



# City of Bellevue Tree Tour: Chism Beach Park







# Bellevue Neighborhood Tree Ambassador Program

This tree tour was developed by one of Bellevue's Neighborhood Tree Ambassador volunteers. The goal of the Neighborhood Tree Ambassador program is to help build community support for trees in Bellevue.

Trees are an important part of our community; they provide significant health and environmental benefits. Trees:

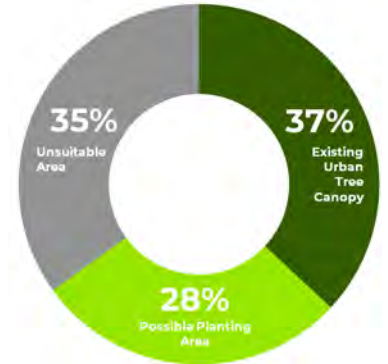
- Remove pollutants from the air and water
- Reduce stress and improve focus
- Lower air temperature
- Pull greenhouse gases from the atmosphere
- Reduce flooding and erosion caused by rain

Bellevue has a goal to achieve a 40% tree canopy across the entire city. As of 2017, we are at 37%. Around two-thirds of Bellevue's existing tree canopy is in residential areas. By preserving and planting trees in residential areas, Bellevue's community members can make a big difference in helping to reach the 40% tree canopy goal. If no trees were lost, by planting just one tree, each household would help Bellevue reach its 40% canopy goal by 2050. Think what planting two or more trees might do!

For more information about trees in Bellevue or the Neighborhood Tree Ambassador Program, please visit [Neighborhood Tree Ambassador Program](#).

If you have questions or would like to share feedback about this tour, please email: [trees@bellevuewa.gov](mailto:trees@bellevuewa.gov).

## URBAN TREE CANOPY POTENTIAL



## QUANTIFYING ECOSYSTEM BENEFITS



**AIR  
QUALITY**

**\$39 million**  
in pollution  
removed



**STORED  
CARBON**

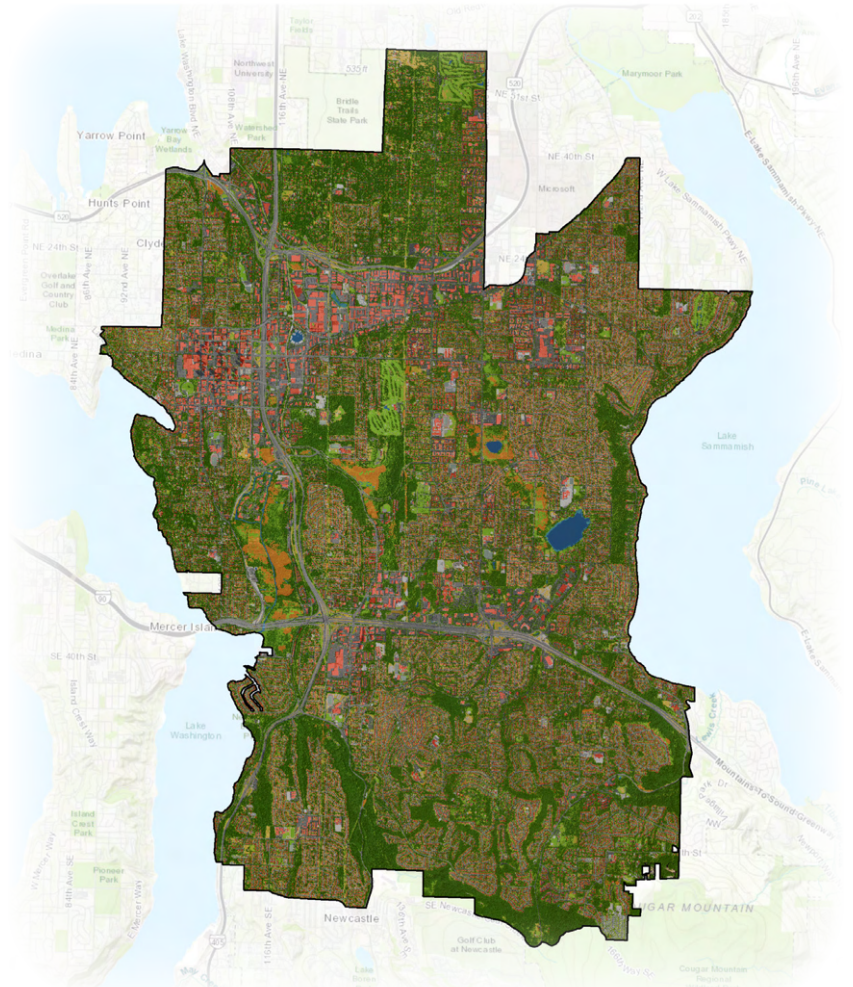
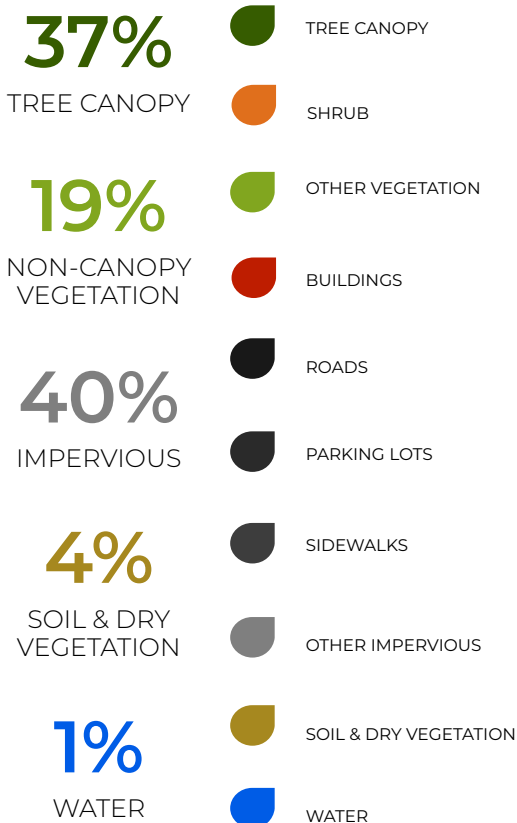
**\$51 million**  
in carbon  
sequestered



**STORM  
WATER**

**\$2.8 million**  
in infrastructure  
avoided

## LAND COVER



Note: Land cover percentages AND urban tree canopy percentages are based on total area as opposed to land area.



