



Oregon State University
Extension Service

METRO AREA Master Gardener™ Program

OSU Extension provides information and expertise to help meet local challenges and help every Oregonian thrive.

- 4-H Youth Development
- Agriculture and Natural Resources
- Family and Community Health
- Forestry and Natural Resources



Oregon State University
Extension Service

OSU Extension across Oregon

FAST FACTS

- 37,000+ youth participating in 4-H clubs and in-school programs
- 59% of our faculty live and work outside of Corvallis
- 13,000+ trained volunteers increasing community capacity
- 1,000+ peer-reviewed Extension publications, videos and apps in the Extension catalog
- 4,800 students and parents served by *Juntos* in 54 schools in 35 communities and 19 counties
- 33,000 individuals receive SNAP-Ed nutrition education
- 6,000+ Ask an Expert questions answered by OSU researchers, educators and volunteers

OSU Master Gardener™ Program



- Helps Oregonians grow healthy gardens
- Provides gardening information rooted in science
- More than 3,000 trained volunteers provide 200,000 volunteer hours and 250,000 contacts annually
- Requires annual volunteer recertification

Hello!



OSU EXTENSION SERVICE metro area MASTER GARDENER VOLUNTEER



Jack Shorr

Hello!



OSU EXTENSION SERVICE
metro area

MASTER GARDENER VOLUNTEER




Robin Carpenter

OSU Master Gardener Mission



Cultivating resilient and healthy communities throughout **Oregon** through sustainable horticulture education and **gardening** projects that are rooted in science and that are supported by OSU Extension volunteers.

Land Acknowledgment

A group of diverse children are gathered around a wooden garden bed, planting small potted plants. One child in the foreground wears a bright pink jacket and blue gloves. Another child has red hair in a ponytail. The scene is outdoors with a green fence in the background.

Oregon State University is a “land grant” institution, located on the traditional homeland of the Kalapuya people, who were forcibly removed to reservations in Western Oregon. After 1868, land taken from Klamath, Coos, Lower Umpqua, Siuslaw and Coquille people was sold to support the growth of the new college.

OSU accepts its responsibility to understand the continuing impact on living descendants of the Confederated Tribes of Grand Ronde and Confederated Tribes of Siletz, and is committed to being of enduring benefit to the state of Oregon and the people on whose ancestral lands it occupies.



Gardening with Pacific Northwest Native Plants

Jack Shorr & Robin Carpenter
OSU Extension Service Master Gardener Volunteers

Photo: Anna's Hummingbird in Red Flowering Currant by Norman Goo

Norman Goo

What is a native plant?



Photo credit Stanley Zimny via Creative Commons



Native - a plant or animal that has evolved in a given place over a period of time sufficient to develop **complex and essential relationships** with the physical environment and other organisms in a given ecological community.

- 'The Living Landscape'
by Rick Darke & Doug Tallamy

Native to where?

- Plants that have similar needs in terms of climate, elevation, and soil
- Plants that have been here for millennia before European colonization and now urbanization



* Level III ecoregions data from the U.S. Environmental Protection Agency and the U.S. Geological Survey, 2003, epa.gov/wed/pages/ecoregions/ecoregions.htm

Does one yard matter?



Source: Backyard Habitat Certification Program

An ecosystem is a tapestry of species and relationships.
Chop away a section, isolate that section, and there
arises the problem of unraveling.

David Quammen, The Song of the Dodo (1996)



Why Natives Plants?

All photos: Jim Cruce

Native plants support native wildlife & food web



Photo: Dan Mullen



- 90% of insects depend on native plants to survive
- 96% of terrestrial (i.e. land) birds feed on insects
- 10% of small mammals only eat insects
- 100% of adult amphibians (and most reptiles) eat insects, small mammals, and fish
- We are all connected through the food web

Photo: Backyard Habitat Certification Program

**Approximately 30 species of bees are labeled
as possibly extinct or critically imperiled**



Photo: The Xerces Society/Rich Hatfield

Causes of species decline

Big picture:

- Less habitat due to development
- Climate change caused by fossil fuels
- Introduced species of plants and animals
- Other human hazards

