

FORESTS & ORCA WHALES

The health of our forests and orca whales are connected. Celebrate both in a hike with mom!



Image by 272447 from Pixabay

LIFE REVOLVES AROUND MOM

Our beloved Southern Resident orcas are a great example of a matriarchal society found right here in the Puget Sound. The entire clan of orcas includes smaller pods, revolving around the oldest female. Offspring stay with their mothers the entirety of their lives, creating tight families of grandmothers, mothers, and children, called matriline. A single orca pod can include multiple matriline. This matriline structure is driven by leadership rather than dominance. Since female orcas live much longer than males, their wealth of survival knowledge drives the success of the pods and clans.

HEALTHY FORESTS, HAPPY ORCAS

The Southern Resident orca diet consists primarily of Chinook salmon. The health and success of our beloved resident orcas depend on a robust Chinook salmon fishery, which means cool, clean streams for spawning. Cooler water temperatures allow for more dissolved oxygen for aquatic life. Salmon need streams below 68 degrees Fahrenheit to support a successful life cycle. Healthy, intact forests keep streams shaded and cool in the summer months. They also reduce erosion, keeping streams clear of sediment that could interfere with spawning and hatching. Taking care of our forests and waterways ensures a healthy Sound full of salmon for our hardworking orca mothers.

FOREST HIKE WITH MOM

In honor of orcas, take a forest hike with Mom. Try to see how many of our five main trees you can find on your walk. Use IslandWood Each One Teach One cards to take turns with your mom sharing something that interests you about each tree. If you wish, take a leaf from each tree home and make a rubbing with paper and the side of a crayon, or press them into a journal to save as a memory of your day together.

Common: **Big Leaf Maple**

Latin: ***Acer macrophyllum***

Lushootseed: **č'ólhac**

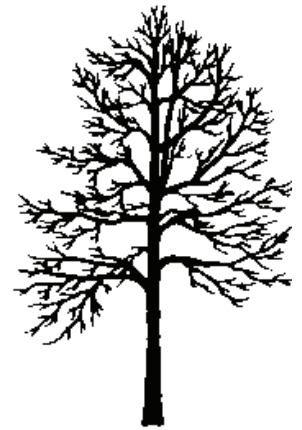


Appearance:

- Height can reach 35m (116ft)
- Often moss covered
- Leaf has 5 lobes and looks like a human hand 15–30cm (6–12in) across
- Deciduous (leaves fall every autumn)
- Winged seeds spin like helicopters

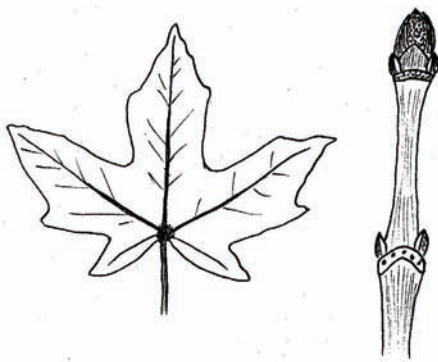
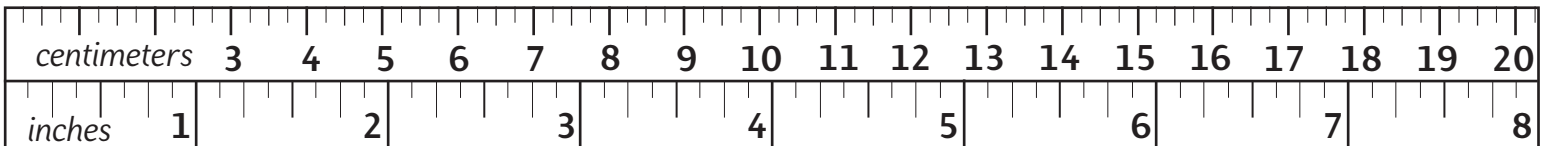
Habitat:

- Dry to moist areas
- Found on disturbed sites



Cultural Uses:

- Leaves used to treat sore throats, to rub on a young man's face so he wouldn't grow whiskers, and as temporary containers
- Inner bark used to make rope
- One of the most useful woods in the Northwest for wood-carving
- Called "Paddle tree." Why?
- Used commercially to make furniture and musical instruments



