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NATIVE PLANTS: WHAT THEY ARE, WHY THEY MATTER AND HOW TO USE THEM IN THE LANDSCAPE

Definition of the Cascadia Bioregion

I want to begin here because I want to expand our definition of native plants, what defines native, and to include those plants native from Northern California to Southern Alaska.

This is what we can think of when we think of native plants!

A **bioregion** is defined in terms of the unique overall pattern of natural characteristics that are found in a specific place. The main features are generally obvious throughout a continuous geographic terrain and include a particular climate, local aspects of seasons, landforms, watersheds, soils, and native plants and animals.

The Cascadia Bioregion, also referred to as the Pacific Northwest Bioregion, encompasses all or portions of Washington, Oregon, Idaho, California, Nevada, Wyoming, Montana, Alaska, British Columbia, and Alberta. Bioregions are geographically based areas defined by land or soil composition, watershed, climate, flora, and fauna. The Cascadia Bioregion claims the entire watershed of the Columbia River (as far as the Continental Divide), as well as the Cascade Range from Northern California well into Canada. The delineation of a bioregion has environmental stewardship as its primary goal, with the belief that political boundaries should match ecological and cultural boundaries (*Cascadia Now 2016*)

Pacific Northwest Native Plants by Plant Communities

Native plant communities are groups of native plants that interact with each other and with their environment in ways not greatly altered by modern human activity or by introduced organisms. These are types of plants that occur together in particular environments. Below are the main plant communities we have here in the PNW.

**Western Hemlock-Douglas Fir Forest

The most common plant community in the Pacific Northwest is dominated by large conifers, (Douglas fir, western hemlock, western red cedar, Lawson cypress) with a wide range of trees, shrubs and ground covers as understory plants (sword fern, salal, evergreen huckleberry, redwood sorrel, salmonberry, devil's club, vine maple). Ground covers will vary depending on amount of sunlight and moisture. A number of species are common throughout the moist to dry range with a few species found at one end of the gradient or the other. For instance, in places where the soil is well drained and the slope is south-facing, or in open canopy sunny conditions, you will find plants more tolerant of dry conditions. Many of these plants will grow in mixed deciduous forest conditions as well.

**Mixed Deciduous Forest/Steep Dry Slope

Extremely well drained, exposed south slopes, this community is predominately a mixture of deciduous trees with scattered conifers. Garry oak and Bigleaf maple are the dominant trees. Conifers do not favor the dry conditions and thin, rocky and well-drained soils. Where the tree canopy is more open, a wider variety of herbaceous plants and grasses can be found.

**Prairie

This community is most common in the middle and southern Willamette Valley, although some prairies did exist within the Columbia Corridor, on Sauvie Island, and in the Tualatin Valley.
Historically these areas were burned by Native Americans, which helped maintain their open grassy character. Today the extent of this type of plant community is gone due to development, elimination of burn practices and the subsequent natural process of forest succession. Prairies are comprised primarily of grasses on well-drained dry upland sites. If trees and shrubs are present, they are typically found alone or in small groups. The number of trees and shrubs present will depend on the depth of the soil and available moisture and they are tolerant of shallow dry soils and sunny exposed conditions.

**Scrub-Shrub Wetlands

This plant community occurs on lake shores, gravel bars and in poorly drained areas. Growing conditions range from moist soils, to periodic flooding, to standing water. Plants are adapted to seasonal changes in water levels. Some riparian areas are dense thickets of willows, red osier dogwoods, roses. In other areas, scattered trees such as cottonwoods and ash are present. At the edges, where the ground if higher and less wet, plants that tolerate somewhat drier conditions will be found.

How to Use Native Plants

Native plants have inestimable value in the landscape. They provide essential habitat and food for birds, pollinators, and all varieties of other creatures. Properly placed, native plants are naturally beautiful and grow vigorously, with minimal effort on our part. Given the many microclimates and varied conditions in a typical garden, there's a good spot in virtually any garden for Northwest native plants.