In our yards:



Photo: Ivan Radic



Photo: Jeanne Donaldson/Bird Alliance of Oregon



Photo: OSU Master Gardener

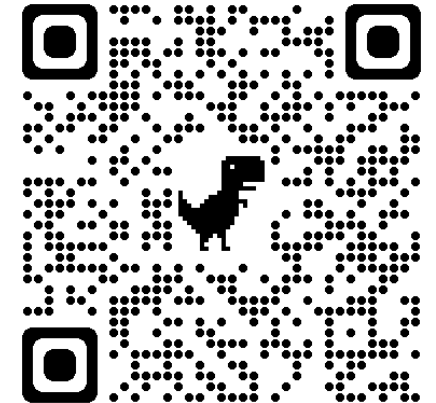
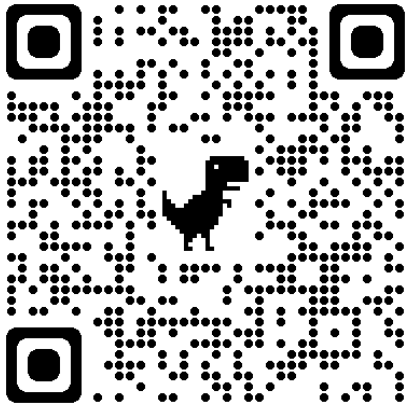


Photo: Agnieszka Kwiecień

Reduce or eliminate pesticide use



- ❖ Take Metro's pledge to not use pesticides
- ❖ Use GrowSmartGrowSafe.org





Native Plants & Pollinators in the Garden

Photo: Robin Carpenter

Native Canopy Layers for Wildlife Diversity



Image courtesy of WA Dept of Fish and Wildlife, *Landscaping for Wildlife* by Russel Link
(adapted for BHCP)

Our local climate, elevation, and soil

- Cool, rainy winters
- Warm, relatively dry summers
- Long growing season
- USDA zone 8b, AHS zone 4, Sunset zone 6
- Wide elevation range, some microclimates
- Soil testing



Credit: Mercedes Maltese

Our urban gardens

- Disturbed soil
- Non-native ecosystem with introduced flora & fauna
- Introduced pests and diseases
- Wildlife pressures
- Weediness vs our concept of “garden”
- Difficulty of culture
- Unfavorable conditions
- Hazards and nuisances for dense population
- *Right Plant, Right Place, Right Care*



Photo: Susan Nolte

Perennials and Annuals



Douglas Aster

Symphotrichum subspicatum

Abundance 100% | Diversity 100%

- Here, we see a woodland skipper (*Ochlodes sylvanoides*) foraging from Douglas Aster!

To support native bees in your garden, select plants that support high bee abundance and/or high bee species richness.

Outer white circle represents relative bee abundance.



Inner white circle represents relative number of bee species (diversity).

Infographics developed by LeAnn Locher, Aaron Anderson, and Gail Langelotto.

