

*Climate Resiliency:  
The Future of Native Planting*

A Conversation with  
Botanists ▪ Landscape Designers ▪ Restoration Technicians  
in the Pacific Northwest



SER-UW Native Plant Nursery Internship 2022  
Sophia Falls

# Knowledge shared from...



**Samantha Elie**  
Field Researcher | WA DNR



**Ben Alexander**  
Co-owner | Sound Native Plants



**LeAnn Locher**  
Master Gardener | OSU



**Shannon Leslie**  
Project Manager | Berger Partnership



**Apollo Stone**  
Crew Leader | Sound Native Plants



**Brian Matson**  
Owner | Trillium Landscape Design

## Guiding Questions ...



Are there any plants that you have begun to avoid due to the shifting climate, such as drier summers?



Have you begun to include species native to Oregon or Northern California in native planting palettes?

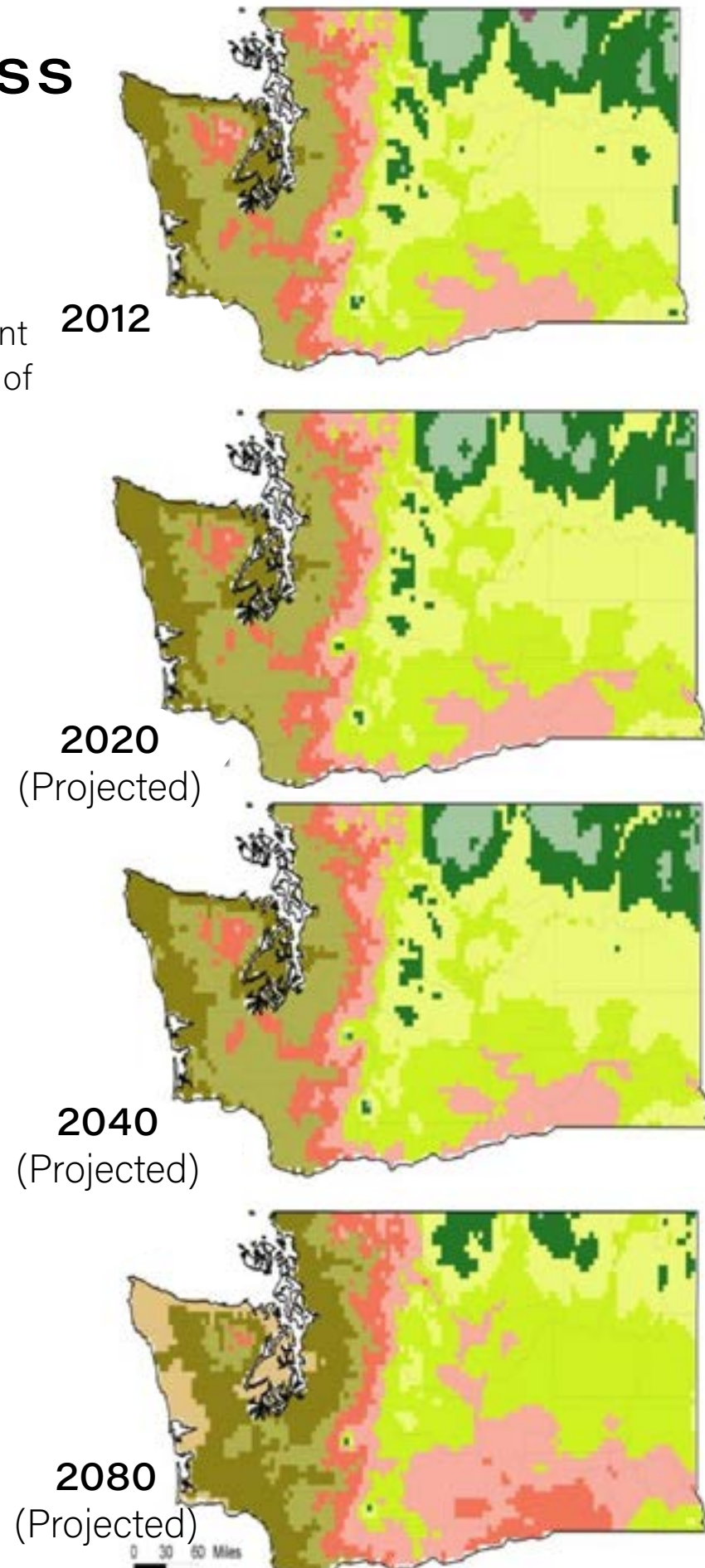
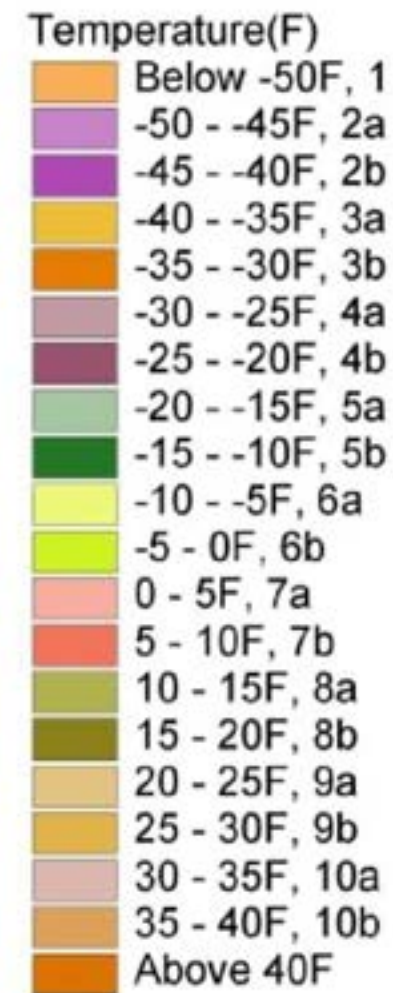