There are many ways to incorporate native plants in our Pacific Northwest Gardens!

Some of the ways to use native plants include:

- Incorporating native plants into our ornamental gardens. Great candidates include native huckleberry, Western sword fern, salal and vine maple!
- In native plant gardens including wildlife gardens and rain gardens.
- Wildlife gardens contain a variety of habitats that cater to native birds, amphibians, reptiles, insects, and mammals.
- Rain gardens incorporate native shrubs, perennials, and flowers planted in a small depression designed to temporarily hold and soak in rainwater runoff that flows from roofs, driveways, patios, or lawns.
- For restoration sites including municipal restoration, vegetation management plans and slope stability. Environmentally critical areas (ECAs) such as streams, wetlands, shorelines and slopes represent the most environmentally sensitive and productive habitat in the city of Seattle. Restoration in these areas can play a critical role in improving the health and function of these areas.

Ethnobotany and Native Plants

Ethnobotany is the study of how people of a particular culture and region make use of indigenous (native) plants. I love learning about how people use these plants for food, medicine, clothing and housing. Can you eat it? Make tools from it? Weave it? Wear it? Create medicines from it?
PNW Native Americans had the bounty of the sea, prairies, and forests to house, clothe, and feed them. Modern science continues to expand the applications and benefits of native plants.
Examples include:

- Materials Plants Bark: *Acer spp., Alnus rubra, Betula papyrifera, Chamaecyparis nootkatensis, Picea sitchensis, Prunus emarginata, Thuja plicata.*
- *Food Plants: Berries and Fruits: *Amelanchier alnifolia, Fragaria spp., Gaultheria shallon, Mahonia spp., Malus fusca, Oemlaria cerasiformis, Ribes spp., Rosa spp., Rubus spp., Sambucus spp., Vaccinium spp.,*
- Medicine Plants: *Achillea millefolium, Lonicera ciliosa, Mahonia spp., Oplopanax horridus, Petacites speciosus, Prunus emarginata, Rhamnus purshiana, Veratrum viride, Symphoricarpus albus, Taxus brevifolia, Urtica dioica***.**

Are Native plants the best choice for every situation?

Not always. Because of our urban density and the ways, we have altered the land through development, native plants are not always the best choice for every site. We should consider the effects of global warming and using drought tolerant plants as responsible, conscientious choices.

Native plants or Nothing?

I don't believe this. During my tenure at the UW, I also learned the importance of conservation and the appreciations and value of plants from all over the world.

Ten Great Natives for Our Gardens!

Vine Maple (Acer circinatum)

Native to woodlands from southwest British Columbia to Northern California, typically as far east as the west side of the Cascades

Characteristic Northwest small tree for shade. While vine maple is well adapted to summer drought in the Pacific Northwest, it does best when provided with dappled light or morning sun only. More sun means the plant requires more summer water; it then

produces even more brilliant red, purple and orange fall color. Full sun also produces bushier and less vine-like branching. Seeds and buds provide food for birds and small mammals.

Vine maple branches rarely exceeds 30 feet in habitat; in gardens, trees typically range from 12 to 20 feet tall, depending on light and moisture levels.

Native Americans used Vine Maple branches for baskets and fish traps. It was often used for firewood.

Summer foliage is a preferred food for deer and elk. Seeds, buds and flowers provide food for many birds and rodents. Squirrels and chipmunks will cache the seeds. In fact, if you try to collect seeds, you may discover that many of the samaras have already had the seed removed.

Blueblossom (Ceanothus thyrsiflorus)

Native to coastal and intermountain North America from Oregon to California
Glorious large shrub for hot, dry sun. Blueblossom is a medium to large broadleaf evergreen shrub that thrives in a summer-dry, winter-wet climate in slight shade to full sun, with good drainage. Once it's established, no supplemental summer water is needed. Fluffy blue or white honey-scented blossoms in spring provide insect nectar and pollen, as well as seeds, which are eaten by birds in the fall.
Naturally occurring after fires or timber harvest, Ceanothus curbs erosion and has the very desirable ability of fixing nitrogen in the soil.
Keeping a few ceanothus growing in your yard will take care of the nitrogen requirements your other plants may need. If you have some squirrels around, they'll help with mixing the soil in the landscape- less work for the friendly gardener.
Native Americans make tea from the leaves and flowers. Some species produce better tasting tea than others. A red dye can be made from the roots. The stems make perfect foundations for baskets. The blossoms can be mixed with water to produce a soap. A native custom among some tribes sees a bride and groom shampooing each other's hair with this aromatic mixture as part of the wedding ceremony.

