Oregon White Oak Habitats in the Willamette Valley

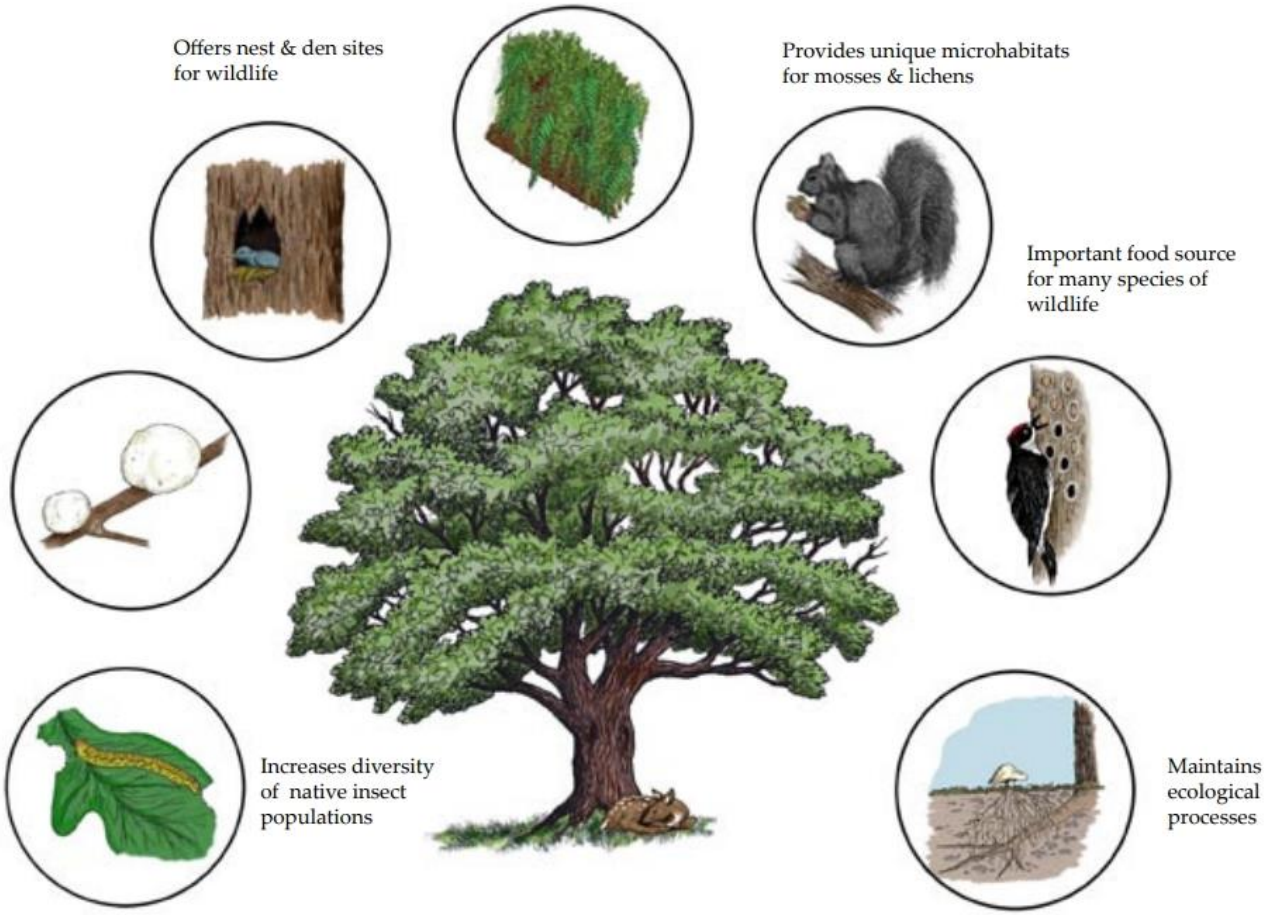
Elaine Stewart; February 12, 2024

Photo credit: Adam Schneider

What's so special about Oregon white oaks?

