

Common name: Douglas-fir



Scientific name: *Pseudotsuga menziesii*
(pronounced SOO - DO - SOO - GA MEN - ZEE - SEE - EYE)

Cool tree facts: Douglas-fir is Oregon's state tree. Its name honors David Douglas—the famous botanist. Its Latin name, *Pseudotsuga*, means “false hemlock” and the second name, “*menziesii*” honors Archibald Menzies, who discovered the tree on Vancouver Island in 1791.

Size and appearance: Douglas-fir can be a very large tree, sometimes up to 250 feet tall. The trunk can be quite large, sometimes exceeding 10 feet in diameter. They have a triangular shape to their crown and the top point of the tree stands straight.

Bark: Older trees have a wide base and narrow trunk that is covered with very thick, brown bark along with very deep cracks or crevices. Some people think it looks like bacon. Young Douglas-firs have thin, grayish-brown bark that contains sap or pitch blisters that can burst if you push on them. Their bark is fire resistant

Leaves/needles: The needles are flat, and all are about the same length (1 inch long) with a slightly pointed tip. There is a groove on the upper surface and two white lines on the underside. They are spirally arranged, looking similar to a bottle brush.

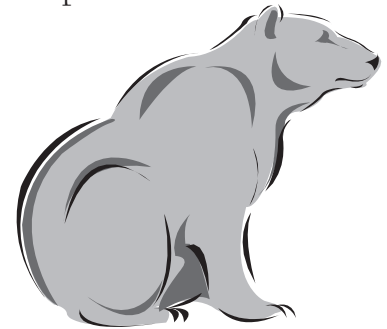
Fruit/seeds: Douglas-fir's cones hang down, unlike a *true* fir where cones stand upright on the branch like a perched bird. They are 3-4 inches long, reddish-brown and oval shaped with thin papery scales. They are known for their 3 forked- looking *bracts* that extend beyond the cone's scales. These bracts resemble mice hiding their head in the cone. Look for their hind feet and tails!



Branches, twigs and buds: When a needle is removed, the twigs are smooth—the twigs *do not* have pegs. The buds are next year's leaves or shoots and are located at the end of the branch. Douglas-fir buds vary in size from small to large, are covered with brown scales, and are pointed at the tip like an arrow.

Wildlife: Birds and other small animals use the Douglas-fir for homes, shade and shelter.

Porcupine eat the sweet inner bark of younger trees in the winter, and **bear** will eat the inner bark in the spring. **Squirrels, chipmunks** and **birds** eat the seeds from the cones. The **red tree vole** eats its needles year round.



People: Douglas-fir is known as the tree of 1,000 uses. It provides more products than any other tree in the world! It can be turned into poles, beams and boards to construct houses and buildings. It can be chipped up to make paper. The sap can be turned into glues and photo supplies. It is also the nation's most popular Christmas tree.

How does it help the forest environment?: Because they are evergreen, the trees' leaves allow them to photosynthesize and provide oxygen year round. They provide shade to plants and animals and hold moisture for ground-dwelling plants. As dead trunks decompose, they add nutrients to the soil.

Where it grows: Douglas firs love to grow in full sunlight and thrive in the moist and rainy climate of Oregon. They grow in the valleys and up in the mountains.

Common name: Western Redcedar



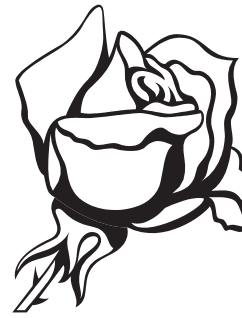
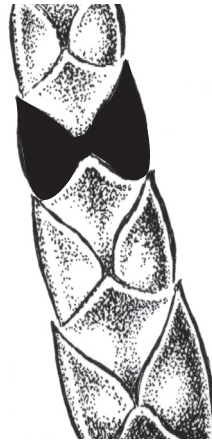
Scientific name: *Thuja plicata*
(pronounced THOO - YA PLI - KAH - TUH)

Cool tree facts: This is the kind of tree one would seek during a rain storm! The dense branches form a nice roof that sheds rain and keeps the ground dry. 'Thuja' comes from a Greek word for highly prized scented wood. The word 'plicata' means folded or interwoven for the arrangement of the twigs or scale-like leaves or possibly the long stringy bark. Strong winds can easily knock it down due to its shallow roots. Of Oregon's native conifers, western redcedar and western hemlock seedlings grow the slowest.

