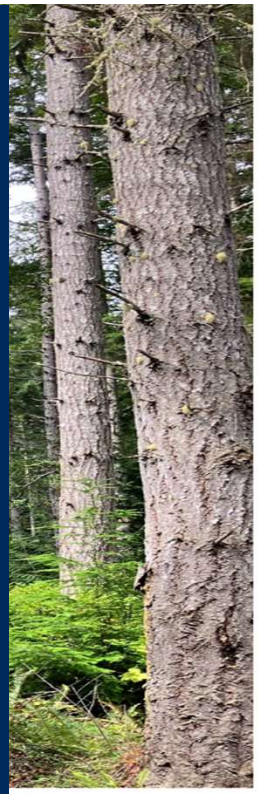
Native Plant Communities

Beyond Right Plant, Right Place

Irene Weber, Kitsap County Parks
Native Plant Workshop

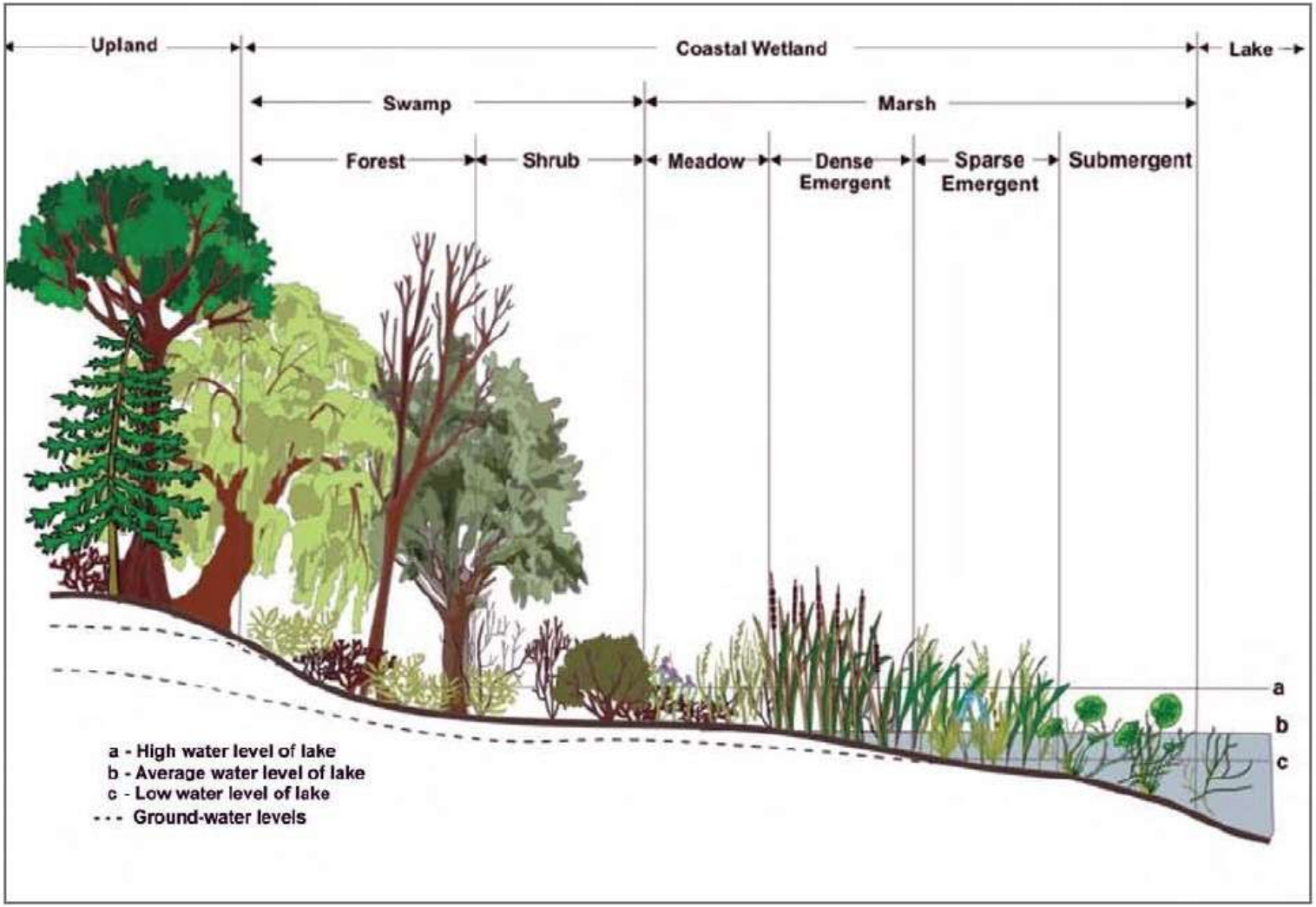
September 16, 2025 | Island Lake County Park