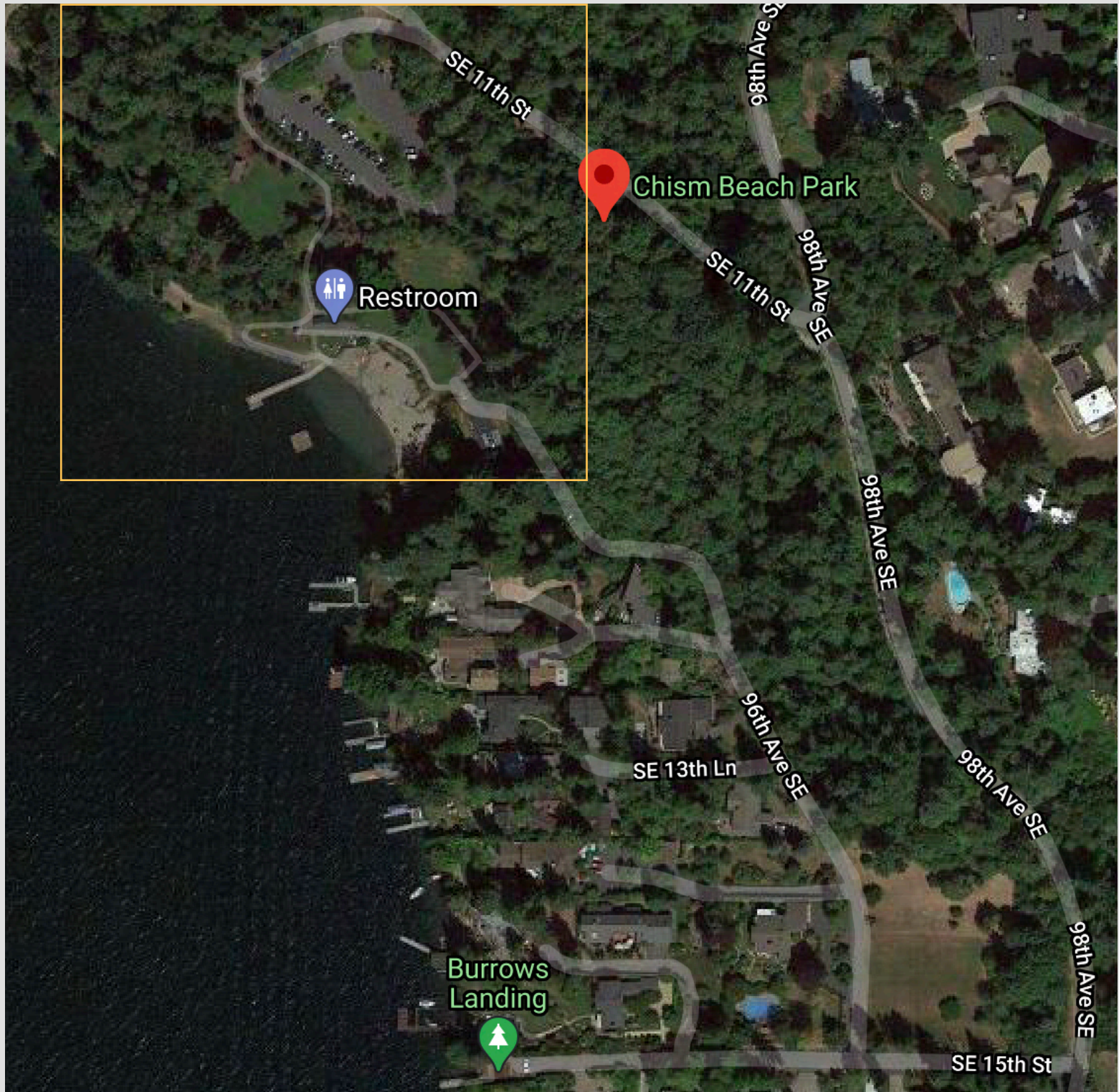


# Self-Guided Neighborhood Tree Tour: Chism Beach Park

Neighborhood: Chism Beach Park, located at 9600 SE 11th Street

Starting Point: Chism Beach Park, parking lot.

Welcome to Chism Beach Park located in West Bellevue on the shores of Lake Washington. This park covers 18 acres including forested trails, grassy picnic areas, restrooms, a sandy beach, a children's play area, and some of the most beautiful trees in Bellevue! If you are staying awhile consider bringing beverages, a picnic, or snacks - there are no concessions. Accessible Parking Spaces are available in the main parking lot and using an access road to the lower beach area. Dogs are allowed most of the year but are not allowed in the park or water recreation areas from June 1 through September 15. Paths in the park are paved, pebbled, or maintained peat trails. The tree tour is focused on the area outlined in the yellow. Chism Beach Park is a great park to explore and enjoy! Have a great visit!







# Self-Guided Neighborhood Tree Tour: Chism Beach Park

Neighborhood: Chism Beach Park, located at 9600 SE 11th Street

Starting Point: Chism Beach Park parking lot.

This self-guided tree tour will stay mainly on the paved trails except where indicated. The main segment of the loop tour (yellow) is paved, less than 1/2 mile, but includes a moderate hill down to the shoreline then back up to the parking lot. Each stop is described on one page of the tour. The dark green text boxes provide information about the tree. Information about wildlife interactions with the tree type is provided in the black text boxes. Bright green text identifies the subjects in photographs. The tour will include some rest stops and side trails for those who want to explore the park a little further. At a rest stop, the tour provides some points of interest in Bellevue's history or some helpful hints in tree identification to enjoy while you rest and contemplate the scenery.

Remember, if each Bellevue household planted just one tree, this will help Bellevue get to our canopy goal of 40% by 2050! Which of these tree types, would you plant? It might be hard to choose a favorite, consider planting several! 🌲🌳🌴🌱 If you are still deciding, come back to visit our spectacular trees again soon!





# 1 Green Ash (*Fraxinus pennsylvanica*)



The first stop on our tree tour of Chism Beach Park is just at the end of the parking lot and a true beauty - the green ash (*Fraxinus pennsylvanica*). The grey bark with diamond shaped fissures is characteristic of this ash tree. Native to midwestern North America, it is the most widely distributed of the ash trees. Due to its beauty, fast growth, and tolerance to urban environments, the green ash is a popular ornamental tree. Like many ash trees, however, the green ash is threatened by the emerald borer beetle. The emerald borer has already killed hundreds of millions of ash trees. Ash trees have lower tannin levels than other trees making them more susceptible to the emerald borer. Some green ash trees may have higher tannin levels protecting them from this aggressive beetle. Let's hope this ash has high tannin levels!



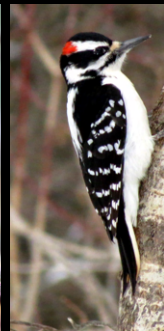
The green ash provides an important food source for many wildlife. When close to ponds, the dropped leaves are a favorite meal of the tadpoles of native frogs. You may see the eastern cottontail or white-tail deer making a snack of the distinctive grey bark. When reachable, deer also devour the tender leaves of the ash. Wood ducks and finches like the seeds of the green ash. The seeds are found encased in the fruit of the ash tree called *samara*. The paper-thin quality and shape of the samara allows the wind to carry the fruit with their single seed far from the parent ash tree. As you take the tour, are you able to find any samara a wood duck or finch might enjoy as a snack?



## 2 Quaking Aspen (*Populus tremuloides*)



At the end of the parking lot, follow the paved trail to the right. This path will wind down to beach. Upon entering the trail, you will be in a grove of **quaking aspens** (*Populus tremuloides*). Native to North America, the aspen is the most widely distributed tree on the continent - found from Canada to Central Mexico. The bark is relatively smooth, colored greenish-white to gray, and marked by thick black horizontal scars and prominent black knots. The dark green leaves are nearly round. Listen for the characteristic whispering of these leaves as a soft breeze passes. The aspen spreads by its roots to form colonies. Since their root system is often below the fire line, Aspen colonies are able to survive fires. One of the oldest Aspen colonies, located in Utah, is estimated to be 80,000 years old.



Do you see any parallel vertical scars on the bark of any of these aspens? Vertical scars are a sign that an elk used its front teeth to strip off the aspen bark for a quick nibble.

The winter bud of the quaking aspen is also a favorite meal of grouse and **quail**. Beavers and rabbits like to eat the bark, foliage, and **buds**.

The **Downy woodpecker** is known to frequent aspen trees and commonly evacuates a cavity to form a nest. It is the smallest woodpecker in North America. Can you find a cavity in one of these aspens where a Downy Woodpecker might build a nest? This woodpecker does not migrate so you might find one in its nest year-round.