Pacific Trillium (Trillium ovatum)

Native to western North America from British Columbia and Alberta south through Washington, Oregon, Montana, Wyoming, northern Colorado and California
The Pacific Northwest's most iconic spring wildflower. Pacific trillium, also called western wake-robin, thrives in woodland conditions with fertile, humus-rich yet well-drained soil. It reaches about 1 foot tall in time, with glistening white, tripartite flowers in late winter to early spring that are visited by pollinating insects.
These flowers are small miracles of nature, requiring seven years to grow from seed to flower. Found along the Pacific coast and inland throughout the Rocky Mountains (USDA 5-8), Western Trillium grows at low elevations and often along streams or seasonal waterways.
They appreciate shade and rich soil.

Pacific Coast Iris (Iris spp.)

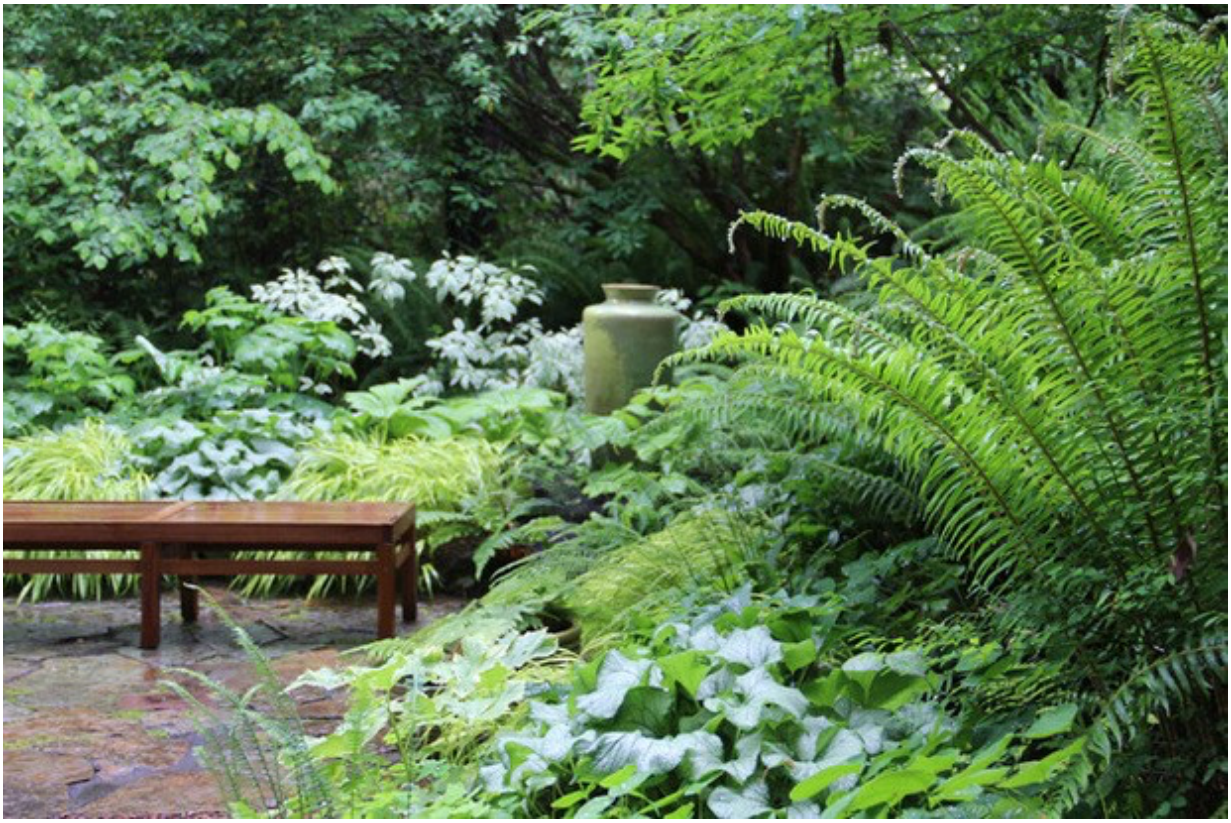
Native to the west coast of North America from the Pacific Northwest down to Southern California.