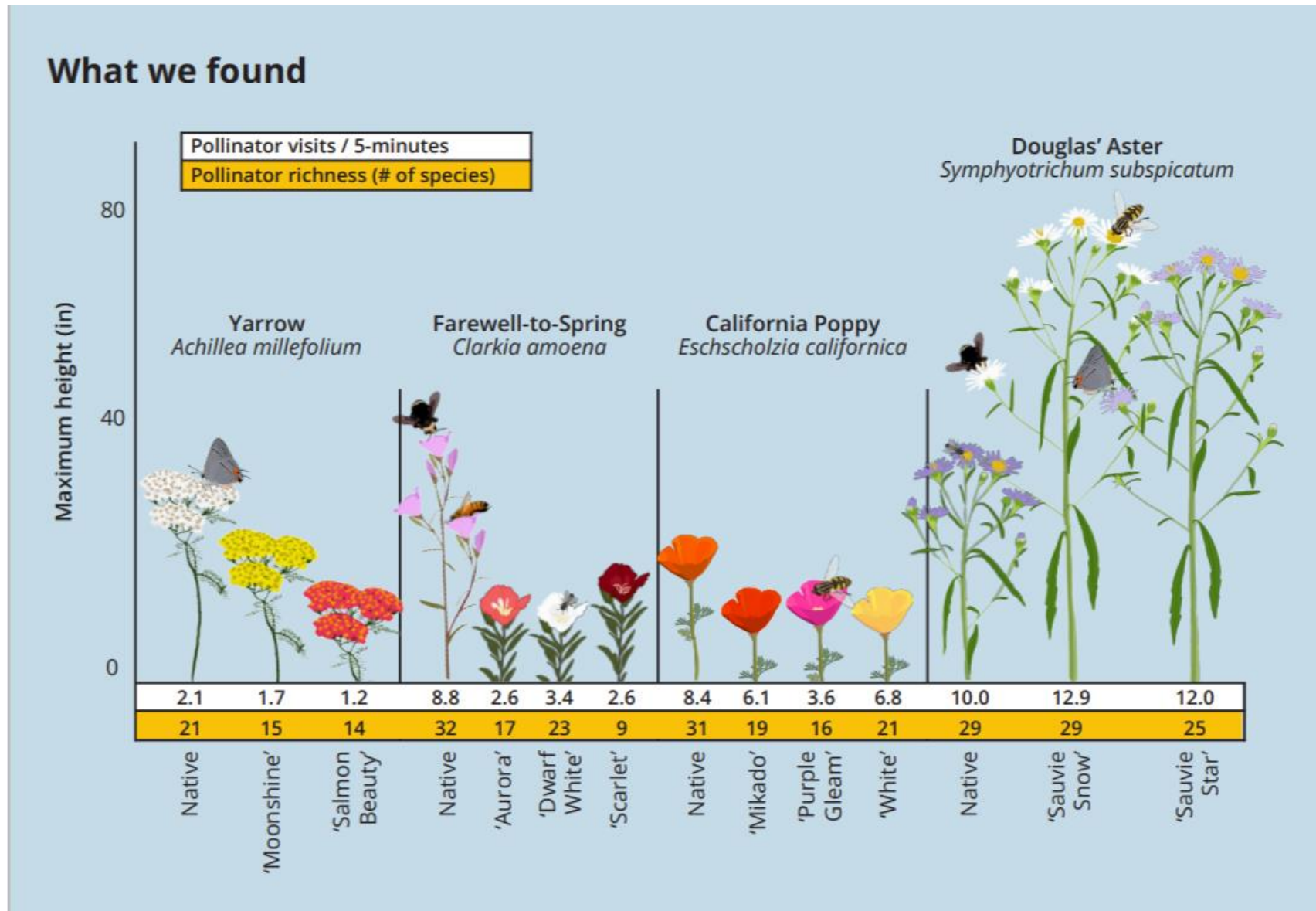
Top 10 Oregon Native Plants for Pollinators!

We selected native perennials based on results of Aaron Anderson's three-year study of native bee preference for native Oregon plants.

- OSU Garden Ecology Lab



Layering Garden Plants for Pollinators



Spring plants for pollinators



Large-leaved Lupine

Photo: Terri Paju, Pixabay



Red Flowering Currant

Photo: Robin Carpenter



Osoberry

Photo: Robin Carpenter



Farewell to Spring

Photo: Shu-Ju Wang



Common Camas

Photo: Susan Albright



Tall Oregon Grape

Photo: Dena Turner



Blue-headed Gilia

Photo: Alain General, Pixabay

Summer plants for pollinators

Douglas spirea

Photo: Tammi Miller



Western
columbine

Photo right: Susan Albright



Fireweed

Photo: Shu-Ju Wang



California Poppy

Photo: JackieLou DL, Pixabay



Showy fleabane

Photo: David J. Stang



Madia elegans

Photo: Ragni Jayanthi



Fall plants for pollinators

Pearly
Everlasting



Photo: Natalie N., Pixabay

Goldenrod



Photo: Hans Benn, Pixabay

Douglas Aster



Photo: Doug Murphy, CC BY 4.0 via Wikimedia Commons

Harebell



Photo: Witold Rychter, Pixabay

Yarrow



Photo: Hans, Pixabay



Native Planting Ideas

Photo: Robin Carpenter

Natives in Sun



Photo: Mercedes Maltese

Natives in Shade



Photos: Mercedes Maltese

Native Shrub Hedgerow

60% of regional bird species nest in the shrub layer.