## 3 Coastal Redwood (*Sequoia sempervirens*)



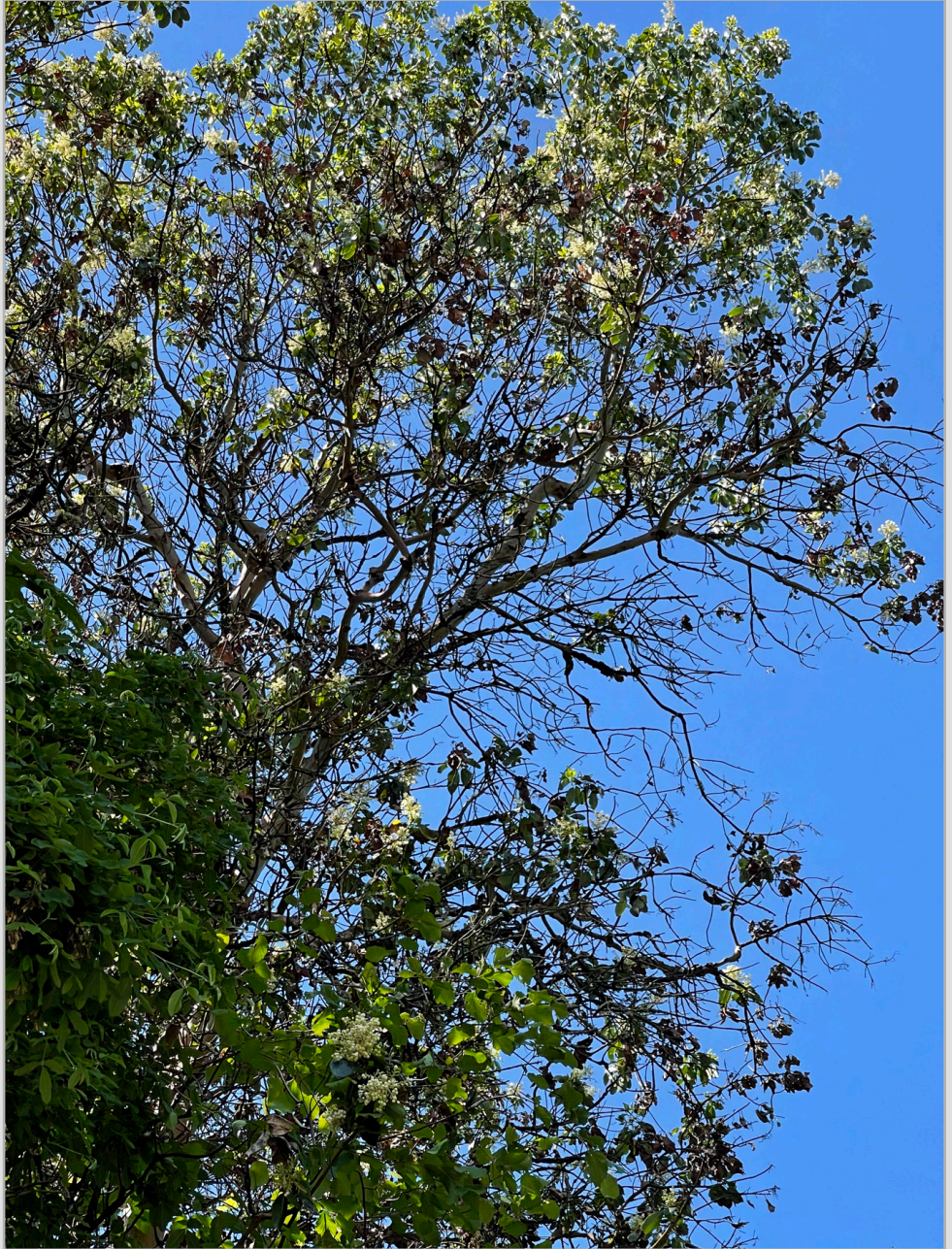
Continue on the trail towards the beach making a gentle left. As you round the curve, you will find a majestic tree on your left - a beautiful **coastal redwood** (*Sequoia sempervirens*), also known as a California redwood. These trees are native to North America; they are amongst the oldest, largest, and tallest living things on earth. The tallest redwood on record, named Hyperion, is estimated to be 380.1 feet tall with a trunk measuring 15.9 feet in diameter. Hyperion is estimated to be over 914 years old. The oldest known California redwood is over 2000 years old. Many feared that one of the oldest groves of redwoods perished in the 2020 California wildfires. Fortunately the tall giants survived. The thick fibrous bark of the redwood is extremely fire resistant and helps it survive to a ripe old age.



Standing close to a coastal redwood on an early morning of summer is the best opportunity to catch a glimpse of the elusive and endangered **marbled murrelet**. In the same family as the puffin (*Alcidae*), the marbled murrelet is a seabird. They spend most of their time at sea but return to the forest in the summer to nest. Its nesting habitat is limited to the coastal old-growth forests of the Pacific Northwest. Unfortunately only 5% of this habitat remains. Murrelets fly in both air and water. Like penguins, they fly underwater to catch fast schooling fish which is their main food source. Murrelets pair for life, laying one precious egg each year. In Washington, murrelet sightings are rare. Their numbers decline by 4.4% per year due to the loss of old growth forests.



## 4 Pacific Madrona (*Arbutus menziesii*)



As you approach an intersection on the path, look upward towards the sky and notice the canopy of the exquisite **Pacific madrona** (*Arbutus menziesii*). The madrona is native to the western coast of North America. It is an evergreen tree with distinct red-orange bark which peels away revealing smooth light green new bark. This tree can grow quite large: the largest known madrona measured 125 feet tall and 25 feet in circumference. Despite being fire resistant, this tall beauty perished in the 2016 California Soberanes Fire started by an illegal campfire. In 2020, a madrona in Douglas, Oregon made its debut on the National Register of Champion Trees standing 96 feet tall and 28.83 feet in circumference. Port Angeles is the current home of Washington's tallest madrona at 85 feet tall.



The madrona is important for wildlife. Honey bees are attracted to the sweet scent of the flowers in the spring. Rufus and **Anna's hummingbirds** feed on its blossoms. Red-breasted sapsuckers and hairy woodpeckers evacuate cavities to build nests in its large trunk. A **great horned owl** or barred owl might make a home of an existing cavity. When the flowers turn to bright red berries in the fall, they provide a food source to many other birds and small mammals. The banded-tail pigeon, varied thrush, American robin, house finch, Stellar jay, cedar wax-wing, and Bewick's wren are native birds with an appetite for the berries. What a list! It is not surprising that the madrona is one of the top 30 trees for food source for wildlife.





## 5 Red Alder (*Alnus rubra*)



After gazing at the madrona you may need a break to take in all the natural beauty around you. Continue down the path a little farther, to the right you will find the perfect bench for a rest stop. Behind the bench and reaching overhead is a **red alder** (*Alnus rubra*). The red alder is native to western North America and is amongst the largest alders in the world. Notice the beautiful mottled grey bark. The leaves of the red alder are gently curved at the edges distinguishing the red alder from other alders. The flowers, called catkins, are reddish in color and dangle from the branches in early spring. In the fall when the alder leaves turn a spectacular yellow, the female catkins develop into woody cone-like fruit. The membranous seeds, found between the wood bracts, are shed in late autumn then carried off by the wind.



Can you hear any fluttering overhead or a distinctive rising twitter of a bird song? There may be a **pine siskin** close by. The pine siskin is in the finch family but can be distinguished by its slender beak, pointed wings, and notched tail. While they usually nest in conifers, flocks of pine siskin forage in trees like the red alder. Their foraging is active - at times they can be seen hanging upside down to reach a delicious seed. They eat the seeds of alders, birch, spruce, and other trees. Despite their noisy activity, you need to look carefully to see one, their brown-yellow coloring provides effective camouflage in the leaves of the alder.

As take a you rest and listen for a pine siskin, on the next page there is little information about Bellevue's history.