Has your idea of what falls into the category of "native plants" shifted in your practice to accommodate for climate resilience?



# Plant Hardiness Zones

USDA plant hardiness measurements takes into account a location's closeness to bodies of water, elevation, and other micro-climate effects.

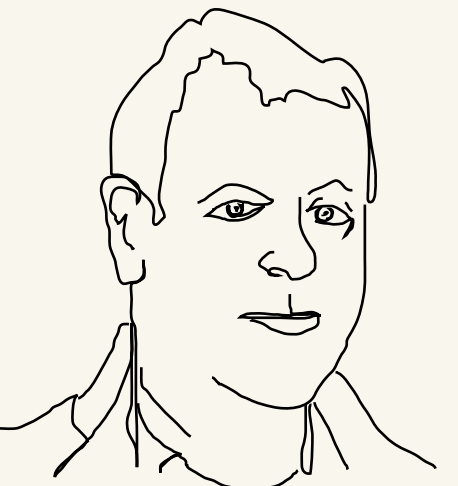


<https://greenseattle.org/wp-content/uploads/2015/08/Plant-Hardiness-Zone-Map-One-Page-2013.pdf>  
<https://planthardiness.ars.usda.gov>

## Assisted Migration Versus Drift

*"Only 15% of the area currently suitable for three pine species in Washington (ponderosa pine, lodgepole pine, and whitebark pine) is projected to remain suitable for all three by the 2060s relative to 1961-1990"*  
 -Dr. Soo-Hyung Kim

## Planting Out of Range?



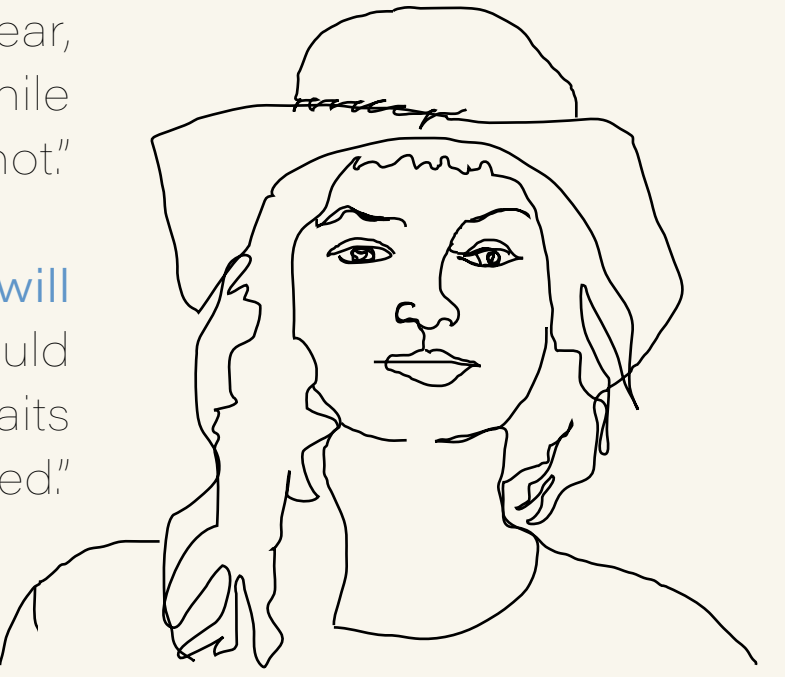
"Scotch Broom, English Ivy, Reed Canary Grass, Japanese Knotweed all cases of intentionally introduced species with immeasurable ecological damage and economic harm. Our ability to predict the behavior and consequences of any species into a new place is minimal at best"

-Ben Alexander

"Plant migration can be a very slow process. Because weather patterns change from year to year, plants have a lot of built-in adaptability, and trees can potentially survive for decades, even while severely stressed. Some plants will drift on their own, others will not."

*"The more variability in the genome of a species, the more likely that natural selection will produce offspring adapted to the changes.* Considering stock from neighboring ecoregion could be beneficial but hauling entire specie from another state is too much. Depending on the plant, traits between subspecies can vary widely and should be critically considered."