KitsapCounty

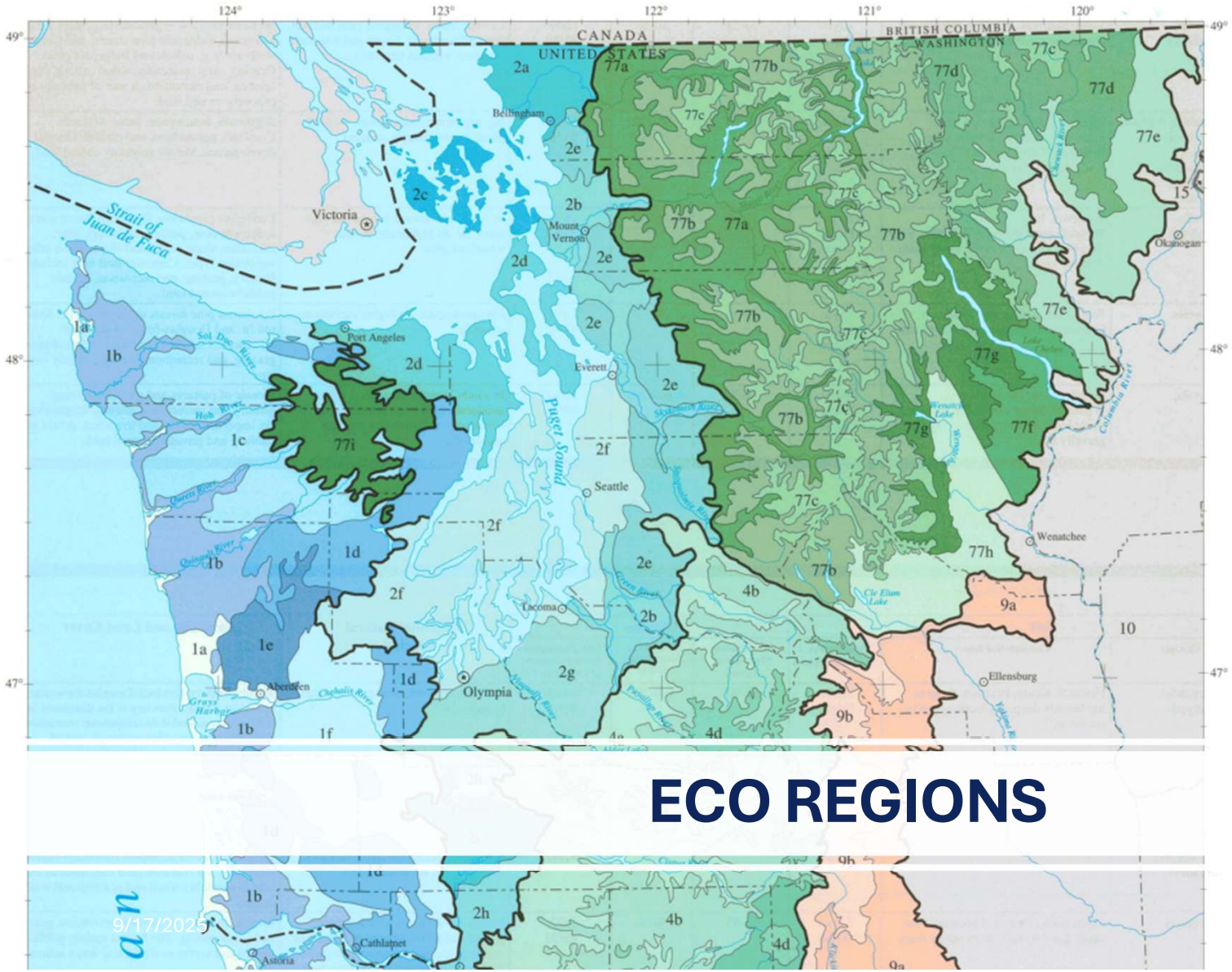


Vegetation Community:

- “Provides means for humans to conceptualize a complex phenomenon to communicate about it for purposes such as conservation, management, and environmental education (Lea, NPS 2011)”
- A common language to compare vegetation communities over years and across organizations



By Douglas A. Wilcox, Todd A. Thompson, Robert K. Booth, and J.R. Nicholas - USGS Document, Circular 1311, Lake-Level Variability and Water Availability in the Great Lakes, Public Domain, https://commons.wikimedia.org/w/index.php?curid=19748553



ECO REGIONS

1 Coast Range
- 1a Coastal Lowlands
- 1b Coastal Uplands
- 1c Low Olympics
- 1d Volcanics
- 1e Outwash
- 1f Willapa Hills
- 1g Mid-Coastal Sedimentary
- 1h Southern Oregon Coastal Mountains
- 1i Redwood Zone

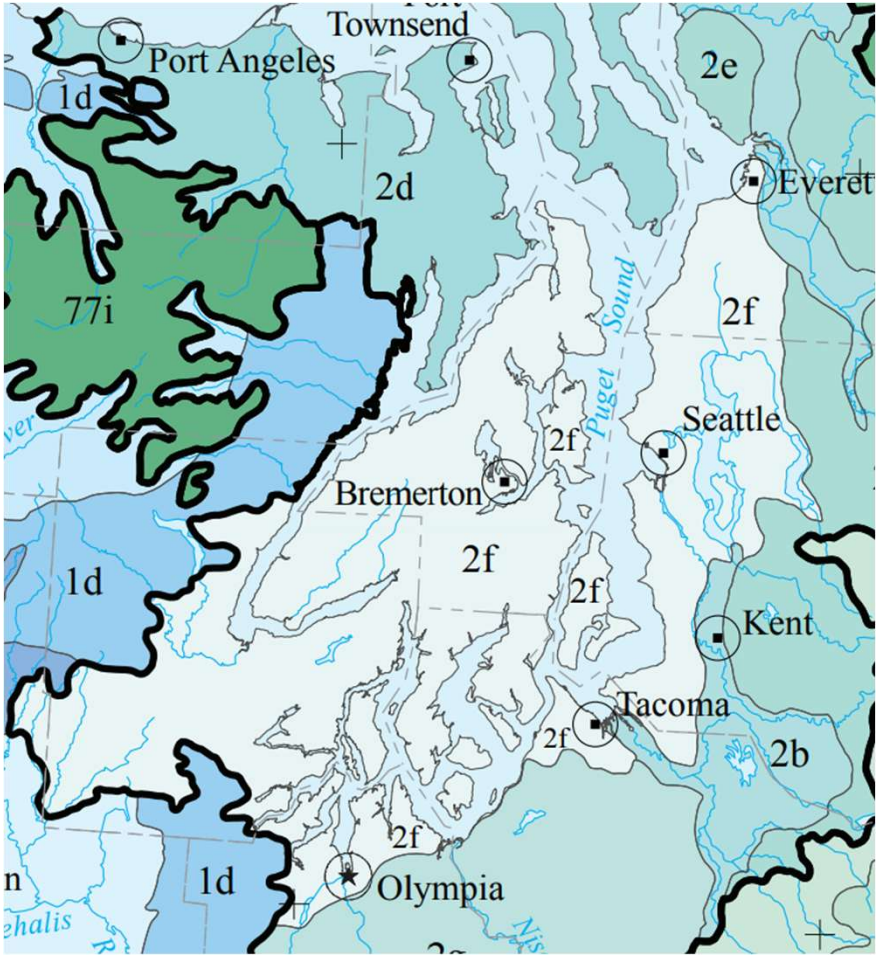
2 Puget Lowland
- 2a Fraser Lowland
- 2b Eastern Puget Riverine Lowlands
- 2c San Juan Islands
- 2d Olympic Rainshadow
- 2e Eastern Puget Uplands
- 2f Central Puget Lowland
- 2g Southern Puget Prairies
- 2h Cowlitz/Chehalis Foothills
- 2i Cowlitz/Newaukum Prairie Floodplains