## 6 Rest Stop: Bellevue history

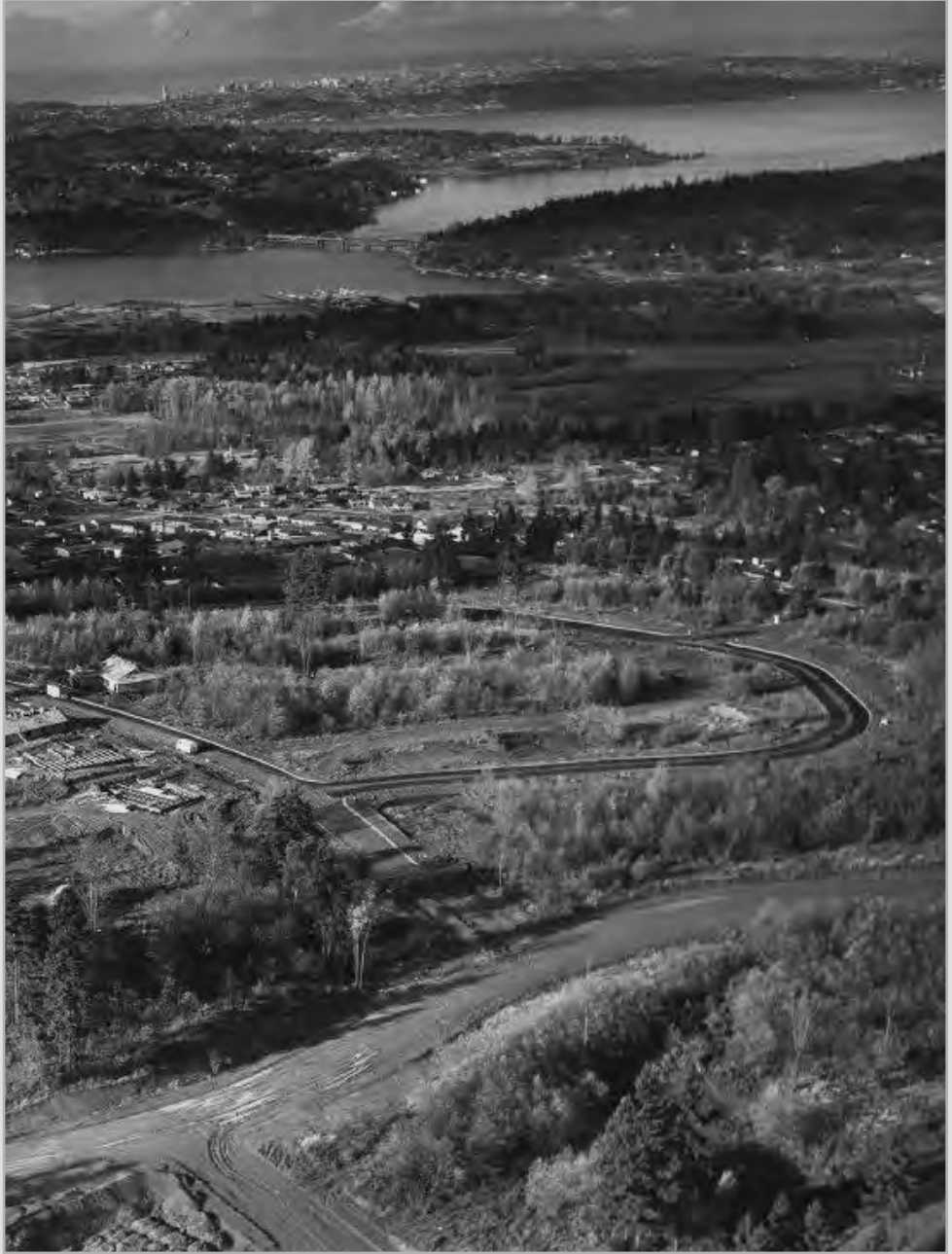


Before the opening of the Evergreen Point Floating Bridge in 1963, Bellevue was largely considered a "bedroom community." One attraction was **Bellevue Square**. Opening in 1946, Bellevue Square was the first suburban shopping mall in the Pacific Northwest. 1947 brought the first Bellevue Arts & Crafts Fair - organized at Bellevue Square under the central large **madrona tree**. To get to these attractions, you would cross the East Channel Bridge on the I-90 to be greeted by a **traffic sign** directing you to different cities in the region. With a population of 5,940, the city of Bellevue was incorporated on March 31, 1953. Six years later, the city installed its first traffic light on Main Street and Bellevue Way! By 1960, Overlake hospital was completed and Bellevue Square was well on its way to be the destination for shopping.





## 6 Rest Stop: Bellevue history



The opening of the Evergreen Point Bridge brought further development to Bellevue. The 1967 photograph from Somerset showcases all the development during that time. What else happened in Bellevue in 1967?

- The first Bellevue Film Festival was held in the summer
- In September, daredevil, Evel Knievel, completes a publicity jump
- A band called "A Boy and His Dog" was started including band member Amy Wilson. The band was often joined by Amy's sister, Nancy who was 16 years old at the time. Amy and Nancy Wilson would form the band "Heart" later the same year.

1967 was also the year the Chism family donated the land which would become Chism Beach Park.





# 7 Giant sequoias (*Sequoiadendron giganteum*)



Did you enjoy the view at the rest stop? If you continue on the pebbled trail, you will be treated to identifying six more amazing trees! Taking the paved trail to the left will bring you to the loop back to the parking lot.

On the pebbled path, the first tree on the shoreline is a **giant sequoia** (*Sequoiadendron giganteum*). Hard to call this guy a giant but it is still a youngster. Giant sequoias can have a very long life and grow to a staggering size. The oldest known giant sequoia, named Muir Snag, was over 3,500 years old! The tallest one is the famous General Sherman located in Sequoia National Park standing at 274.9 feet tall and is currently between 2,300 - 2,700 years old. Now that's an old giant and, still growing! Later on this tour, you can learn more about identifying giant sequoias from other conifer trees.



The cones of Giant sequoia are serotinous, meaning the cones may stay attached to the branches for up to 20 years. A single tree may have 10,000 to 30,000 cones at one time - each year producing another 1,500 new cones! The cones may remain closed for many more years but contain an average of 230 seeds. The long-horned wood boring beetle, the **Douglas squirrel**, or fire may help the sequoia spread its seeds by opening the cone. Do you see any squirrels close by? Does it have an orange belly or a pure white belly? The Douglas squirrel has a pale orange belly and grey/brown coat. In a conifer seed taste test, however, the giant sequoia seed was found to be the least tasty by mammals which forage for hidden seeds, like the Douglas squirrel.



## 8 Peachleaf Willow (*Salix babylonica*)



Continuing along the pebbled path, just beyond the giant sequoia is a **peachleaf willow** (*Salix amygdaloides*). There are about 400 species of willows, some narrow-leaved shrubs are called osiers and some broader-leaved shrubs called sallows. Willows have lance-shaped leaves which are amongst the earliest to leaf out in spring and the last to drop their leaves in autumn. The flowers, catkins, start appearing in early spring sometimes even before the leaves. If day time temperatures are greater than 55 degrees for several days, it's time for sunglasses here and for a willow's leaves to come out! Leaf drop occurs in autumn when the length of the day is less than 10 hours 25 minutes. The leaves and bark of the willow contain salicin, the active ingredient of aspirin.



Do you hear a boisterous, "rapid fire, gurgling trilling, buzzy, sputtering, or bubbling," bird song? It might be the **marsh wren**. You may find these active little birds fluttering through marshy wetlands with each foot grasping a different twig or reed. You will recognize the marsh wren by its rusty brown back with black and white streaks. It also has little white eyebrow. These birds nest among the twigs or reeds in fresh water wetlands. Male wrens build up to 22 decoy nests in their territory. Females prefer males that demonstrate the most nest building prowess. The decoy nests not only attract females, they serve to protect against predators. With its dense foliage, a large willow may hold a number of the small football shaped wren nests hidden in its branches.