- *Quercus garryanna*, aka Garry oak
- More than 200 species of wildlife use oak savannas and woodlands
- Savannas and woodlands support unique plant communities
- Actively managed by Indigenous people
- Fire resistant habitats
- Can live up to 500 years
- *One of the most endangered ecosystems in the Pacific Northwest*

Credit: Nora Sherwood



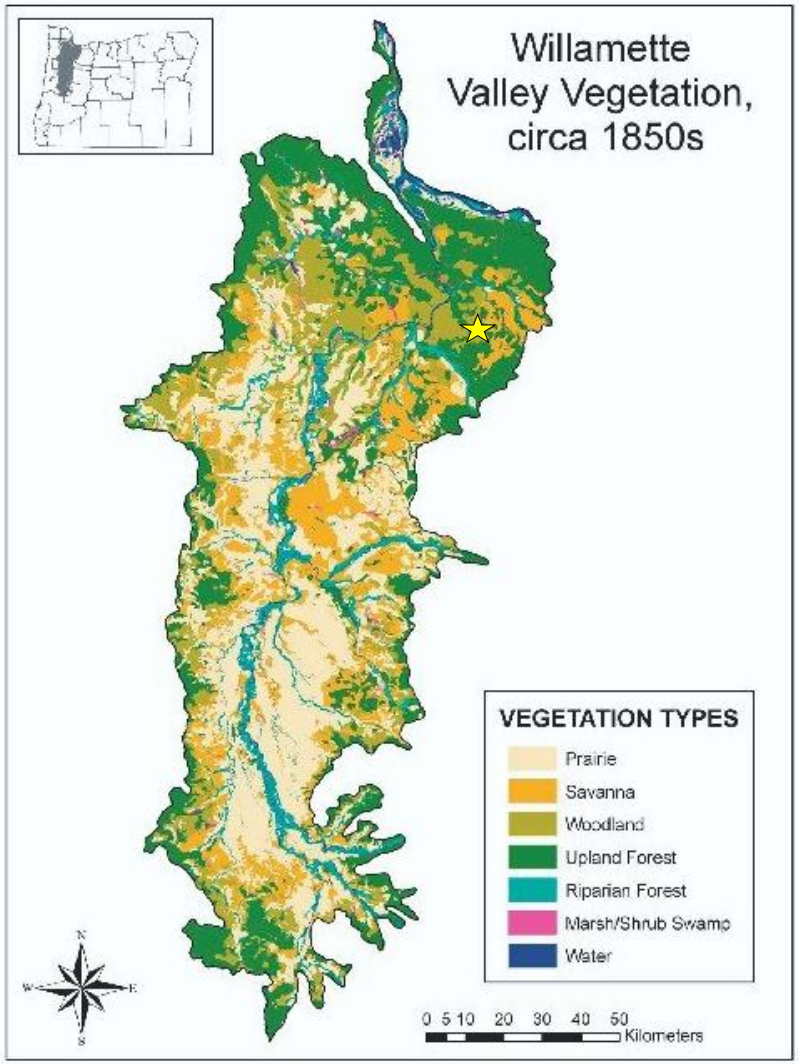
Even a single Oregon white oak can make a significant contribution to the biological richness of your property.

Source: A Landowner's Guide for Restoring and Managing Oregon White Oak Habitats.

Once dominant

- Oak and prairie habitats once covered 400,000 acres in the Willamette Valley
- Now less than 5% is left