3 Willamette Valley
- 3a Portland/Vancouver Basin
- 3b Willamette River and Tributaries Gallery
- 3c Prairie Terraces
- 3d Valley Foothills

4 Cascades
- 4a Western Cascades Lowlands and Valleys
- 4b Western Cascades Montane Highlands
- 4c Cascade Crest Montane Forest
- 4d Cascades Subalpine/Alpine
- 4e High Southern Cascades Montane Forest
- 4f Umpqua Cascades
- 4g Southern Cascades

Central Puget Lowlands Ecoregion

- 0-1000 ft elevation
- Undulating glacial drift plains
- Mesic/Xeric
- Limited moisture holding capacity
- Western hemlock, western red cedar, Douglas-fir; some red alder, bigleaf maple.

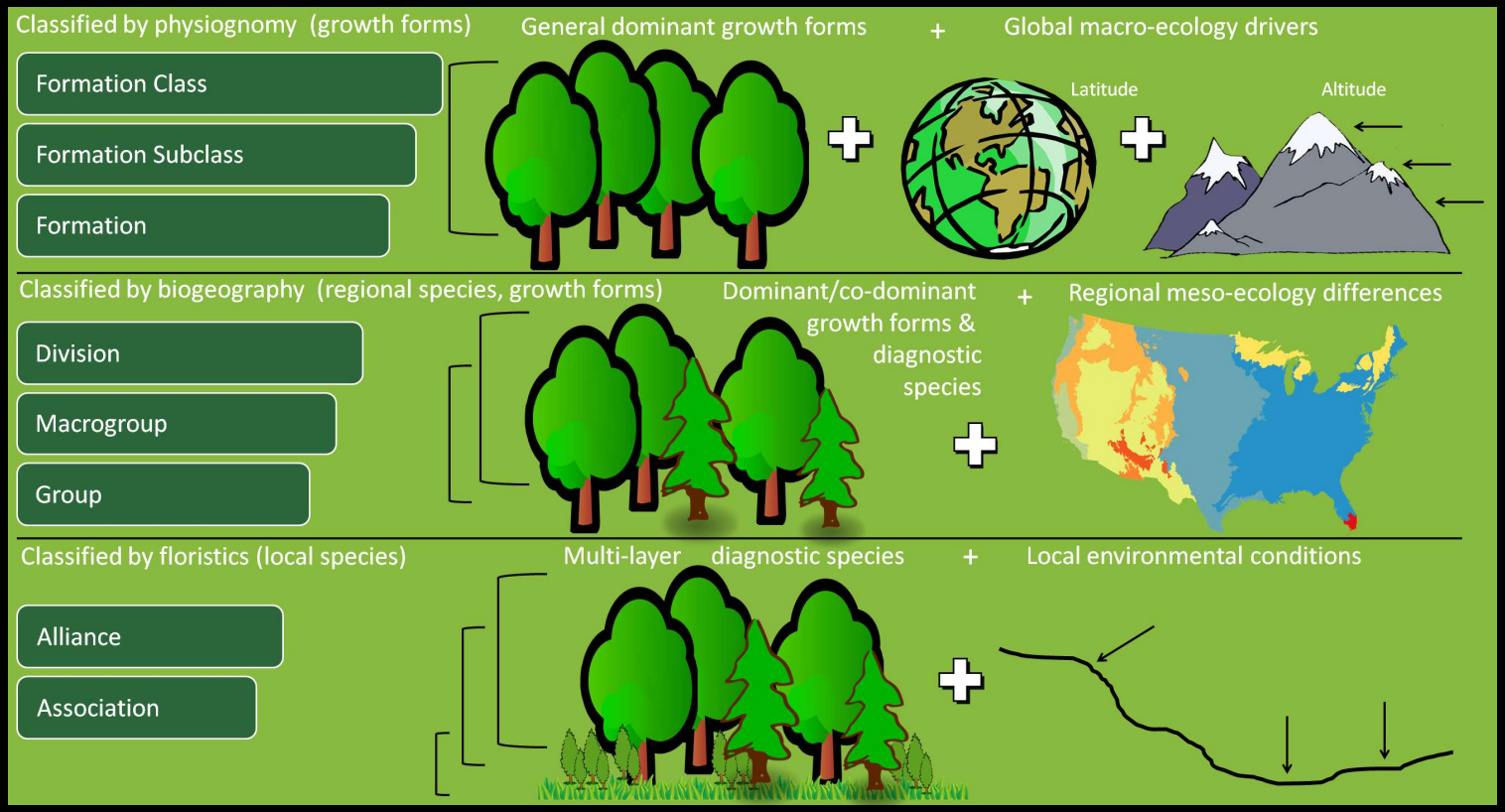


Omernik, J.M. and G.E. Griffith. 2014. Ecoregions of the conterminous United States