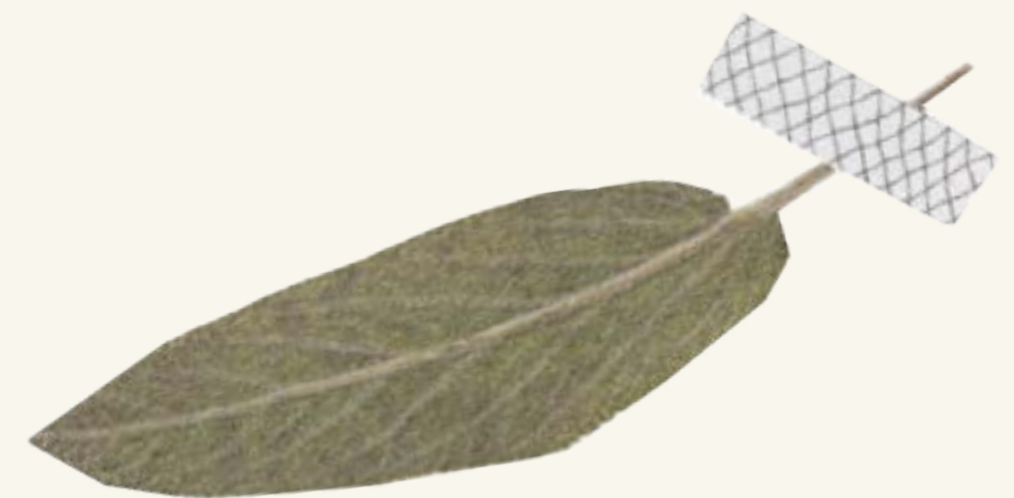
-Samantha Elie



"Finding a **gene source for native plants** further south, or east [Oregon or Eastern WA] could be a useful way to have more drought hardy plants while not straying too far from plants that naturally occur [in Seattle]."

"It's impossible to know the long term effects of introducing species not typically found here. Species have varying degrees of tolerance for climate change, so when they do migrate, they will do so individually."

-Brian Matson





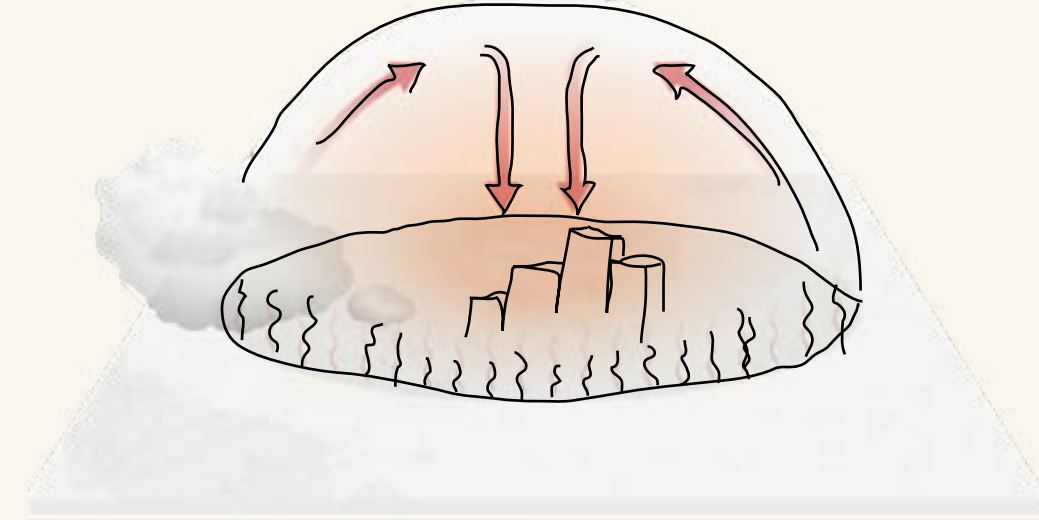
## Observations in the Field



"Maintaining biodiversity will be a struggle as the climate heats up."

"The **heat dome** we have experienced the last few years is more of a concern than drier weather."

- LeAnn Locher



## Species Suffering



**Kinnikinnick**  
Arctostaphylos uva-ursi



**Oregon Ash**  
Fraxinus latifolia

**Tall Oregon grape**  
Mahonia aquifolium

"[Oregon Ash] is threatened by the rapid northward march of the ash borer, seems related to climate change. We are very worried this species will be **extirpated.**"

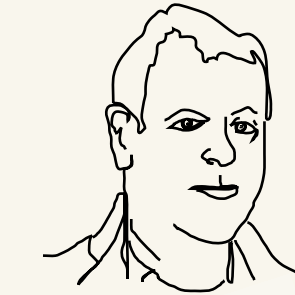
- Ben Alexander

ex·tir·pate - to become locally extinct

## Species Emphasizing



**Douglas Aster**  
Aster subspicatus



**Red Osier Dogwood**  
Cornus sericea

**Snowberry**  
Symphoricarpos albus

"Placing greater emphasis species that can tolerate wide range of conditions."  
- Ben Alexander

## Looking forward

"Planting for climate resiliency you don't want to limit planting plans to only include tolerant restoration superstars. This limits species biodiversity. Instead be purposeful about placement. Place thirsty plants deeper in shade to mitigate potential drought stress."

-Samantha Elie







*Thank you*