## 9 Coastal Redwood (*Sequoia sempervirens*)



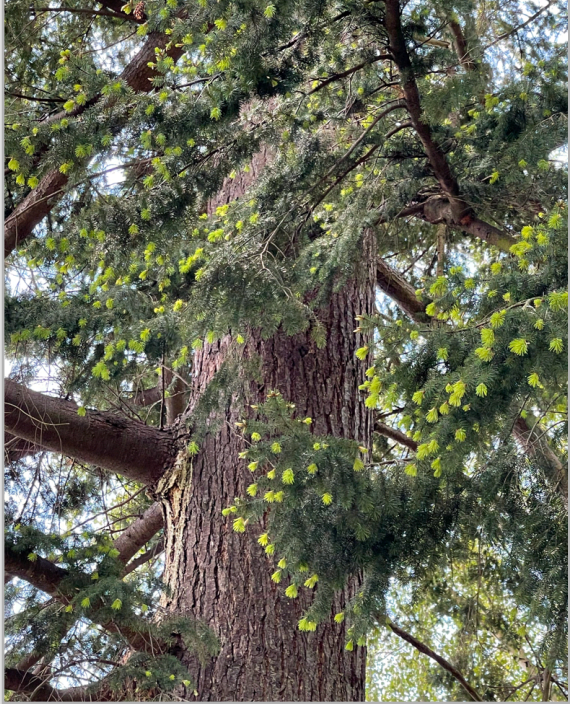
The next tree is a type you have encountered before on this tour. Do you recognize it? If you thought this tree is a **coastal redwood**, you are right! You can recognize this as a coastal redwood by its needles flatly arranged like a feather and its characteristic red bark. This one is younger than the first - the diameter of this tree is approximately 6 inches making this tree less than 10 years old. Can you imagine this tree in 100 years or even a 1000 years? A coast redwood can grow two to three feet per year. Hopefully, this one will become a tall giant - maybe even the start of a small redwood forest. The natural range of this tree is a 450 mile strip along the southern coast of Oregon to Monterey, California. They like foggy winters with 25-122 inches of annual precipitation. Do you think we have enough rain?



Redwoods are not an important food source for animals but is critically important to wildlife. Like the endangered marbled murrelet, the **northern spotted owl** needs the redwood for nesting. Unfortunately, this owl was listed as "endangered" in Washington State in 1988, and "threatened" federally in 1990. It is considered an "indicator species" which means its presence indicates a healthy old growth forest ecosystem. Currently, this owl population continues to decline and is near extinction. Habitat loss is the primary factor affecting the number of northern spotted owls. In January 2021, 42% of the critical habitat of this owl was lifted from Federal Protection. The lifting of this protection will likely result in the extinction of this beautiful creature.



# 10 Douglas Fir (*Pseudotsuga menziesii*)



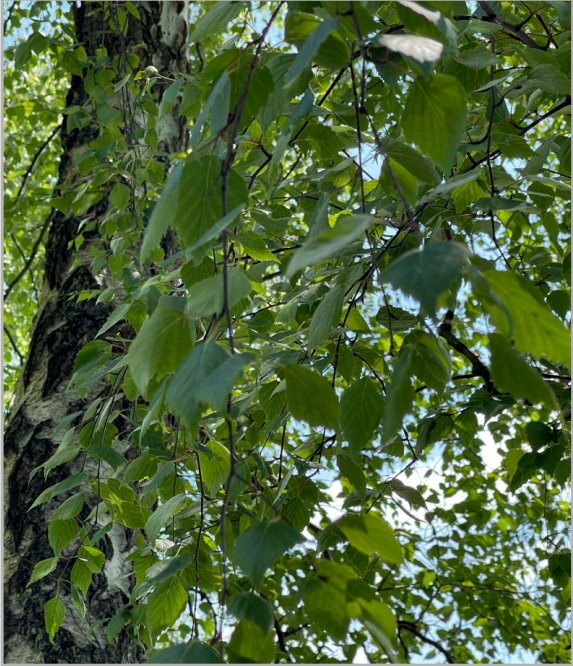
Taking the path right along the shore, you will find a gorgeous example of a **Douglas-fir** (*Pseudotsuga menziesii*). Despite its common name and being considered part of the pine family, it is not a true fir, pine, or hemlock. In dense forests, these trees grow very tall and can lose their lower branches. The thick brown bark of mature Douglas-fir can grow to 14 inches thick with deep vertical fissures. The thick bark allows this tree to be amongst the most fire-resistant tree native to the Pacific Northwest. The flat single 2 - 4 cm needles completely encircle the branch. Unlike true fir cones, the Doug-fir cone hangs down from the branch. The cones have distinctive scales with three-point bracts above each scale resembling the tiny feet and tail of a little mouse.



Douglas-fir seeds are an important food source to many small mammals which consume an estimated 65% of the dropped seeds. The Douglas squirrel or pine squirrel, and the **Western grey squirrel**, both hoard the cones but also eat the cones, inner bark, shoots, and needles of the Douglas-fir. Western grey squirrels, the largest of the native tree squirrels, have a silver-grey coat, a pure white underbelly, and a large bushy tail curved upright in an "S" shape. When on alert, the Western grey squirrel spreads its tail overhead like an umbrella, shielding it from its predators.



# 11 Silver Birch (*Betula pendula*)



A little further on the path you will see a magnificent **silver birch** (*Betula pendula*) with its delicate branches reaching out towards the water. Commonly known as European white birch, it is native to Europe and parts of Asia but introduced to North America. The birch is considered invasive in the states of Kentucky, Maryland, Washington, and Wisconsin. Young trees have smooth white bark which thickens and becomes dark, irregular, and rugged as it gets older. Do you think these trees are young or old? The leaves are about 2 inches long, medium green in the summer turning to a brilliant yellow in the fall. When there is a gentle breeze in the fall, the leaves drop like a sky full of incredible yellow confetti.

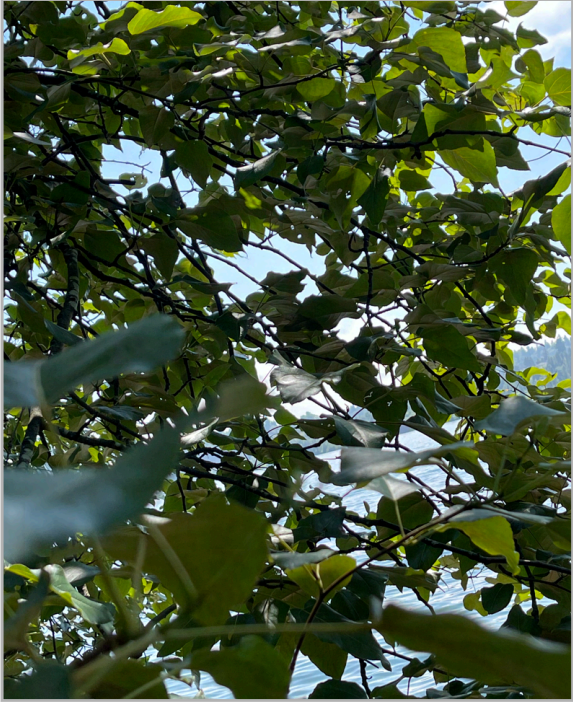


If you are lucky, you may see a **great blue heron** perched in one of these birch trees, motionless, carefully probing the water for signs of small fish or frogs. Great blue herons are the largest herons native to North America. They can tolerate our cooler winters and may even be year-long residents. Herons nest in trees close to lakes or wetlands, laying 3-6 eggs per year. Be careful, though, human disturbance may lead to nest failure.

More likely, you will see an **American robin** fluttering in the branches or singing its cheerful song. Insects are a part of a robin's diet. Over 500 species of insects use parts of the silver birch for food, making this tree a good place for the American robin to find a snack.