USNVC

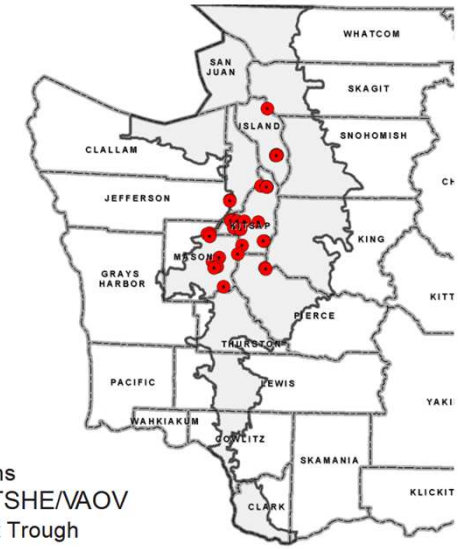
- US National Vegetation Classification
- Originated in 1997
- USNVC Version 2.04, June 2022
- Natural and “Unnatural” communities
- Peer reviewed

USNVC (United States National Vegetation Classification) Database Ver 2.032. 2022. Federal Geographic Data Committee, Vegetation Subcommittee. Washington D.C.


Classified by physiognomy (growth forms)
General dominant growth forms
+
Global macro-ecology drivers
Formation Class
Formation Subclass
Formation
Latitude
Altitude
Classified by biogeography (regional species, growth forms)
Dominant/co-dominant growth forms & diagnostic species
+
Regional meso-ecology differences
Division
Macrogroup
Group
Classified by floristics (local species)
Multi-layer diagnostic species
+
Local environmental conditions
Alliance
Association

Hierarchy	Name
Formation Class	1 Forest & Woodland Class
Formation Subclass	1.B Temperate & Boreal Forest & Woodland Subclass
Formation	1.B.2 Cool Temperate Forest & Woodland Formation
Division	1.B.2.Nd Vancouverian Forest & Woodland Division
Macrogroup	MG024 Western Hemlock - Sitka Spruce - Redwood Rainforest Macrogroup
Group	G240 Douglas-fir - Western Hemlock / Salal Rainforest Group
Alliance	A3379 Western Hemlock - Douglas-fir / Oceanspray Dry Forest Alliance
Association	CEGL002614 Pseudotsuga menziesii - Tsuga heterophylla / Vaccinium ovatum Forest

CEGL002614 Pseudotsuga menziesii - Tsuga heterophylla / Vaccinium ovatum Forest



Plot locations
of PSME-TSHE/VAOV
in the Puget Trough

CEGL002614 Pseudotsuga menziesii - Tsuga heterophylla / Vaccinium ovatum Forest

- Endemic to the Puget Trough ecoregion.
- Evergreen huckleberry provides >5% cover, Pacific rhododendron <5% cover, and sword fern <3% cover, Salal usually co-dominates with evergreen huckleberry
- These sites are moderately dry and appear to be relatively nutrient-poor.

Vegetation Composition Table (selected species):
Con = const ancy, the percent of plots within which each species was found;
Cov = cover , the mean crown cover of the species in plot s where it was found;
+ = trace (< 0.5% cover).

Trees	Kartesz 2005 Name	Con	Cov
Douglas-fir	Pseudotsuga menziesii var. menziesii	100	60
western hemlock	Tsuga heterophylla	89	37
western redcedar	Thuja plicata	82	9
western white pine	Pinus monticola	45	14
Shrubs and Dwarf-shrubs			
evergreen huckleberry	Vaccinium ovatum	100	28
salal	Gaultheria shallon	97	27
dwarf Oregongrape	Mahonia nervosa	53	3
red huckleberry	Vaccinium parvifolium	42	2
trailing blackberry	Rubus ursinus var. macropetalus	32	+
Pacific rhododendron	Rhododendron macrophyllum	16	3
Forbs and Ferns			
bracken fern	Pteridium aquilinum var. pubescens	68	2
sword fern	Polystichum munitum	37	1
twinflower	Linnaea borealis ssp. longiflora	16	4
western starflower	Trientalis borealis ssp. latifolia	16	+

Upland Plant Associations of the Puget Trough Ecoregion, Washington 2006. Christopher B. Chappell.

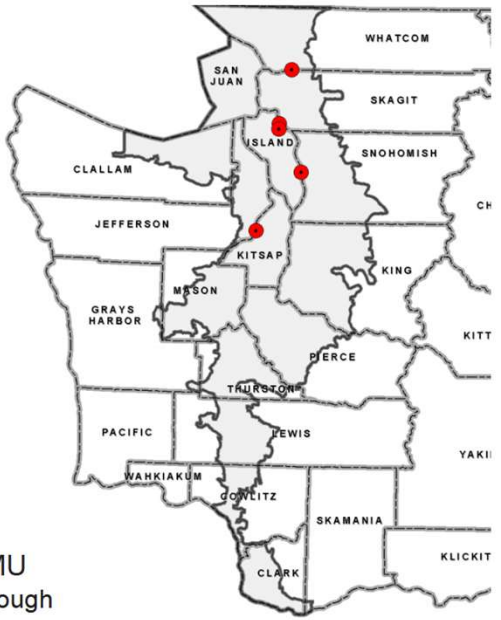
What does this Plant Community Tell Me?