Warblers, sparrows, towhees, and goldfinches are thicket/hedge nesters.



Photo: Eric Butler

Woodland

- Focus on shade-tolerant small trees, shrubs, ferns, and herbaceous plants
- Maintain leaf litter, woody debris



Photo: East Multnomah Soil and Water Conservation District

Meadowscape

- Focus on bunchgrasses and wildflowers. Similar species mix to pollinator garden, but more grass-focused
- Wet or dry
- Sometimes used as water-wise lawn substitute



Photo: Susan Nolte



Photo: Bob Hansen

Pollinator Garden

- Focus on low-maintenance shrubs, wildflowers, and bunchgrasses
- Flower diversity
 - Bloom season
 - Flower types
 - Host plants
 - Not all flowers “work”



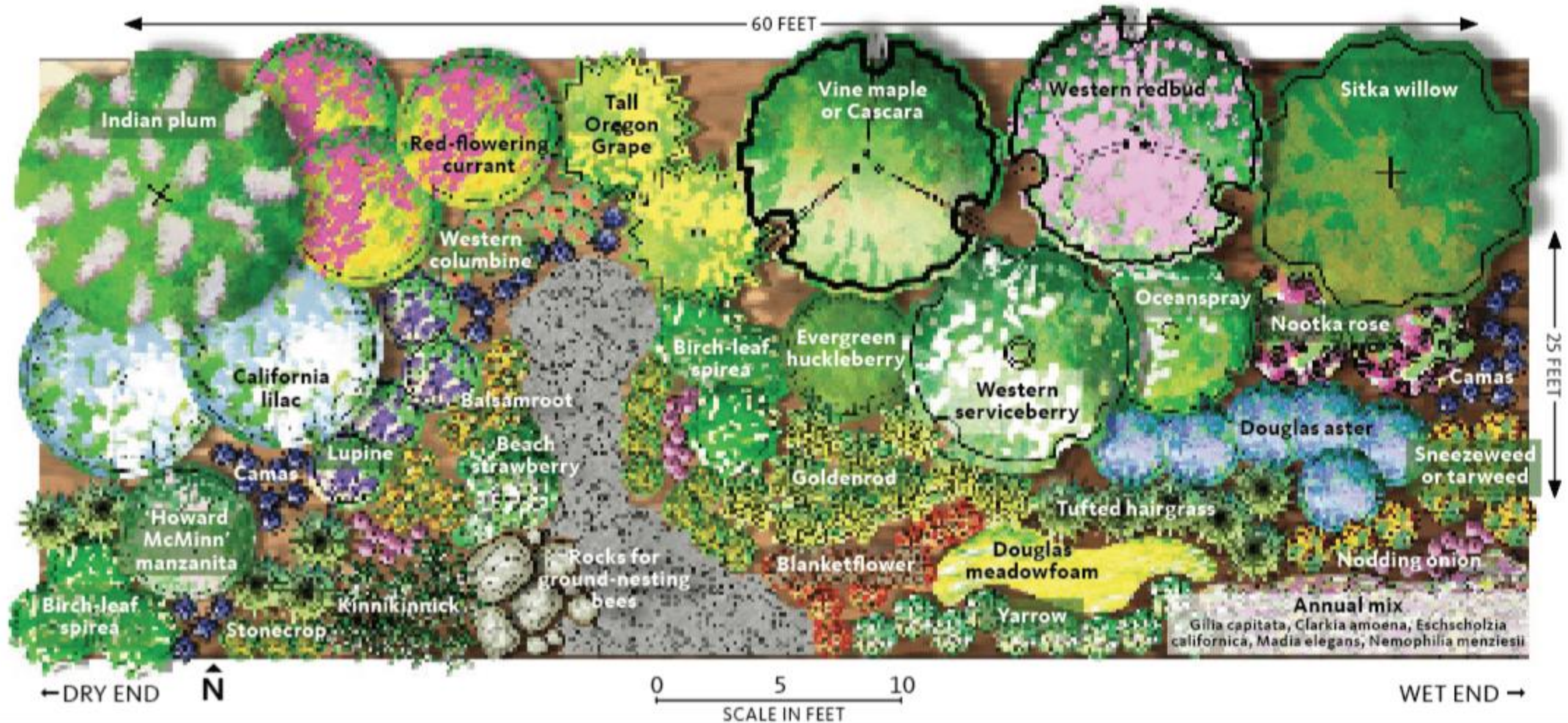
Photo: Eric Butler

Bee Species Supported Relative to Lavender



Number of estimated bee species supported, based on three years of bee collections.

Planting Ideas - Native Pollinator Garden



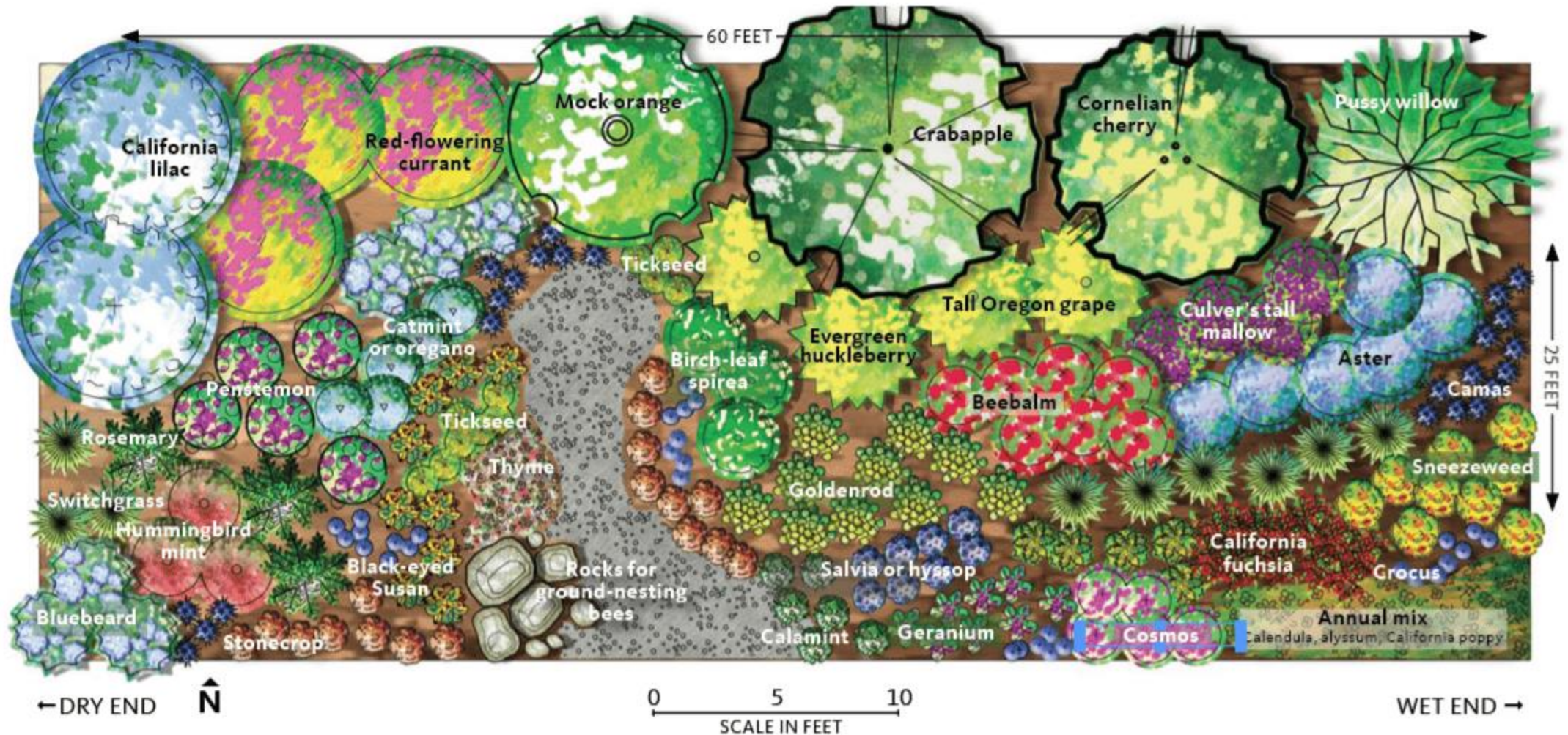
Native plant garden design, spring through fall, west of the Cascades.