# 12 Black Poplar Tree (*Populus trichocarpa*)



This next tree will be the last for this section of the tour but the pebbled path continues further. Fortunately, this tree is a stunner! - it's a **black cottonwood** (*Populus trichocarpa*). Black cottonwoods are widespread in Iceland but they were imported from their native home of North America. Older black cottonwoods have thick grey fissured bark but are unfortunately short-lived. How old do you think this one is? The oldest black cottonwood, found Arden, Washington is estimated to be 350 years old. Cottonwood leaves are triangular in shape, dark glossy green on top, and grey-green on the underside. Each cottonwood flower produces many seeds covered with long cottony hair appearing like snowflakes floating in the air in spring.



When it's time for a spring cottonwood snowstorm, you may also see bald eagles nesting. Due to their large size and strong branches, black cottonwoods are a preferred nesting tree for **bald eagles**. The nest of the bald eagle is the largest of any North American bird. Pairs of bald eagle use the same nest every year. They will add to this nest throughout the summer as the new chicks grow! Adult eagles often perch in a nearby tree to defend its nest from intruders including other eagles. If an intruding eagle ignores warning calls, the eagles may attack each other resulting in "cartwheeling" - where the eagles lock talons, then roll back, tumbling downward separating just before hitting the ground. What aerial acrobats or... acro-eagles!



# 14 Rest Stop: Conifer Identification, Leaves

After spending a little time appreciating the black cottonwood tree, the tour brings you back to the rest stop at the beginning of the pebbled trail. As you return to the rest stop, you may want to take another look at the trees along the shoreline. The trees we identified include 3 broadleaf trees and 3 conifers. *Conifers* are a group of plants distinguished by their generation of cones. The three conifers along the shoreline represent the largest and tallest living trees on earth. In Western Washington, we are lucky enough to live in the biome known as **The Northwest Coniferous Forest**. A *biome* is a collection of plants and animals which have common characteristics due to the environment they live in. The conifer group has eight different families comprising 629 species. Conifers native to the Pacific Northwest are members of only three botanical families: pine, cypress (bakeri), and yew (pacific).

Let's take a moment to look at some identifying features of these conifers which are so important to our biome.



Examining leaves is one of the best ways to identify trees - it is also one of the most fun! Conifer trees are no different. The different native conifers may be distinguished by some of the following features:

- **Pine:** The pine family includes the species Douglas fir, Hemlock, Fir, Pine, Spruce, and Larch. Pine needles are softer in texture, longer, and bundled in bunches, called fascicles, of 2 - 7 needles each. Each fascicle is held together by what looks like a thin dark piece of tape around the base. The fascicles are usually arranged in a spiral around the tree branch or twig.
- **Cypress:** The cypress family includes cedars, junipers, and sequoias. Cypress leaves are scale-like, about 2 - 6 mm long, and occur in opposite pairs that intersect each other.
- **Yew:** The Pacific yew is the only native yew in the Pacific Northwest. Yew needles are flat, dark green on top, lighter green underside, between 3/4 and 1 inch long, without white stripes running the length on the underside of each needle.

Can you identify each tree type above by the images of their needles? From left to right: the **lodgepole pine** (*Pinus contorta*), the **Baker cypress** (*Cupressus bakeri*), and the **Pacific Yew** (*Taxus brevifolia*).



The images above are of conifer tree types we have already seen on this tree tour. Can you identify the tree types? A couple of these are a little tricky! From left to right:

- **Douglas fir:** This tree species is considered a pine but it is really not considered a true pine or fir. It has a distinct species name (*Pseudotsuga menziesii*). This tree has the soft, bottle-brush needles of a pine, which spiral around the twig or branch but the needles are attached singly, not in fascicles, like true pines. A pine species named a fir? Pretty tricky!
- **Giant sequoia** (*Sequoiadendron giganteum*): The evergreen needles are bluish-green, 3 - 6 mm long, scale-like with short, thick, sharp points, and arranged spirally on the shoots. It's in the cypress family! These leaves even look like cypress leaves!
- **Coastal redwood** (*Sequoia sempervirens*): The leaves are 5 - 25 mm long, flat, and arranged like a double-edged sword. They are dark green on top and have two blue-white bands on the underside. Leaf arrangement is spiral, but the larger shade leaves are twisted at the base to lie flat in a plane for maximum light capture. Though their leaves may be deceiving, the redwood is in the cypress family too! This tree is the sole living species of the genus *Sequoia* in the cypress family!

Did you get the tricky ones? This knowledge of conifer leaf identification will come in handy again shortly!



# 15 Himalayan cedar (*Cedrus deodara*)



When you are ready make your way back to the paved path and continue toward a grassy area on your right. You will encounter another graceful conifer. - this is a **Himalayan cedar (*Cedrus deodara*)**. Its name means "timber of the gods." Not surprisingly, it is often used in the construction of religious temples and surrounding structures. The wood is in high demand for building material due to its durability and fine-grain. The wood is also rot-resistant and often used to build houseboats. Native to western Himalaya, it usually grows at altitudes of 5,000 - 10,000 feet. The needles are arranged in clusters of 20 - 30 on shorter branches and singly on longer branches. The larger branches reach out horizontally but the side branches droop gracefully. Did you think this might be a pine? This cedar is actually considered a pine!



This cedar type provides nesting sites, cover, and food for many mammals and birds, such as the woodpecker. There are 11 woodpecker species that call Washington State their home, 9 species are year-round residents:

1. Downy Woodpeckers
2. Hairy Woodpeckers
3. **Northern Flickers**
4. **Pileated Woodpeckers**
5. American Three-toed Woodpeckers,
6. Black-backed Woodpeckers
7. White-headed Woodpeckers
8. Red-breasted Sapsuckers
9. Williamson's Sapsucker.

Found here only during breeding season are:

1. Lewis's Woodpeckers
2. Red-naped Sapsuckers



# 16 Douglas Fir (*Pseudotsuga menziesii*)



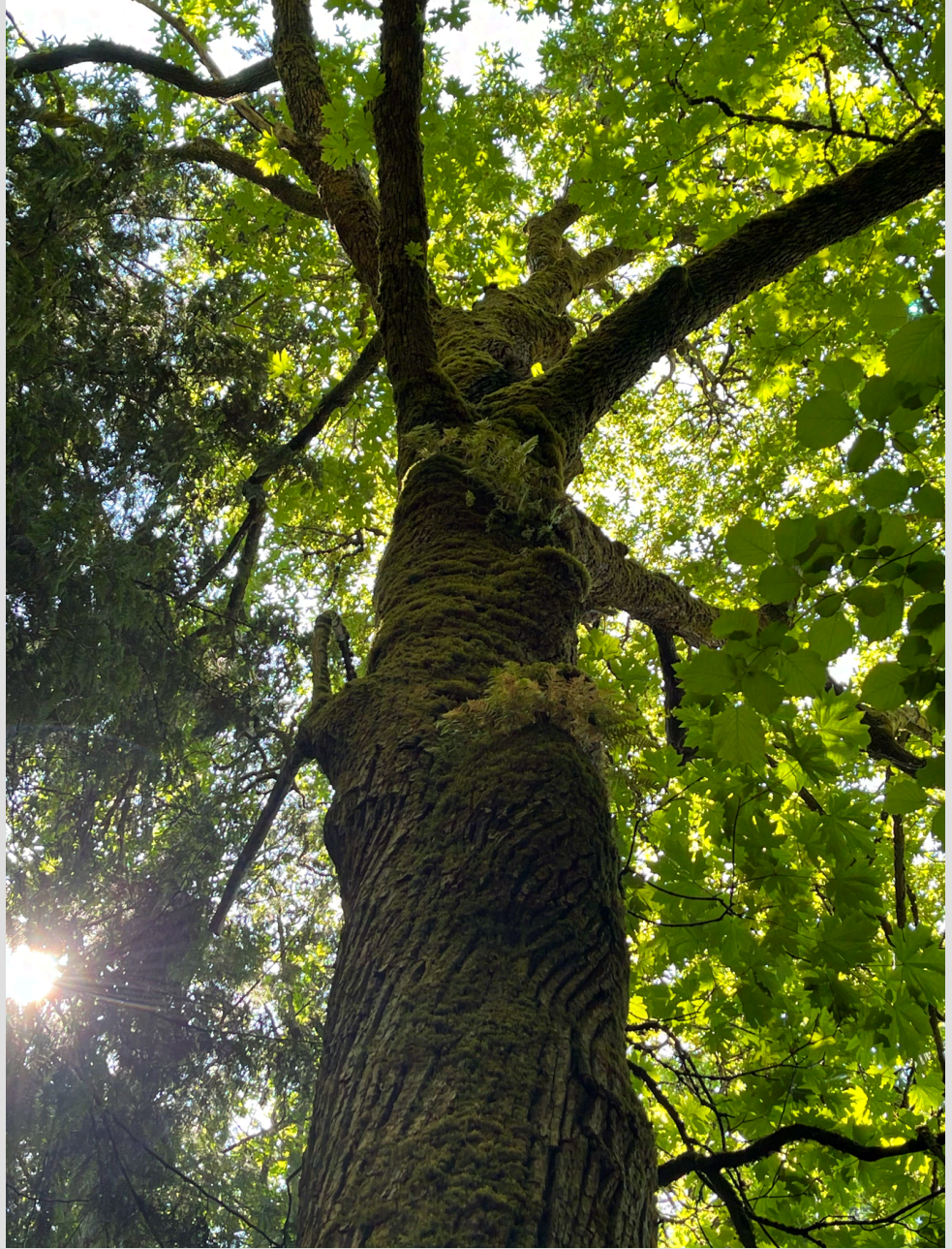
Continuing on the paved path, you will come across one of the tallest trees in the park. You have encountered this tree type before, can you identify it? It is a little harder to see the leaves way up high but for a hint take a look on the ground, can you find any cones? Do you see any characteristic cones of the **Douglas-fir** (*Pseudotsuga menziesii*)? Remember it has the distinctive three-point bract above each scale. This tree may be amongst the tallest trees in the park but the Douglas fir is also amongst the tallest trees on Earth. Following only Hyperion, the coast redwood, and a mountain ash located in Australia, a Douglas fir, named Doerner fir, is the third tallest tree in the world. Doerner fir, located in Brummit Creek, Oregon was last estimated to be 327 feet tall. Wow! that's tall!



The **red tree vole** relies almost exclusively on Douglas firs. These tiny creatures nest in the branches of Douglas firs at least 50 feet above the ground. Red tree voles obtain water from the tree by licking moisture off the needles. The Douglas' needles are their main food source. When eating the needles, they carefully remove the resin ducts along each edge of the needle. The ducts look like coarse, straight hairs. The vole will either discard the ducts or use them in their nest. You may not see one during the day, but if you see piles of **discarded resin ducts** on the ground, you will know a red tree vole is close by. These little guys often spend their entire lives in just one tree. Many vole generations may live in different parts of the same Douglas fir.



# 17 Big Leaf Maple (*Acer macrophyllum*)



On the path looking to the Southeast, you will find another very tall tree. Is it taller than the Douglas-fir at the last stop? If you are up for a short detour, take the access road up a little way to get a closer look at this big tree. It is a **big leaf maple** (*Acer macrophyllum*). You will also be treated to the experience of a beautiful mixed woods tree canopy. The big leaf maple is native to western North America, mostly near the Pacific coast. It has the largest leaves of any maple and can grow quite large. The current national champion of big leaf maples is located in Lane County, Oregon, is 119 feet tall, with an average diameter of about 12.3 feet. Syrup has been made from big leaf maple sap, but more typically from the sugar maple. Bigleaf maple syrup tastes different from sugar maple syrup - commercial interest has been limited.

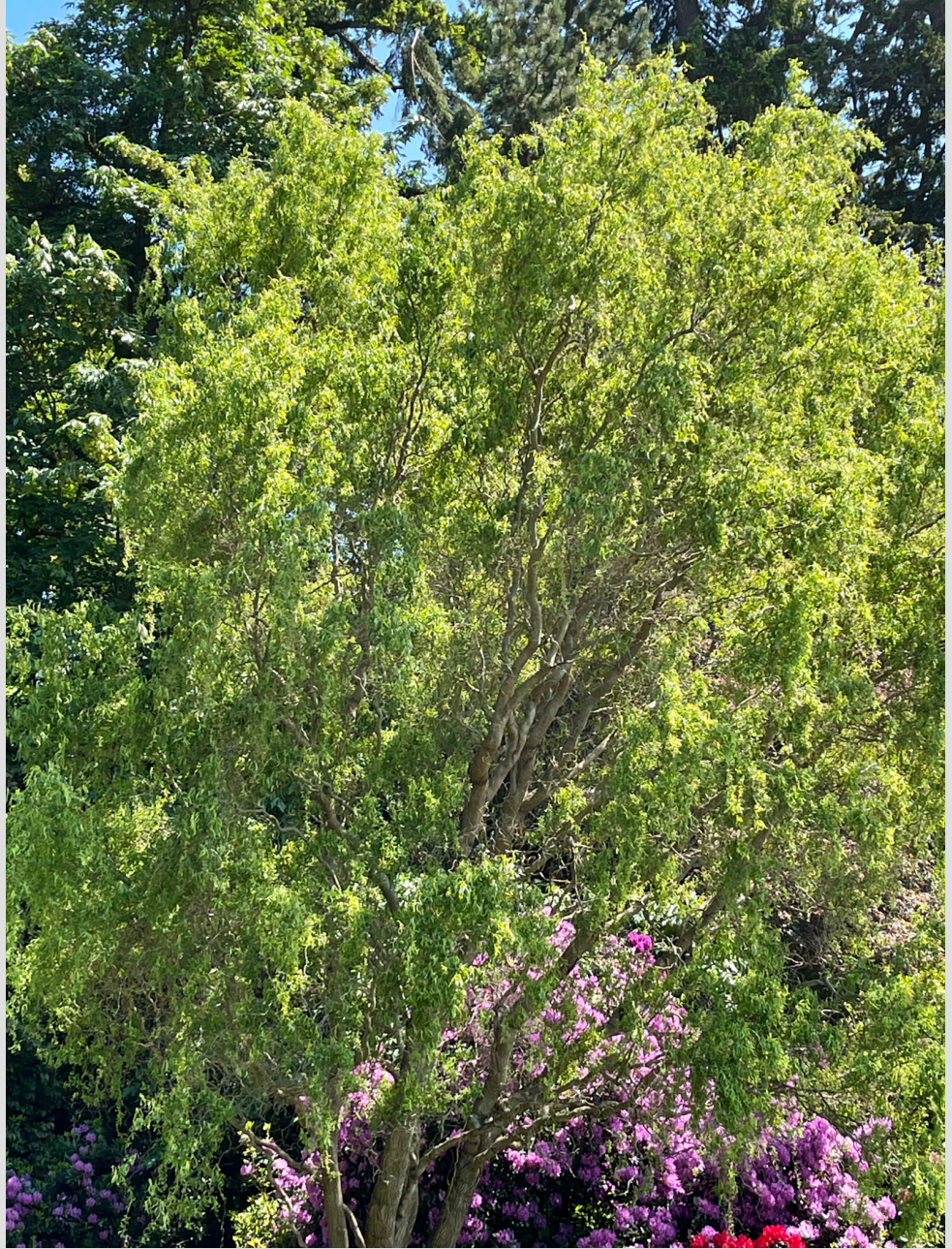


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Bigleaf maple is the preferred as habitat by the **barred owl**. Barred owls are native to eastern North America but their territory expanded to the Pacific northwest. The barred owl has begun to encroach on the territory of the endangered spotted owl. Barred owl habitat is not limited to extensive forest, their habitat semi-open wooded areas and large parks with mature trees. It is quite possible a barred owl lives in this park! Subspecies of this owl vary mostly by region. Typically barred owls in this area are mid-gray/brown with blackish or dusky brown streaks. Their calls are described as "spectacular, loud, and emphatic." Their usual call sounding like the owl version of: "Who cooks for you, who cooks for you all," can be heard up 0.5 miles away.