- I’m in a dry site
- Soils are likely gravelly and might have a restrictive layer
- Depending on successional stage, I might see a lot of Doug fir, red cedar, or western hemlock in the canopy
- Fire is the primary natural disturbance, but return interval is long
- “Wet feet” plants might not do well here
- Great place to forage for berries!

What Should I Plant Here?

We can go to our plant association description and see what is commonly found in these types of forests:

CEGL000638 Alnus rubra / Polystichum munitum Forest



Plot locations
of ALRU/POMU
in the Puget Trough

CEGL000638 Alnus rubra / Polystichum munitum Forest

- Found throughout the Puget Trough ecoregion and surrounding areas
- Common after disturbance
- Red alder dominates with a sword fern understory
- Found on upland sites (not bluffs, landslides, or riparian terraces)

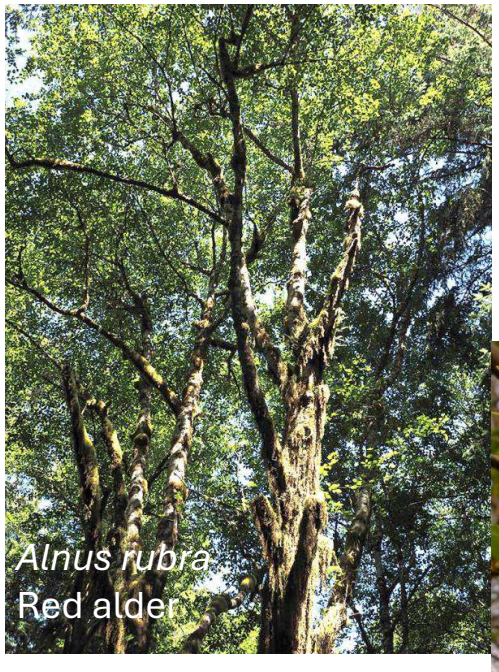
Trees	Kartesz 2005 Name	Con	Cov
red alder	Alnus rubra	100	82
western hemlock	Tsuga heterophylla	80	2
Douglas-fir	Pseudotsuga menziesii var. menziesii	40	12
bigleaf maple	Acer macrophyllum	20	13
grand fir	Abies grandis	20	8
Shrubs and Dwarf-shrubs			
salmonberry	Rubus spectabilis var. spectabilis	100	33
trailing blackberry	Rubus ursinus ssp. macropetalus	80	8
red huckleberry	Vaccinium parvifolium	80	7
red elderberry	Sambucus racemosa var. racemosa	60	4
swamp currant	Ribes lacustre	60	2
oceanspray	Holodiscus discolor	40	7
dwarf Oregongrape	Mahonia nervosa	40	6
Graminoids			
Dewey's sedge	Carex deweyana var. deweyana	80	2
nodding trisetum	Trisetum canescens	60	2
Columbia brome	Bromus vulgaris	60	1
blue wildrye	Elymus glaucus	40	2
bearded fescue	Festuca subulata	40	2
Forbs and Ferns			
sword fern	Polystichum munitum	100	57
spreading woodfern	Dryopteris expansa	80	5
Siberian springbeauty	Claytonia siberica var. siberica	60	13
stinging nettle	Urtica dioica ssp. gracilis	60	8
bracken fern	Pteridium aquilinum var. pubescens	60	6
threeleaf foamflower	Tiarella trifoliata var. trifoliata	60	6
lady-fern	Athyrium filix-femina ssp. cycolosorum	60	3
sweet-scented bedstraw	Galium triflorum	60	1
enchanter's nightshade	Circaea alpina ssp. pacifica	40	4
fringecup	Tellima grandiflora	40	+
western starflower	Trientalis borealis ssp. latifolia	40	+
Pacific bleedingheart	Dicentra formosa ssp. formosa	20	3

Upland Plant Associations of the Puget Trough Ecoregion, Washington 2006. Christopher B. Chappell.

What does this Plant Community Tell Me?

- Site is moist
- This area was likely disturbed (timber harvest, old road, etc.)
- Soils can be variable
- Depending on age of alders, I might see a Douglas fir or western hemlock in the understory
- Overtime, alders will die out and conifers will become the dominant tree on site
- English ivy and herb Robert may cause issues here

What Should I Plant Here?


Alnus rubra
Red alder


Acer macrophyllum
Big-leaf maple


Rubus spectabilis
Salmonberry


Dicentra formosa
Pacific bleedingheart

What Should I Plant Here?


Pseudotsuga menziesii
Douglas fir


Tsuga heterophylla
Western hemlock


Polystichum munitum
Swordfern


Tellima grandiflora
Fringecup

CEGL001796 Leymus mollis - Abronia latifolia Grassland

Range

- Known from Northern CA to BC
- Found on active coastal sand dunes and hummocks along the coast
- Actively moving sand and salt spray are required

Ebey's Landing National Historical Reserve Vegetation Classification and Mapping Project, Natural Resource Report NPS/NCCN/NRR—2016/1127 Catharine Copass and Tynan Ramm-Granberg

What does this Plant Community Tell Me?

- I’m at the beach!
- Sand has been minimally stabilized
- Total plant cover is low
- There may be lots of driftwood
- This community will move and change overtime with the elements
- May co-occur with other plant communities depending on stabilization
- European beachgrass is a big threat to this community

What Should I Plant Here?