Size and appearance: These trees can be quite large, growing up to 200 feet tall and 10 feet in diameter. They have a triangular-shaped crown and the leaves look droopy.

Bark: The trunk often looks like it has a swollen base. The bark is thin, stringy (shaggy) and varies in thickness from ½ inch to 1 inch.

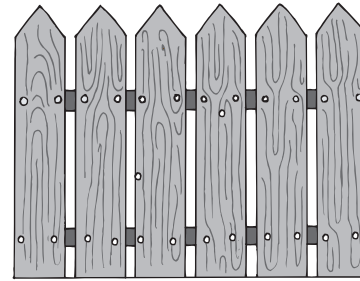
Leaves/needles: Leaves are scaly and green above. Look at the underside of the leaves for a butterfly or a bow-tie pattern.



Fruit/seeds: Cones are woody and about ½ inch long. The cones are clustered near the ends of twigs and bend backwards on the branch. When open, they look like tiny rosebuds. Cones average about three to six seeds, but there are often many cones.

Branches, twigs and buds: The branches of leaves appear flattened in fanlike sprays, drooping slightly. Twigs are scaly and typically green or brown in color.

Wildlife: Western redcedar is eaten by **deer** and **elk**. **Bear** eat the inner bark on young trees. Hollowed trunks provide homes for nesting **birds** and mammals. The large, thick branches provides cooling shade for **fish** in streams and many animals trying to escape summer heat.



People: This tree was known as the tree of life to the Coastal Native tribes of Oregon. It was used **historically** to make lodges, boats, tools and utensils. The bark was used to make clothes, diapers, ropes and fishing nets. **Today** we use it to make shingles, house siding, poles, posts, fencing, greenhouse equipment, boats and outdoor decks.

How does it help the forest environment?: Because they are evergreen, the trees' leaves allow them to photosynthesize and provide oxygen year round. They provide shade to plants and animals. As dead trunks decompose, they add nutrients to the soil.

Where it grows: The seedlings grow in partial shade, but large trees can survive in full sunlight.

Common name: Red alder



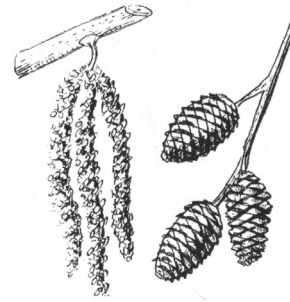
Scientific name: *Alnus rubra*
(pronounced AHL - NUS ROO - BRUH)

Cool tree facts: Red alder is the most common broadleaf tree in western Oregon. It is a very fast growing tree. If the bark was cut with a sharp tool, the inner bark would turn rusty red when exposed to air, hence the name “red” alder. Northwest Indian children used to play sick by chewing the inner bark because the bark juice made their saliva turn as red as blood.

Size and appearance: Can grow up to 3 feet in diameter. Large trees can be as tall as 120 feet and have a single trunk.

Bark: The bark of the alder tree can range from a white to grayish color. Younger bark is a greenish color. The bark is usually very smooth to the touch.

Leaves/needles: The leaves of red alder grow alternately on the branch, are about 3-6 inches long, egg-shaped with a pointed tip at the end, and have “teeth” along the edges. The leaves are dark green above and a light green to rusty color below. The tree sheds its leaves each fall. The veins of the leaf are very straight.



Fruit/seeds: Fruits of this tree are small, woody and cone-like—called strobiles (STROHB-EYE-L). They are the only deciduous trees that have “cones”. Its flowers are called catkins. They are long (4-6 inches), drooping, and reddish in color.

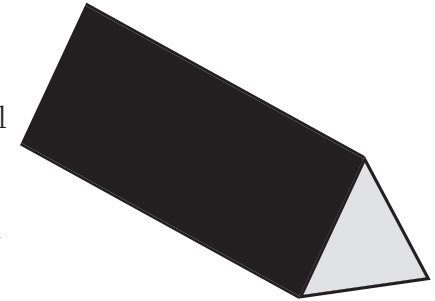
Branches, twigs and buds: The young twigs, when rolled between your fingers, have three distinct sides like a triangle. They are not circular like most twigs.