Credit: Signe Danler, © Oregon State University

Enhancing Urban and Suburban Landscapes to Protect Pollinators

<https://extension.oregonstate.edu/catalog/pub/em-9289-enhancing-urban-suburban-landscapes-protect-pollinators>

Planting Ideas - Native & Non-native Pollinator Garden



Native and non-native garden, spring through fall, for areas west of the Cascades.

Credit: Signe Danler, © Oregon State University

Enhancing Urban and Suburban Landscapes to Protect Pollinators

<https://extension.oregonstate.edu/catalog/pub/em-9289-enhancing-urban-suburban-landscapes-protect-pollinators>



Sustainability in the Native Garden

Decals photo quinn.anya, porch photo megnut, mason bee house photo jhritz, catio photo Michael Sulis, snag photo & birdbath photos Nikkie West

Sustainable options



Photo: Joseph Ken, Pixabay



Photo: Kjerstin Michaela Noomi Sakura
Gihle Martinsen Haraldsen, Pixabay



Photo: Stephanie McLean, Pixabay

- Use resources you already have on your site (i.e. leaves, twigs, stumps, etc)
- Repurpose/share resources (i.e. Chipdrop, Craigslist, plant swaps, etc.)
- Wood and branch piles are insect habitats
- Put the right plants in the right places. Needs vs conditions
- Grow plants from seed and/or propagate from cuttings
- Take one step at the time. Work at your own ability
- Plant during “fall” weather. Water for 3 years during “summer” weather
- Ask questions and ask for help. Connect with local organizations: OSU Extension Master Gardeners, Friends of Backyard Habitat

Sustainable options - Lose the Lawn



Western White Yarrow (*Achillea millefolium*)
grown from seed sown after the grass was
removed

Photo: Pam Misener

Sustainable options – Leave the Leaves



Why wait? Get started now!

- ▶ Need PNW/Willamette Valley natives in your yard?
- ▶ Need resources?
- ▶ Need inspirations?



Download Native Plant Lists for Free

<https://www.oregonmetro.gov/native-plants-willamette-valley-yards-booklet>

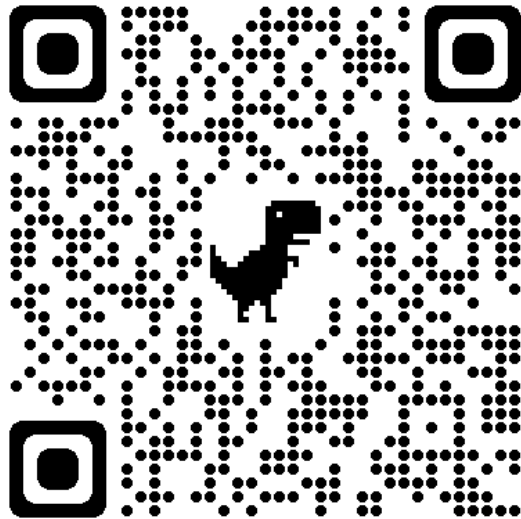
<https://www.portland.gov/bps/documents/portland-plant-list/download>

Native plants for Willamette Valley yards



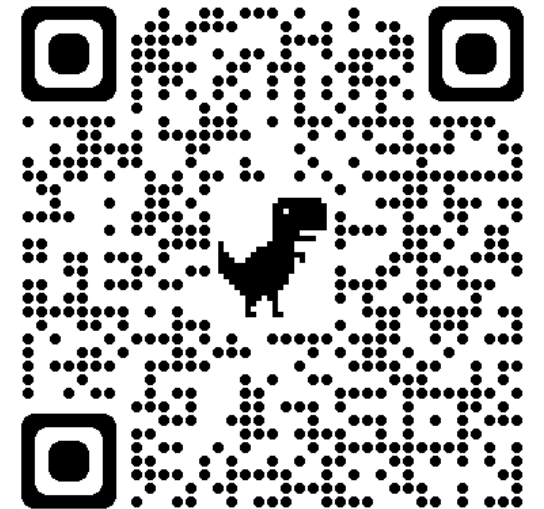
Source: Metro

Accompanied by photos of each plant listed.