Leymus mollis
American dunegrass

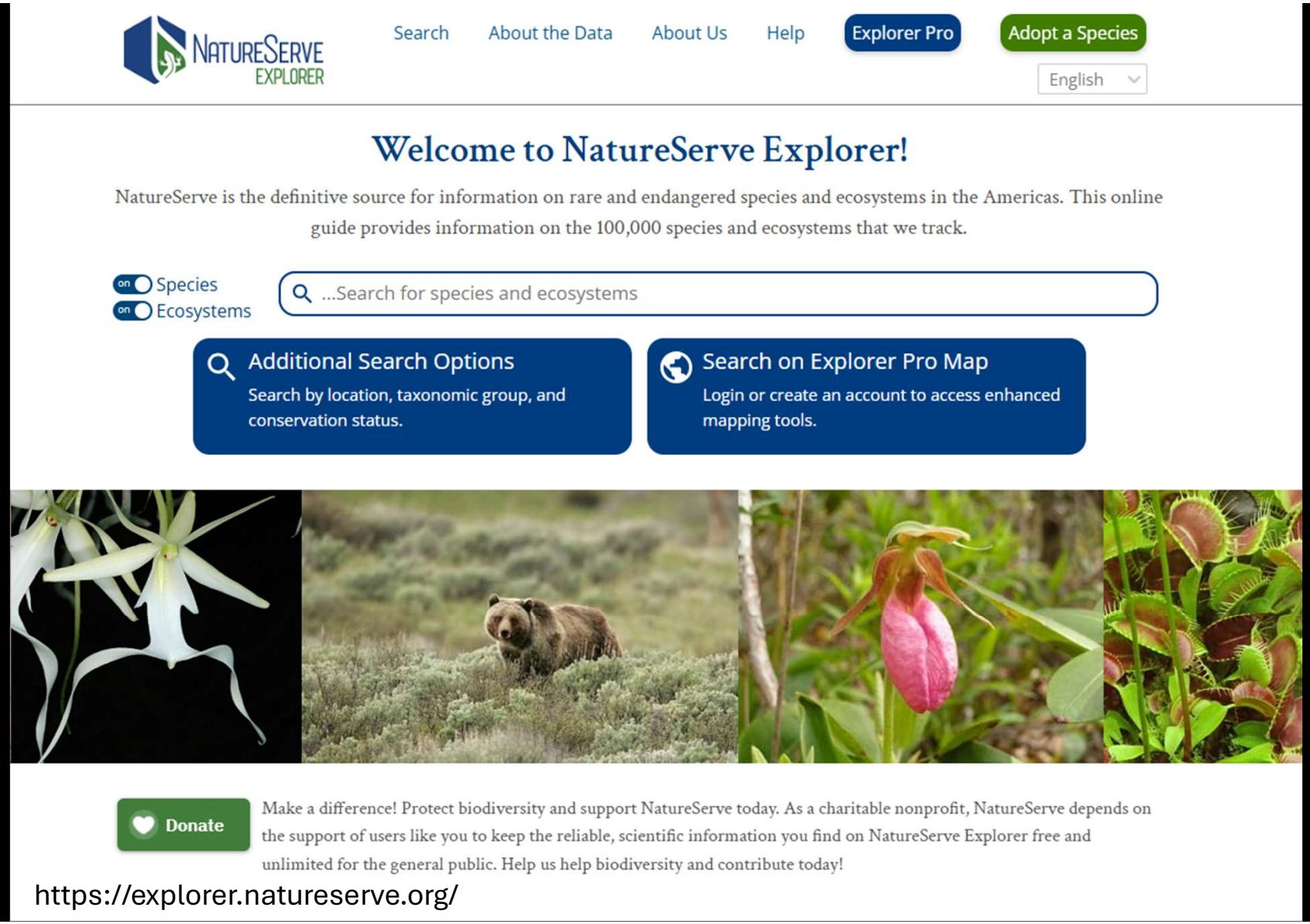
Abronia latifolia
Yellow sand verbena

Carex macrocephala
Bighead sedge

How do I find out?

The Washington Natural Heritage Program is the primary resource for vegetation community information in Washington

https://dnr.wa.gov/natural-heritage-program/ecosystems-washington/us-national-vegetation-classification



https://explorer.natureserve.org/

United States National Vegetation Classification

USNVC

ABOUT GET INVOLVED! EXPLORE THE CLASSIFICATION RESOURCES

U.S. National Vegetation Classification

Your guide to the nation's vegetation!

All Photos by Chris Lea/National Park Service

USNVC Database

HIERARCHY EXPLORER
The U.S. National Vegetation Classification

https://usnvc.org/

Burke Herbarium Image Collection

Vascular Plants, Macrofungi, & Lichenized Fungi of Washington

Search... Names Photos More search options...

Home | Browse Species | Identification Keys | Photos | Contribute | About | Illustrated Glossary | PlantQuest | Log In

BURKE MUSEUM
UNIVERSITY of WASHINGTON

The Image Collection web site presents photographs and information for the vascular plants, macrofungi, and lichenized fungi of Washington state. Photographs are accompanied by distribution maps, species descriptions, synonymy, and links to additional resources. An easy to use identification key is provided for vascular plants.

Developed and hosted by the **University of Washington Herbarium** at the **Burke Museum**, this site brings together **106,083** photographs and contributions from numerous photographers and botanists.

Washington is home to an estimated **3,451** species of vascular plants, **2,537** species of macrofungi, and **1,195** species of lichenized fungi across a diverse array of landscapes from lush coastal rainforests to dry sagebrush plains, high alpine meadows and much more in between.

