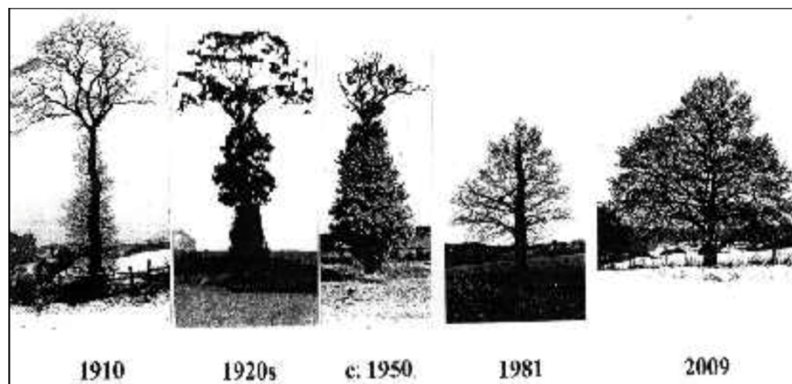
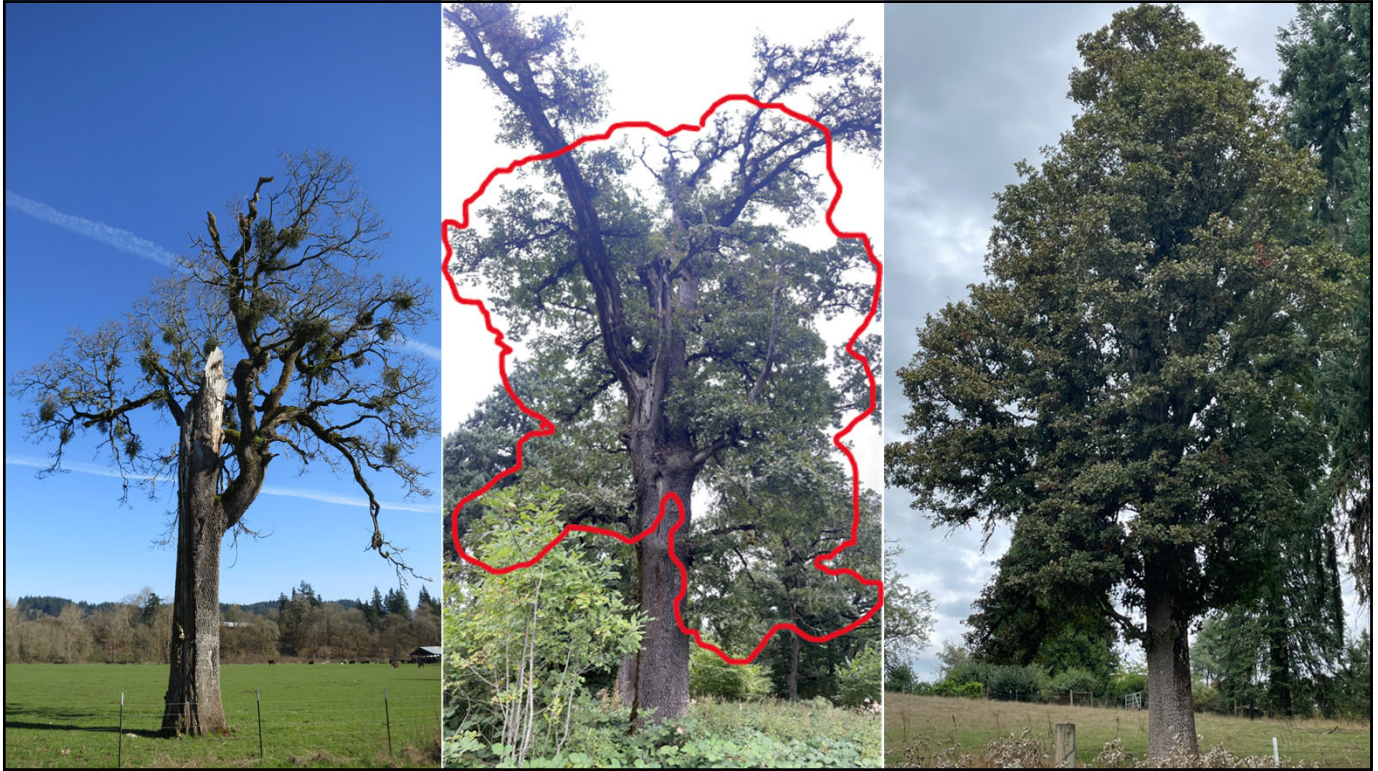


Fig 2: The Arthur Clough Oak Boars Hill, Nr. Oxford

A hundred years of aging, sequence shows limitations in our ability to foresee tree's growth natural responses to its environment and events.
Photos courtesy of Philip Stewart)



6



7

Structural Deadwood

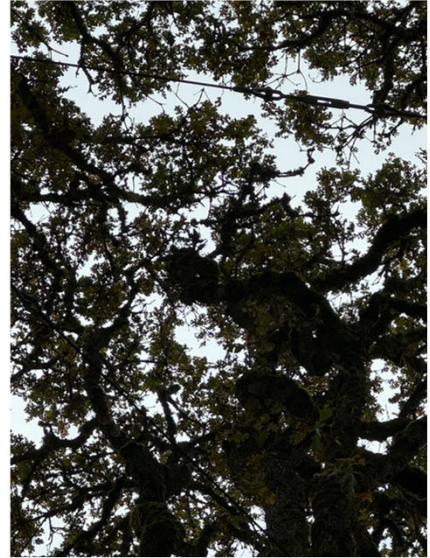
- Branch collar development
- Sets trees up for later stages of life
- Increases biodiversity



Arboriculture International

8

Included Bark



Arboriculture International