Wildlife: Alders provide shade over streams which keeps water cool—essential for **fish** since cooler water holds more oxygen. When alder leaves fall in autumn, **insects** quickly go to work shredding them into food. The leaves are eaten by **deer** and **elk**, and dense thickets of trees create hiding cover for many kinds of animals. Elk also use this tree to rub the velvet off of their antlers. **Beaver** love to cut these trees down to eat the bark and build lodges and dams with the wood.

People: Because it grows big fast, it is an important tree for people. It is very strong and highly shock resistant as a beam or post. Large logs are valued for cabinets, furniture, flooring, and pallet lumber. Small logs are used for carved wooden toys, or firewood or pulp to make paper. Its drawback is that it can decay when in contact with weather and soil.

How does it help the environment?: Alders shed their leaves while they are still green and therefore return many nutrients directly into the soil. The leaves capture nitrogen from the air and send it down to bacteria-filled packets in the roots. There, the soil is fertilized by the tree. Because of this ability, foresters plant red alder in Douglas-fir forests to help soil recover from diseased trees and for a natural fertilizer. Roots of the trees also hold banks and soil in place reducing erosion.

Where it grows: Alder likes to “get its feet wet”. Everywhere it grows, it is associated with water. Alder like cool, moist sites, and you will often see them line the sides of the rivers, streams and creeks of Oregon in the lowlands. They can grow in dark forests or on open sunny hillsides.



Common name: Western Hemlock



Scientific name: *Tsuga heterophylla*
(pronounced SOO-GA HET-ER-AH-FIL-UH)

Cool tree facts: Western hemlock is Washington's state tree. 'Tsu-ga' is the Japanese word for "tree", and heterophylla refers to the different sizes of leaves. Strong winds can easily topple this tree due to its shallow roots.

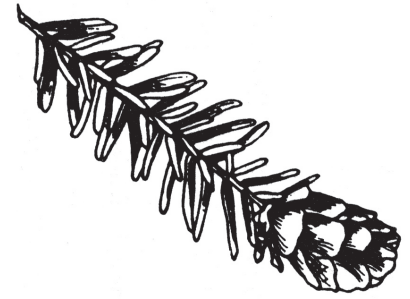
Size and appearance: It can grow to a height of 200 feet tall and 4 feet in diameter. This is a triangular-shaped tree with drooping branches. The very tip top of the tree flops over. Because of these unique features, western hemlock is easy to identify from a distance.

Bark: The bark is very thin, under 1 inch thick and scaly, ranging from a brown to gray color. The inner bark is dark red with streaks of purple. Because of its thin bark, bugs and disease can easily attack it.

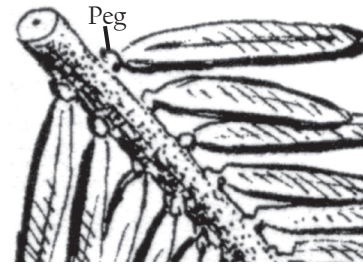
Leaves/needles: Leaves are flat needles of several different sizes ($\frac{1}{4}$ to $\frac{3}{4}$ inches long) and have rounded tips. They are a yellow to green color on the top surface and have 2 white lines underneath. Needles extend around the entire surface of the twig, looking similar to a bottle brush. However, in most cases of western hemlock, the needles look like they have been flattened.



Fruit/seeds: Hemlock have small, woody, reddish-brown, egg-shaped cones (about 1 inch long). The cones have numerous thin, smooth scales and hang at the end of the branches. Some trees have large numbers of cones all over the tree.



Branches, twigs and buds: Twigs are slender, flexible, and are not smooth due



to pegs on the surface of the branches. Pegs are small and may be hard to see. Buds are practically invisible until just prior to new needle growth.

Wildlife: **Elk** and **deer** eat western hemlock in coastal Oregon. In the Oregon Cascades, **mice** eat the cone's seeds. **Black bears** eat the sweet inner bark. **Rabbits** clip off the main stems of western hemlock seedlings. Western hemlock trees provide hiding and protective cover for many wildlife species. Many **birds** make holes and nest in the standing trunks of rotting wood.