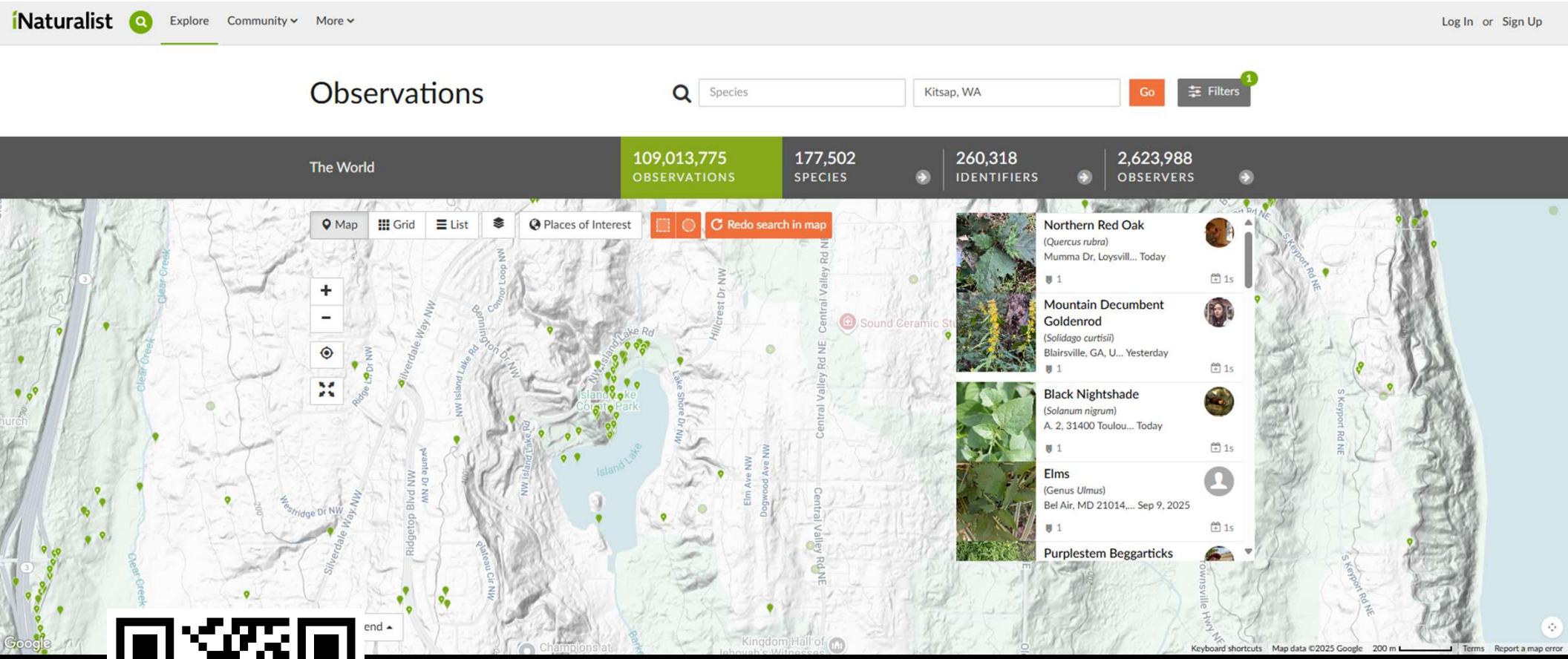
The Burke Herbarium and its partners have also released **wildflower identification apps for Washington and Idaho** based in part on content from the Burke Herbarium Image Collection. The macrofungal portion of the Image Collection web site reproduces photographs and species descriptions from ***Mushrooms of the Pacific Northwest***, published by Timber Press.

Summary:

3,225 vascular plant species with photos
1,142 macrofungi species with photos
254 lichenized fungi species with photos

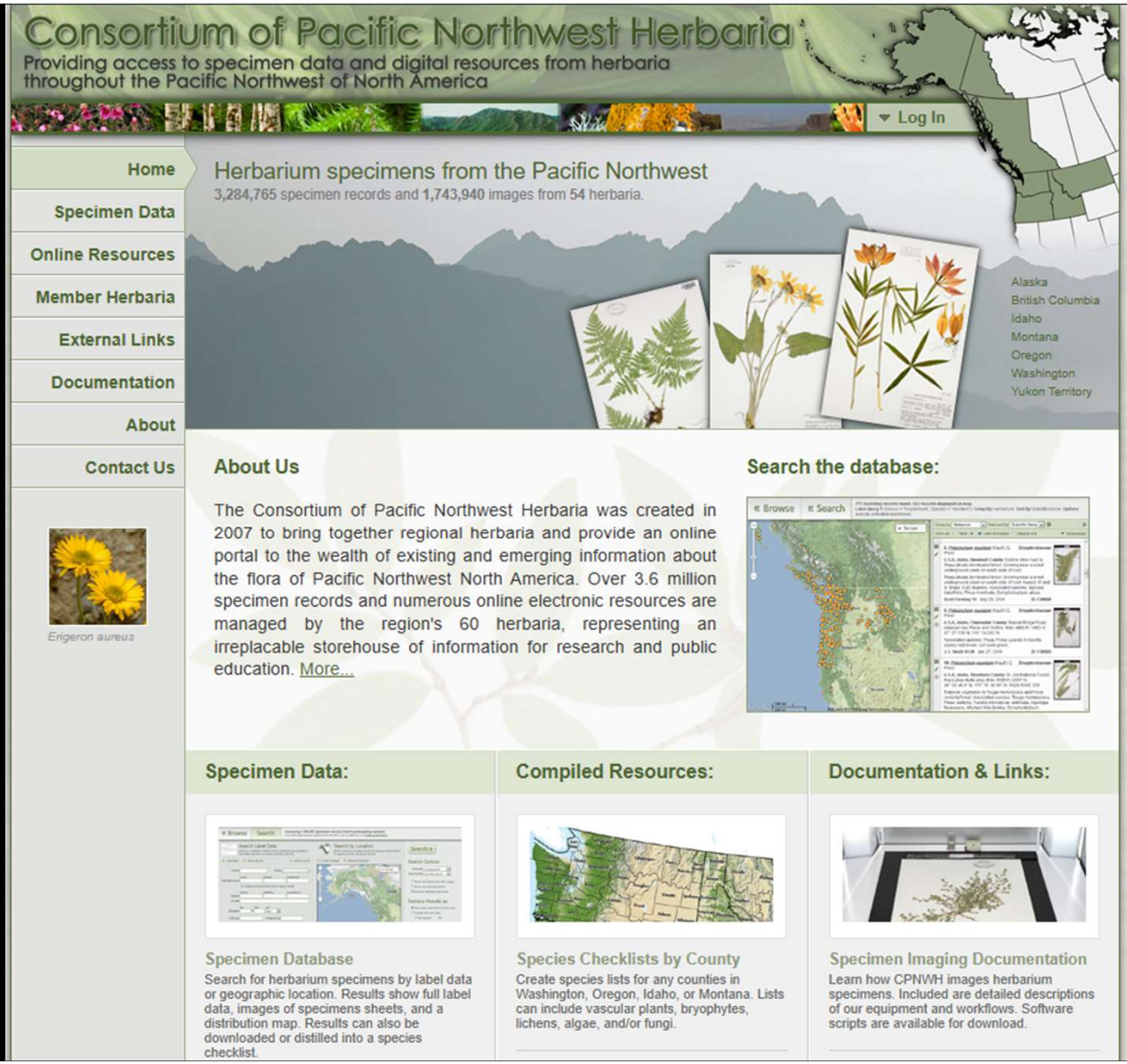
99,777 vascular plant photos
5,038 macrofungi photos
826 lichenized fungi photos
— by **729** photographers