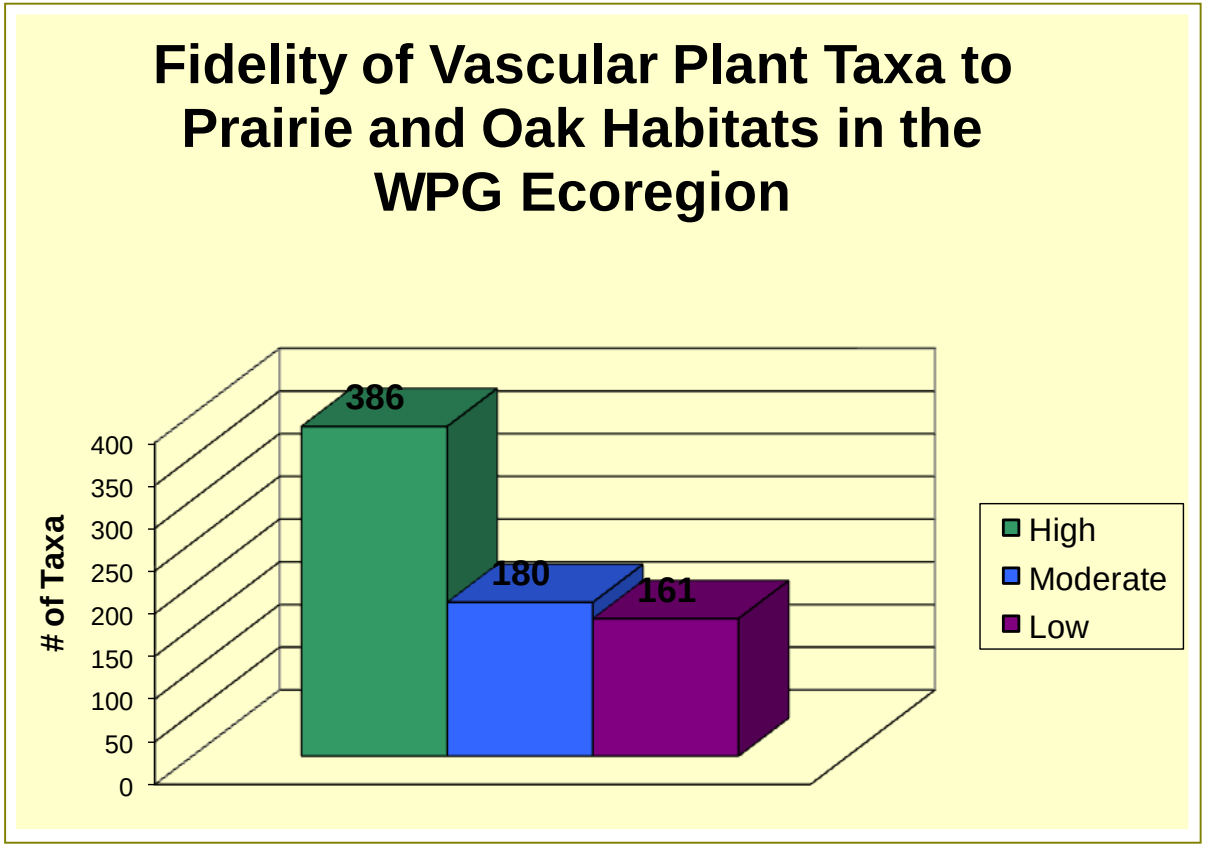
Credit: Jim Burrows



Christy and Alverson 1999

- More than half the plants found in oak and prairie habitats have HIGH FIDELITY to them, meaning they are very ***rarely seen anywhere else***