People: The wood is great for building purposes (plywood and boards), and it makes excellent pulp for paper production (newsprint, books, magazines and tissue paper). Gym floors are often made of hemlock because the wood hardens with age. It is commonly used for doors, window frames, parts of staircases, and ladders.

How does it help the forest environment?: Because they are evergreen, their leaves allow them to photosynthesize and produce oxygen year round. They provide shade to plants and animals. As dead trunks decompose, they add nutrients to the soil.

Where it grows: Western hemlock seeds can sprout easily and grow on the decaying wood of stumps and nurse logs. This gives hemlock a growing advantage over most other conifers in the area. They love to grow in rainy and foggy areas and do not mind growing in the shade.

Common name: Vine Maple



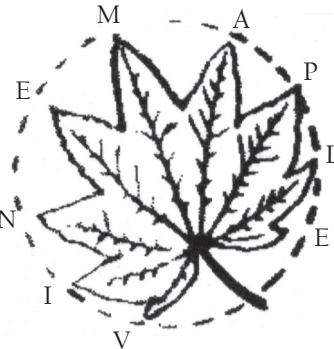
Scientific name: *Acer circinatum*
(pronounced AY - SER SER - SIN - AY - TUM)

Cool tree facts: The crooked look of the tree and the fact that it can occasionally grow along the ground adds to the 'vine' in its common name. 'Acer' is the Latin word for a maple tree; "circinatum" refers to the circular shape of the leaves.

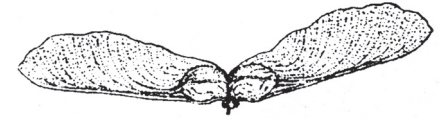
Size and appearance: These 'trees' are actually more like shrubs. They are never more than 35 feet tall and may have more than one trunk coming from the same location in the ground.

Bark: The bark is very smooth and generally has a pale green color when young, turning reddish-brown or gray with age. It is thin, smooth, and may have shallow cracks at the base of the tree when older.

Leaves or needles: Leaves are oppositely arranged on the twig. In the fall, they turn bright red, orange and yellow and eventually fall from the tree. The leaves are circular, usually have nine lobes or points around the edges. You can remember this by using the lobes to spell out: V-I-N-E-M-A-P-L-E



Fruit/seeds: The winged seeds are called samaras (SUH-MAHR-UH) and they look like a helicopter coming in for a landing when they drop from the tree. When the seeds are young, they are rosy red and eventually brown with age. They are joined in pairs forming a 'V' shape. Flowers are small, and reddish or purple.

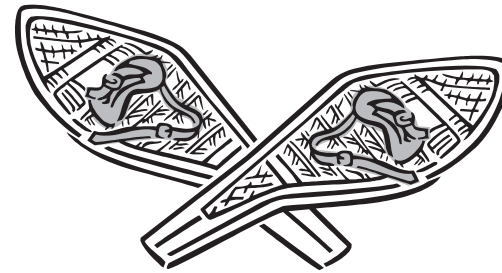


Branches, twigs and buds: The twigs and branches grow opposite from each other. The surface of the twigs is very smooth and colors can range from green to brown to red. Buds are dark red and are found at the end of the twig in pairs and look like deer hooves.

Wildlife: Deer and elk love to eat the leaves of vine maple. Birds and small mammals enjoy the seeds.



People: *Historically*, American Indians used vine maple wood to frame scoop nets for catching salmon and to make bows, snowshoes, cradle frames, firewood, and cooking tools. The bark was boiled to make a tea for colds. Branches were used for cradle swings. *Today*, the trunk of this little tree just does not get big enough for the lumber industry. However, it is prized for its spectacular fall colors of red, yellow and orange, and is therefore planted for landscaping in gardens and around homes to make yards and parks look pretty.



How does it help the forest environment?: As leaves drop from the tree, they decompose and add nutrients to the soil. They provide shade to plants below and release oxygen through photosynthesis.

Where it grows: This tree likes moist or wet areas. It grows generally under other trees where some sunlight can filter through to the forest floor. It can also grow in openings and forest edges with direct sunlight. It sprouts in huge numbers in recently logged or burned areas.