https://www.burkeherbarium.org/imagecollection/



https://www.inaturalist.org/

https://www.pnwherbaria.org/



SEINet

Arizona - New Mexico Chapter

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Taxon Search

Search

Welcome to SEINet

The Arizona - New Mexico Chapter of SEINet started as a gateway to distribute botanical data of interest to the environmental research community within Arizona and New Mexico. Over time this database grew to include many collections across North America. When you search this portal, or any of the other SEINet portal partners, you are getting results from our one central database. The SEINet portal network contains 24 million records from 456 collections. Collections are organized into regional consortia that are accessed through different websites but share a central database. Some examples include: the Consortium of Midwest Herbaria, Consortium of Southern Rocky Mountain Herbaria, Intermountain Regional Herbarium Network, Madrean Discovery Expeditions (MDE), Mid-Atlantic Herbaria Consortium, North American Network of Small Herbaria, North Great Plains Herbaria, Red de Herbarios Mexicanos, SERNEC (Southeast USA), and the Texas Oklahoma Regional Consortium of Herbaria (TORCH).

Here you'll find taxon pages, checklists, and other tools to help you understand the plants in your region of interest.

Join SEINet as a regular visitor and please send your feedback to the Support Hub HelpDesk (help@symbiota.org). Visit the Data Usage Policy page for information on how to cite data obtained from this web resource.

More Arizona and New Mexico specimen data can be found here:

- Bryophytes: Consortium of Bryophyte Herbaria
- Fungi: Mycology Collections Portal (MyCoPortal)
- Lichens: Consortium of Lichen Herbaria
- Macroalgae: Algae Herbarium Consortium

Plant of the Day

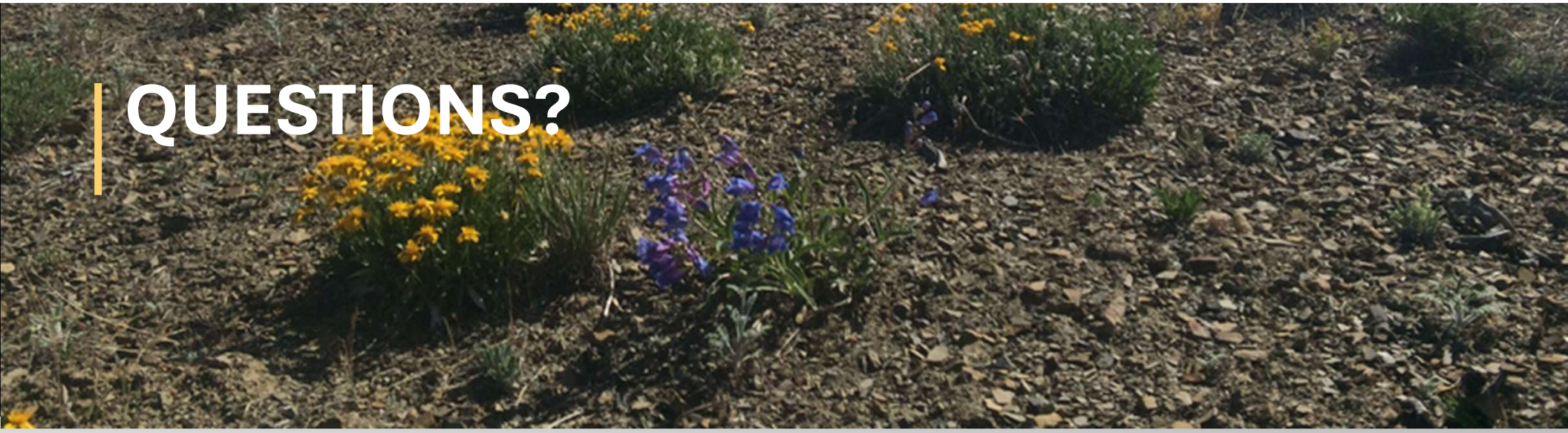
What is this plant?

Click here to test your knowledge

https://swbiodiversity.org/seinet/index.php

Plant Communities and You

- Understanding natural plant assemblages can help you understand what native plants work together and why
- Integral part of restoration practices
- This information can help guide your planting plans
- Another way to see and appreciate the natural world



THANK YOU!

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