Credit: Cheryl Schultz



Credit: Ed Alverson

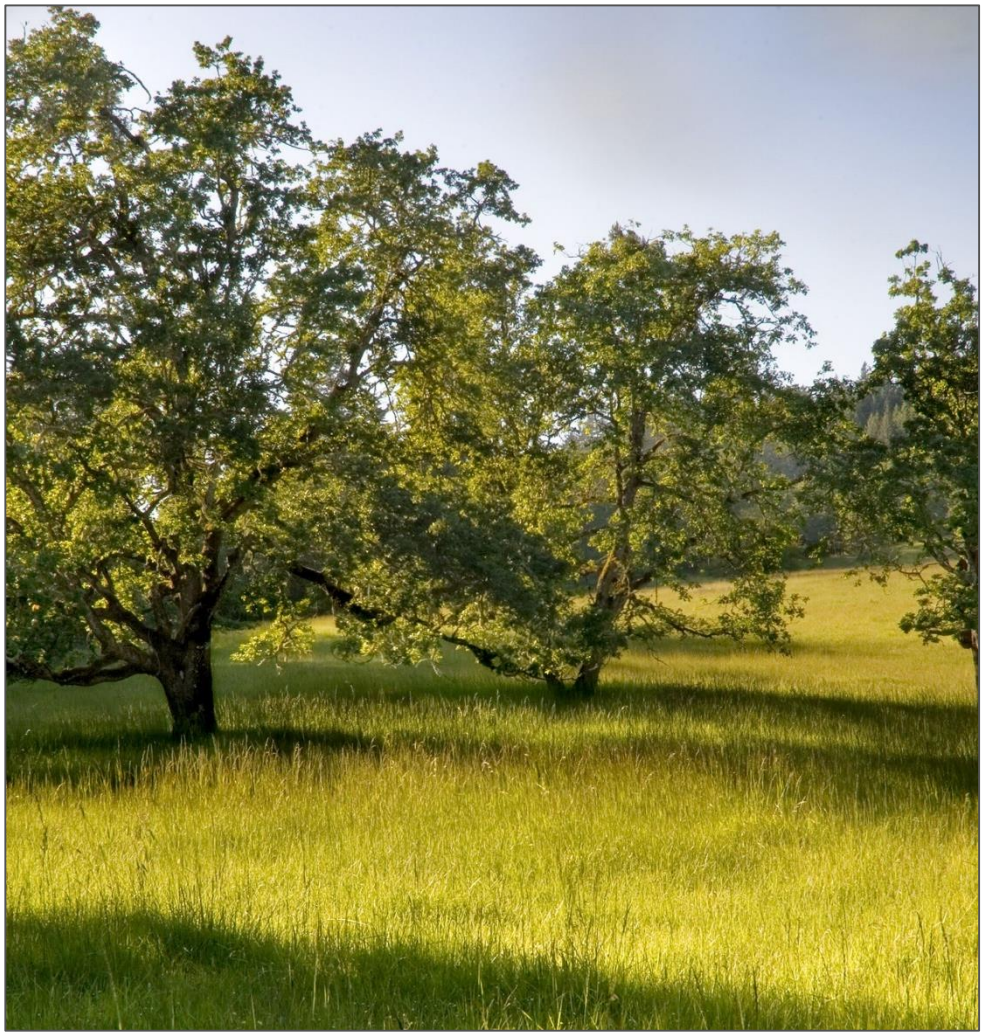
Indigenous land management

- Prescribed burns
- Elk and deer forage
- Acorn production
- Camas production
- Shrub reduction
- Prevent firs and other trees from encroaching

Credit: Capital Public Radio

Fire resistant landscapes

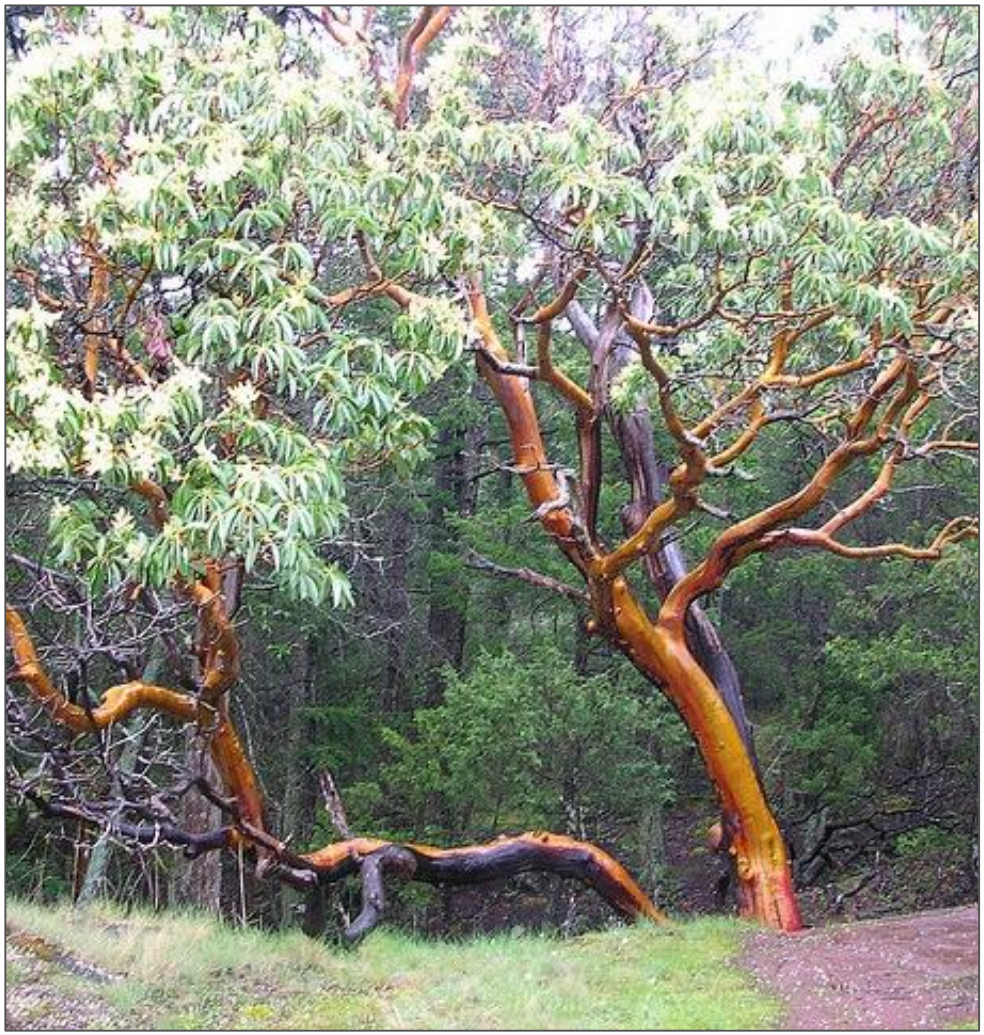
- Thick bark
- Limited ladder fuels
- Fires that occur are low intensity