Delicate-looking blossoms in candy-box colors on tough, drought-tolerant plants. Pacific coast irises (also known as PCIs) are an adaptable group of clumping iris. They can range from 6 to 18 inches in height with colors in all shades of white, pink, purple, maroon, blue, peach, and yellow, many with striking markings on the petals. Sometimes they interbreed in the wild; sometimes they are bred intentionally, but they are invariably exquisite garden plants, tolerating drought and thriving in partial to full sun, with excellent drainage. Another bonus for the summer- dry west coast: No summer water is required once it's established.

We know of six species of Grass Iris: Iris chrysophylla (Yellow Leaf Iris, Slender Tubed Iris), Iris douglasiana (Douglas Iris), Iris innominata (Golden Iris), Iris purdyi (Purdyi's Iris), Iris tenax (Oregon Iris), Iris tenuis (Clackamas Iris).

Besides these recognized grass iris species, there are maybe hundreds of hybrids and a large percentage of them are one of a kind, i.e. designer iris.

The beautiful Pacific northwest irises must come from the footsteps of "IRIS," the beautiful Greek Goddess of the Rainbow! What beauty, what delight! How fortunate, you who have these lovely perennials in your gardens!



Western Sword Fern (Polystichum munitum)

Native to western North America from Alaska to California and east to the Rocky Mountains, Sword fern is a dramatic, tough and adaptable evergreen fern. Western sword fern is so common that it is sometimes overlooked as a garden plant. Well sited, it is one of the region's most visually distinctive — even dramatic —plants for shade. Its dark green, prehistoric-looking fronds can reach nearly 5 feet in height and width. It is also tough as nails once established, growing in seemingly inhospitable cracks between rocks, beneath established trees or on steep, north- facing banks.

Sword Ferns provide cover for wildlife, and serve as a host plant for some butterflies. Elk, deer, black bears and mountain beavers forage on the fronds.

Native Americans used nearly every part of the sword fern. Because of their non-stick qualities, the fronds were used on berry-drying racks, to separate food in storage, and to line baking pits. They were also piled for use as mattresses. The young curled fronds were chewed to sooth sore throats, and Lummi women chewed them to hasten childbirth. Some tribes ate the rhizomes of the Sword Fern. They were dug in the spring, peeled and roasted over a fire or steamed in a baking pit, and served with fresh or dried salmon eggs. The cooked rhizomes were also eaten to cure diarrhea. The Quinaults boiled the roots in water and used the water as a treatment for dandruff.

Broadleaf Stonecrop (Sedum spathulifolium)

Native to western North America from British Columbia to Southern California, in rocky habitats on coastal and inland hills and mountains.

A colorful Northwest succulent. Pretty acid-yellow flowers appear on short stems in mid-spring, providing nectar for insects. The foliage is arranged in tidy little rosettes of plump, powdery-white leaves that turn ruddy pink or red in summer and green in winter. Suited to well- drained, sandy soils, broadleaf stonecrop requires no supplemental summer water once established.

Evergreen Huckleberry (Vaccinium ovatum)

Native to coastal western North America from California to British Columbia

A small, elegant evergreen shrub that produces delectable fruit. Versatile and handsome evergreen huckleberry grows densely in full sun; in shady sites in the wild, it can grow over 12 feet tall and wide with an open habit. When grown in rich, well-drained soil and moderate sun, it produces abundant waxy white, urn-shaped flowers that feed hummingbirds and insects, and delicious fruit that is enjoyed by wildlife and humans
alike.