Interesting Facts:

- Has more mosses and other plants growing on it than any other tree in the Pacific Northwest
- Often draped with licorice fern
- Often survives up to 200 years
- The dead wood is used by the Swinomish, by Chehalis and Quinalt for smoking salmon
- The only known medicinal use of maple is by the Klallam, who boil the bark and drink the mixture for tuberculosis

Flowers/Seeds:

- Flowers are pale yellow and hang in clusters in April, before the leaves appear
- Flowers depend on insects for fertilization
- Winged seeds are 3–6cm (1.2–2.4in) long and appear in late summer to early winter



Source: Pojar, J. & A. MacKinnon. *Plants of the Pacific Northwest Coast* (1994)

Drawings by: Debby Goodwin, Melissa Matassa and Rebecca Helms

Common: **Douglas-fir**

Latin: *Pseudotsuga menziesii*

Lushootseed: **čuhbídac**



Appearance:

- Looks like a pyramid from a distance; has a straight and stiff top and drooping branches
- Bark is smooth grey-brown with resin blisters on young trees. Mature trees have thick reddish brown bark that is deeply furrowed.
- Needles are arranged in a spiral around the branch

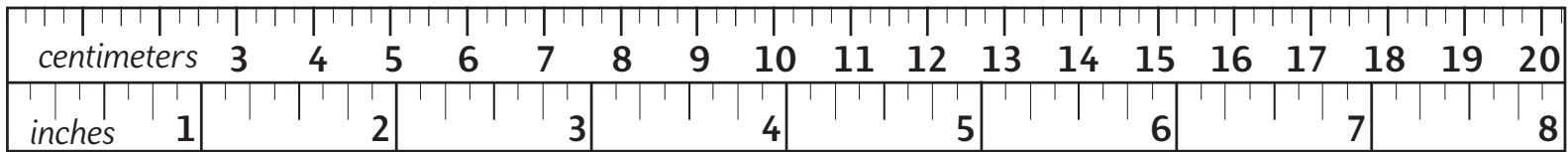
Habitat:

- Ranges from extremely dry sites to moist mountain sites. Often found in areas disturbed by fire.



Cultural Uses:

- Wood used to make spear handles, harpoon shafts, spoons, and hooks
- Not used for woodwork because it does not split evenly
- Wood and thick bark make excellent firewood
- The pitch was used for sealing joints of implements found on things like canoes and water vessels. It was also used medicinally to make a salve for wounds and skin irritations. The pitch may have also been used for chewing gum.
- Loggers cut this tree to mill at Blakely Harbor and shipped it around the world



Other Characteristics:

- Needles are flat, yellowish-green, 2–3cm (0.8–1.2in) long, with pointed tips. There is 1 groove on upper surface and 2 white bands of stomata (air holes) on the lower surface.
- Male pollen cones are small, reddish-brown. Young female seed cones are hanging, oval green at flowering and then turn reddish-brown to grey. 3 forked bracts look like the rear end of a mouse.
- Can grow to over 70m (233ft) high and 2m (6ft) across

Interesting Facts:

- Can live to be over a thousand years old
- Usually grows on wet sites that have been cleared by a fire; their thick bark allows them to survive moderate fires
- Was named after the explorer-botanist David Douglas
- The Douglas fir is not a “true” fir
- In several tribes the cones of the Douglas fir are thought to have magical qualities



Source: Pojar, J. & A. MacKinnon. *Plants of the Pacific Northwest Coast* (1994)

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Common: **Red Alder**

Latin: *Alnus rubra*

Lushootseed: **yuhśáwi**



Appearance:

- Deciduous (leaves fall every autumn)
- Grows up to 26m (85ft) tall
- Bark is thin, gray, and smooth with patches of lichen. Bark becomes scaly at the base with age.
- Leaves are alternate, elliptical and sharply pointed at the base and tip.
- Leaf margins are wavy, slightly rolled under with coarse, blunt teeth