Credit: The Nature Conservancy

Drought resistant communities

- Trees and shrubs adapted to low summer moisture
- Wildflowers bloom briefly and senesce
- Low maintenance in garden setting



Credit: Native Foods Nursery

Abundant food for pollinators

- More than 100 species of annual wildflowers
- Nearly 150 species of perennial wildflowers
- Bloom times extend from February through October

Deep rooted grasses and sedges

- Helps survive fire
- Controls erosion
- Bunchgrasses leave space for pollinator plants and nesting bees (70% are ground nesters)

Credit: Oakland Museum

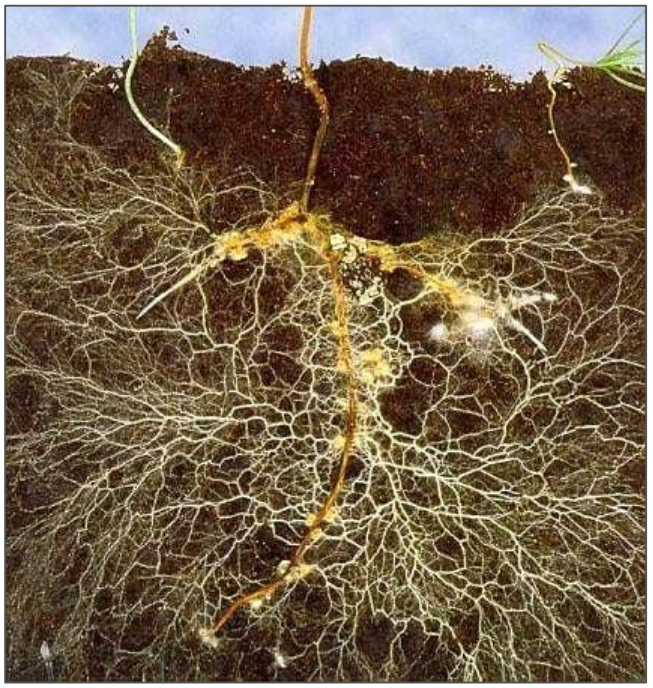
Western gray squirrel

- Arboreal
- Feeds in oaks
- Nests in open-grown firs

Credit: Oregon Department of Fish and Wildlife

Fungi

- More than 40 species are obligates
- Mycorrhizae
  - Protect oaks against disease
  - Get food from oaks
- 18 species of truffles



Credit: Funguys Gourmet

Threats to oak and prairie habitats

- Land conversion (agriculture, development)
- Fire suppression
  - Shade competition from firs and other trees
  - Increased risk of catastrophic wildfire
- Invasive species

Credit: Redwoods National Park

Conservation and restoration practices

- Remove encroaching Douglas-fir, Oregon ash and Bigleaf maple, among other trees
- Control invasive grasses and non-native shrubs and wildflowers
  - Fire
  - Herbicide
  - Grazing
- Plant and seed native species
- Protect oaks – especially older trees

Oak release for restoration (Clackamas County)

Credit: Elaine Stewart

Gladstone Nature Park

- Oregon white oaks
- Thin soils on basalt
- Similar to Camassia Preserve and Canemah Bluff Natural Area
- Many native species already present
- Dedicated Friends organization

Recommendations

- Preserve the Oregon white oak trees
- Consider Oregon white oak, Pacific madrone for new tree plantings
- Continue stewardship activities, weeding exotics and planting natives