

2021-05-27

## Trichome Density and Distribution in *Quercus garryana* (Oregon White Oak)

Nichole Hernandez  
nhernandez17@wou.edu

Ava Howard  
Western Oregon University, howarda@mail.wou.edu

Follow this and additional works at: <https://digitalcommons.wou.edu/aes>

---

### Recommended Citation

Hernandez, Nichole and Howard, Ava, "Trichome Density and Distribution in *Quercus garryana* (Oregon White Oak)" (2021). *Academic Excellence Showcase Proceedings*. 314.  
<https://digitalcommons.wou.edu/aes/314>

This Presentation is brought to you for free and open access by the Student Scholarship at Digital Commons@WOU. It has been accepted for inclusion in Academic Excellence Showcase Proceedings by an authorized administrator of Digital Commons@WOU. For more information, please contact [digitalcommons@wou.edu](mailto:digitalcommons@wou.edu), [kundas@mail.wou.edu](mailto:kundas@mail.wou.edu), [bakersc@mail.wou.edu](mailto:bakersc@mail.wou.edu).

## Abstract

Trichomes are hair-like structures that extend from a plant's surface and help protect the plant from herbivores and excessive water loss. Studying trichome density and distribution can provide insight to a plant's response to drought stress and herbivore damage. We studied the trichome density of up to 20 leaves from each of 47 mature *Quercus garryana* (Oregon's native oak tree). Trees were located in one of three habitat types: oak savannah, oak woodland, and mixed oak-maple-conifer forest. Preliminary results show bundles of four and two trichome clusters were present in higher amounts than bundles of three and single trichomes on the abaxial (lower) leaf surface in the savannah and forest habitat. A lower trichome density was observed on the adaxial (top) versus abaxial (lower) leaf surfaces. Our early results support the conclusion that trichome anatomy is highly variable between *Q. garryana* trees and may help to explain tree survival in different habitats.

### **1:00pm, June 10, Zoom presentation**

Topic: Trichome Density and Distribution in *Quercus garryana* (Oregon White Oak)

Time: Jun 10, 2021 01:00 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/88455085013?pwd=dWRpWkhzVmF2OU1OZW9CN2hJUis1QT09>

Meeting ID: 884 5508 5013

Passcode: x1hZr9