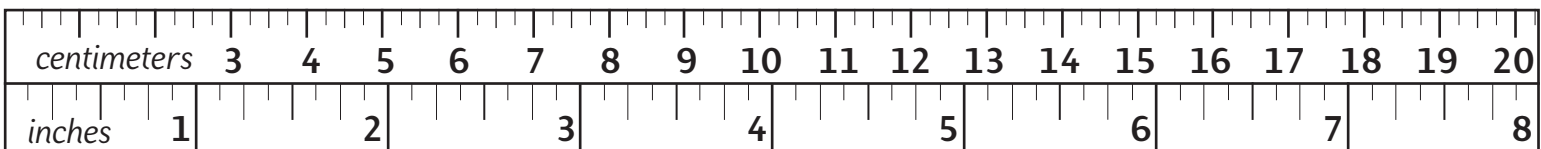
Habitat:

- Moist woods, stream banks, floodplains, old logging roads, slide tracks, recently cleared land
- Low elevations



Cultural Uses:

- Wood used to make bowls, masks, rattles, and utensils
- Some Native American tribes used the bark to make dye. The dye was especially useful in making fishnets invisible to fish.
- Inner bark was eaten in spring by the Straits Salish and other northwest coast peoples
- A bark solution was used to treat respiratory ailments including tuberculosis, and as a wash for skin infections and wounds
- Considered best wood to smoke salmon



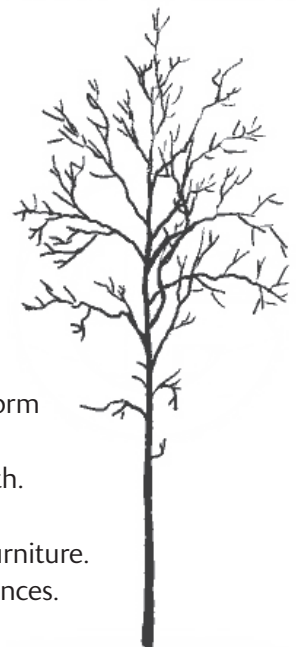
Other Characteristics:

- Leaves are 5–15cm (2–6in) long, dull green and smooth above, rust-colored and hairy below
- Male and female flowers grow in hanging catkins that appear before the leaves.
- Fruits are clusters of brown cones up to 1.9cm (3/4in) long that remain on tree over the winter.



Interesting Facts:

- Nodules on roots take nitrogen (a gas from the air) and turn it into a form that plants can use. Useful because nitrogen usually the most limiting factor in plant growth.
- Fast growing but short life span, can live about 50 years.
- Wood and inner bark turns rusty-red when cut. Often used to make furniture.
- A pioneer species because it grows quickly after fires or other disturbances.



Source: Pojar, J. & A. MacKinnon. *Plants of the Pacific Northwest Coast* (1994)

Drawings by: Debby Goodwin, Melissa Matassa and Rebecca Helms

Common: **Western Hemlock**

Latin: *Tsuga heterophylla*

Lushootseed: **sk^wúpuhc**



Appearance:

- Drooping top (tip of tree bent)
- Down-sweeping branches
- Bark is rough, scaly, reddish-brown, and thick and furrowed in old trees
- Height can reach 60m (200ft)
- Needles are short, flat, irregularly spaced, and have a blunt end that produces feathery flat sprays

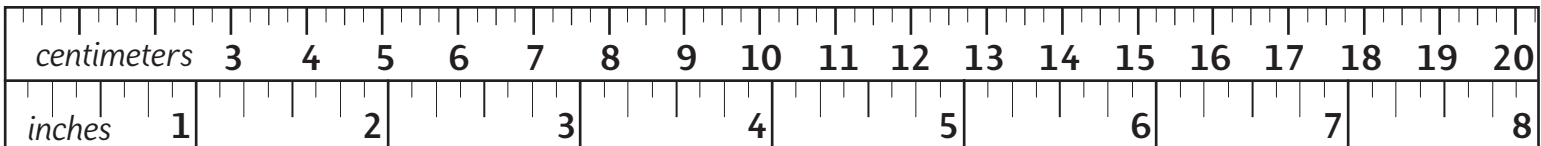
Habitat:

- Grows in dry to wet sites
- Can be found growing on decaying wood
- Shade tolerant
- Low to middle elevations



Cultural Uses:

- Bark used as a tanning agent, cleansing solution, water proofing, and to remove hair.
- Wood carved into spoons, combs, spear shafts, and children's bows.
- Branches used for bedding, hunting shelters, catching fish, lining steaming pots, and clothing.
- Medicinal uses: treat colds, prevent sunburn, and as a tea to treat internal injuries.
- No part was used as food in this area. The Cowlitz used branch tips to flavor bear meat.
- The pitch and bark were mixed together to make face paint.