Source: portland.gov

Includes Nuisance Plants list
(plants that are introduced and
aggressively takes over, ie,
invasive)



Where to get native plants

- Specialist nurseries and seed suppliers
- Garden centers with native plant sections
- Collect/grow your own
- Fundraiser sales



Bigleaf Lupine
Photo: Robin Carpenter

Resources: books & publications

- Kruckeberg & Chalker-Scott: *Gardening with Native Plants of the Pacific Northwest*
- Link: *Landscaping for Wildlife in the Pacific Northwest*
- OSU Extension:
 - i. *Gardenecology.oregonstate.edu*
 - ii. *Gardening with Oregon Native Plants West of the Cascades*
 - iii. *Selecting Native Plant Materials for Restoration Projects (2006)*
 - iv. *Living On the Land: Got a Stream? Grow Plants! (2015)*
- Pojar & MacKinnon: *Plants of the Pacific Northwest Coast*
- Robson, et al.: *Encyclopedia of Native Plants for Pacific Northwest Landscapes*
- Stark: *Real Gardens Grow Natives*
- Tallamy: *Bringing Nature Home, Nature's Best Hope, How Can I Help?*
- West Multnomah SWCD: *The Meadowscaaping Handbook*

Resources: expertise

- Backyard Habitat Certification Program (BHCP)
- Friends of Backyard Habitat Greater Portland Oregon Area (FB group)
 - Westside Habitat Group (in person/email/WhatsApp)
- Metro Master Gardeners
- Tualatin Soil and Water Conservation District; East Multnomah Soil Conservation District; West Multnomah Soil and Conservation District
- Native Plants in Oregon Discussion (FB group)
- Native Plant Society of Oregon
- Native Seed Network

Resources: online

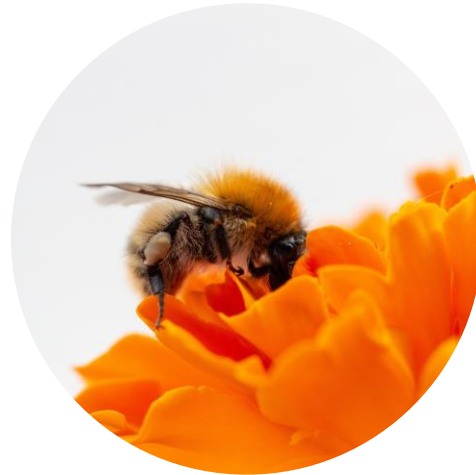
- Clean Water Services plant list (and plant sale list)
- Hansen's Native Plant Database
- National Wildlife Federation
- Oregon Flora Project
- OSU woody plants database
- Plantnative.org
- Portland.gov/bes
- Portland Plant List
- Xerces Society
- *and more...*

Where you can find us...



- **On the web**

www.metromastergardeners.org



- **X (formerly Twitter)**

@TheRealDirt



- **Facebook**

@MetroMasterGardeners

OSU Extension Service & Master Gardener Associations Events Calendar

Find upcoming events at:

-Free events and webinars, all welcome!

-Register for some in advance



Photo credit: OSU Extension Service

www.metromastergardeners.org

Upcoming Events

Jan 28

[Growing Blueberries*](#)

12:00 pm - 1:00 pm PST Online

Feb 3

[Stepwise journey of tree identification*](#)

7:00 pm - 8:00 pm PST Online

Feb 21

[Blueberry Care*](#)

10:00 am - 12:00 pm Portland, OR

Feb 28

[The complete mason bee*](#)

10:00 am - 12:00 pm Portland, OR

Mar 21

[Tree School Clackamas](#)

8:15 am - 5:15 pm Oregon City, OR

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