Hummingbirds love the small, pink-white flowers like fairy bells. Late in the summer, black-purple fruits form. Native only to the Pacific Coast (USDA 6-9), it likes acidic soil and can tolerate salt spray and strong winds. Pamper it with a layer of mulch and you will be richly rewarded with a first-class ornamental shrub for the native garden.

This northwest native shrub was first noted by Captain Lewis at Oregon's Fort Clatsop on January 27, 1806. Favored by native peoples Quinault, Straits Salish and others, the dusky berries of the native huck are hunted far and wide when they begin to ripen in the late summer, early autumn. Though said to reach their best flavor after the first frost, the piquant juiciness is nonetheless a longtime staple for many a knowledgeable woodsman.

Flowering Currant (Ribes sanguineum)

Native to western coastal North America from central British Columbia south to Central California

An iconic and cheerful west coast flowering shrub. This drought-tolerant deciduous shrub with scented, resinous foliage produces chubby racemes of pink, rosy-red or white flowers in early spring, feeding hummingbirds and hungry insects. In fall, powdery blue-black berries offer sustenance to foraging animals. Red-flowering currant reaches approximately 6 to 12 feet tall and wide.

Red Flowering Currant (Ribes sanguineum) is a magnet for butterflies and hummers. In the garden, it grows 8-10 feet and thrives in sun to partial shade.

Cut blooming branches for bouquets in April to June. Leaves are small enough that they can lie where they fall in the autumn, making mulch for neighbor plants.

Originating right here in the northwest, this shrub was introduced to gardeners on the continent by David Douglas, a prominent plant hunter.

Although this plant does fruit, the berries are not actually tasty. Coast Salish groups ate them fresh but they were not well-enough regarded to dry for winter fare. However, birds find them quite tasty.

Coast Silktassel (Garrya elliptica)

Native to the Coast Ranges of California and southern Oregon

An unusual evergreen, winter-interest native shrub. Coast silktassel is a unique broadleaf evergreen that produces sheets of incredibly long, silvery catkins during the winter. Thriving in partial sun, this 10- to 20-foot-tall evergreen is a prized shrub with festoons of winter blooms. It thrives up and down the U.S. West Coast, serving as an early pollen source for bees and, later, providing seed for birds.

This species is about the best native plant ornamental in the northwest. It's a popular garden plant, as would be expected of anything this showy. These shrubs are evergreen with tough, opposite leaves. The flowers concentrate in catkin-like inflorescenes hanging from the tree branch ends, and mature to cotton puff wind-blown seeds giving these distinctive plants their name.

Four species of Garryaceae are found in the Bay Area; on Montara Mountain, this family is represented by Garrya elliptica (Coast Silk Tassel).

Will grow in light (sandy), medium (loamy) and heavy (clay) soils, and requires good drainage. It can grow in full shade (deep woodland) semi-shade (light woodland) or no shade, dry or moist soil and can tolerate drought. The plant can tolerate maritime exposure as well as atmospheric pollution.

Red twig Dogwood (Cornus sericea)

Native in moist areas of northern and western North America, from Alaska east to Newfoundland, south to northern Mexico in the west, and Illinois and Virginia in the east

Red twig dogwood, also called red osier (or red-osier) dogwood, is a deciduous shrub ranging from 3 to 12 feet tall that produces strikingly bright red stems in winter. Later, flowers, foliage and fruit all serve as important food for insects and birds. Yellow-twigged and variegated-leafed varieties also exist.

An ideal deciduous shrub, Red-Osier Dogwood is both attractive and useful.

Forming many stems, it grows rapidly in sun or shade.

The leaves are opposite and have deep, distinct veins, turning a spectacular crimson in fall. When the leaves fall, they reveal the red, showy twigs, stunning against a backdrop of snow.