Other Characteristics:

- Narrow crown and slender twigs.
- The pollen cones are numerous and small.
- The seed cones are numerous, small 2.5cm (1in) long, oblong purplish-green when young to light brown when mature.
- Needles are yellowish-green on top and of unequal length 5–20mm long (0.2–0.8in), with 2 lines underneath.
- It looks like the hemlock is having a “bad hair day” due to needle characteristics.
- The hemlock has the densest canopy of any tree species in the west so few plants can grow under it.

Interesting Facts:

- Washington State Tree
- Commercial uses: Wood pulp for paper production, flooring for gymnasiums, fiber used in manufacturing of rayon, cellophane, and many plastics.
- Will only grow on sites with significant organic content in the soil.

Source: Pojar, J. & A. MacKinnon. *Plants of the Pacific Northwest Coast* (1994)

Drawings by: Debby Goodwin, Melissa Matassa and Rebecca Helms

Common: **Western Redcedar**

Latin: *Thuja plicata*

Lushootseed: **xpáy'uhc**



Appearance:

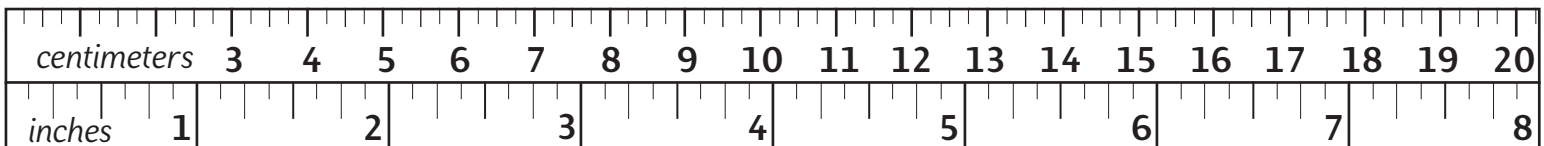
- Branches droop slightly and then turn upward (“J” shaped)
- Needles are yellowish green and scale-like
- Branchlets spray-like, flattened horizontally
- Bark is gray to reddish brown and stringy

Habitat:

- Moist to wet soils, usually shaded areas
- Along the coast from Alaska to California.

Cultural Uses:

- Native Americans refer to cedar as “The Tree of Life” and the cedar is the plant most widely used by Pacific Northwest Native groups.
- Redcedar provided materials for shelter, clothing, tools and transportation. These items included canoes, houses, baskets, rope, mats, hats, diapers, capes, tools, drums, combs, whistles and paddles.
- Few cedars were cut down by Native people; instead they used cedars that had already fallen or they took wood or bark from the tree without killing it. Skilled women could remove a single strip of cedar bark 9m (30ft) long.



Other Characteristics:

- Wood and smoke are quite fragrant
- Leaves overlap in a shingled arrangement
- Twigs smooth and not prickly to the touch
- Pollen cones are small and reddish; seed cones are egg-shaped and turn from green to brown when mature.
- Seeds have wings

Interesting Facts:

- At one time, Redcedars reached 6m (20ft) in diameter, 67m (200ft) tall and 1500 years old. Today, Redcedars often grow to be 60m (200ft) tall and 1.8m (6ft) in diameter.
- Cedar wood is relatively immune to decay due to its natural oils, thus it is used for boats, water tanks and tubs, greenhouses, posts, shakes, and shingles.
- Native Americans consider Redcedar an excellent fuel especially for drying fish, because it burns with little smoke.
- More shade-tolerant than other Pacific Northwest trees and prefers moist soils.



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