# 18 Corkscrew Willow (*Salix matsudana* 'Tortusa')



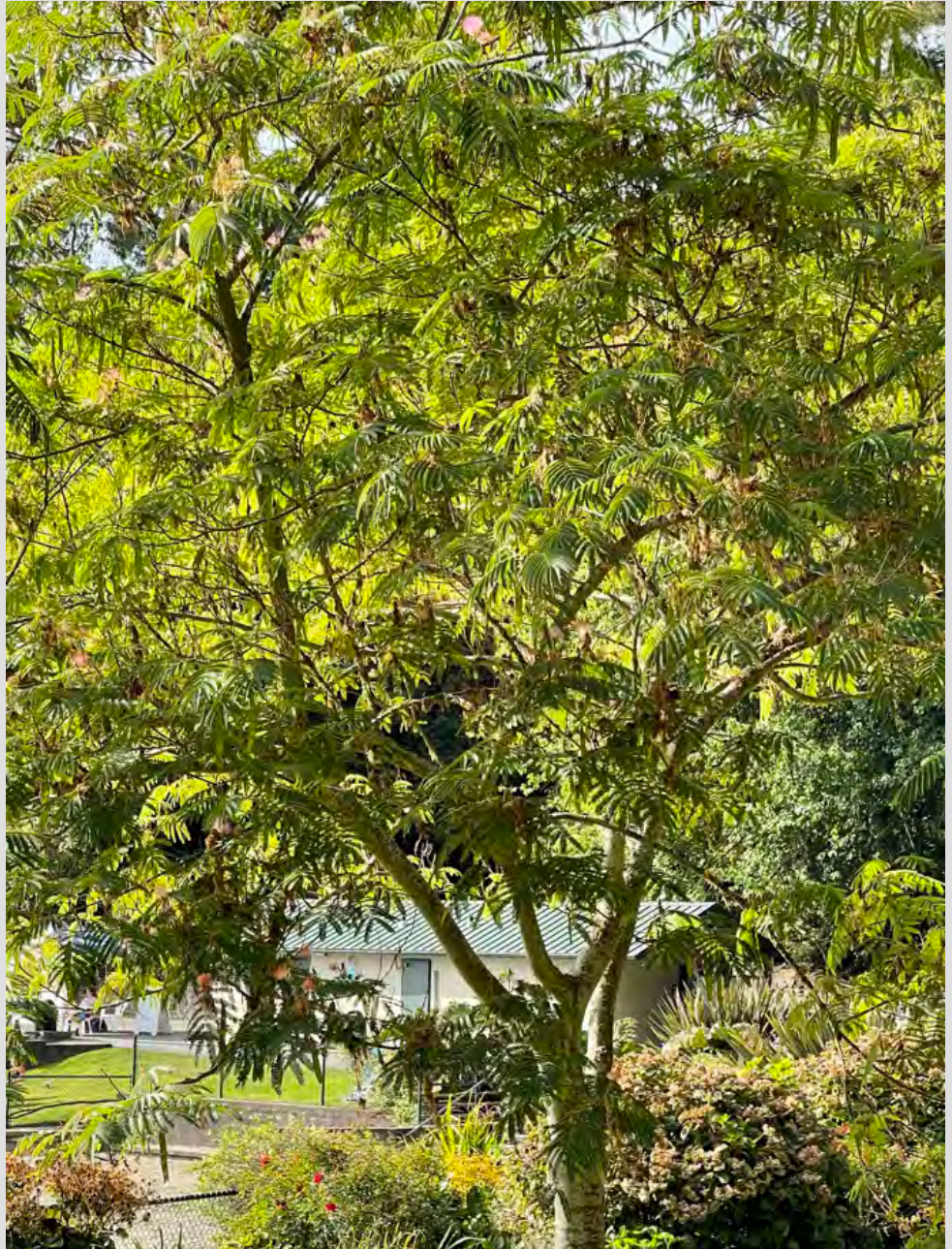
If you return towards the main park on the access road, you will notice a graceful tree on the grassy lawn to the left. It is the **corkscrew willow** (*Salix matsudana* 'Tortusa'). The cultivar "matsudana" is used synonymously with "*Salix Babylonica*" by many botanists. Willows are originally from Asia then imported to England where they became naturalized. The common name, Babylon weeping willow, derived from a misunderstanding to a reference in the bible. In the opening of Psalm 137, a willow tree is referenced in both English and Latin versions of the Bible. However, the trees growing along the Euphrates River during those times, were the *Euphrates poplar* tree. In the more recent versions of the New International Bible, the poplar tree is now referenced instead of the willow.



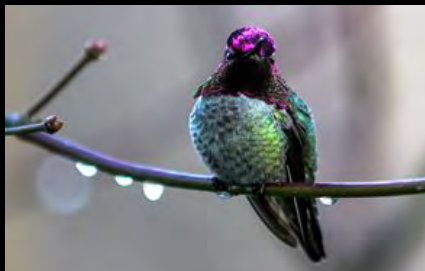
As this tour was being developed, the Seattle Times also published an article (June 6, 2021) on the **beaver** (*Castor canadensis*) and its importance to King County's ecosystem - particularly salmon. Just like the little guy pictured on the left, a photograph in the article depicts a beaver swimming with a willow branch. Using tree branches like the willow, along with other vegetation, rocks, and mud, beavers build their **lodges** and dams. The creation of wetlands by beaver infrastructure has led their designation as a "keystone species" signifying their importance to the ecosystem of other species. Creating wetlands usually involves beavers dams. The dams can be created by felled trees. A beaver can fell a tree 5.9 inches in diameter in less than 50 minutes! Amazing!



# 19 Mimosa Tree (*Albizia julibrissin*)



Back closer to the path you will notice a delicately branched tree with a slender trunk and broad crown. This is the **mimosa tree** (*Albizia julibrissin*). It is also known as a Persian or Chinese silk tree, Lenkoran acacia, and pink siris. This tree is native in southwestern and eastern Asia. In the United States, it is cultivated in California and Oregon but is considered invasive - spreading from southern New York, New Jersey and Connecticut, west to Missouri and Illinois, and south to Florida and Texas. The bark is dark greenish grey developing vertical stripes with age. Its leaves are large and frond-like. The leaflets bow downward and slowly close during the night and during periods of rain. Throughout summer the flowers bloom in bursts of pink silky flowers attracting bees, butterflies and hummingbirds.



Hummingbirds are particularly attracted to mimosa trees. There are two species of hummingbirds here in the Pacific Northwest: **Rufus** and **Anna's hummingbirds**. Rufus hummingbirds, found here in spring and summer, are russet orange in color. Anna's hummingbirds, which are brilliant green, stay in the region throughout the year even when there is snow on the ground! Anna's hummingbirds have adapted to be particularly resilient to our colder winters. In lean times, hummingbirds take a *torpor* which is a deep nap for hummingbirds. A torpor allows a hummingbird to reduce energy consumption to only its most essential functions. Hummingbirds also devote 5 times the brain-power than other birds to remember where the most delicious flowers are!



# 20 Bellevue History: "Life Cycle"



Heading uphill on the paved path, on your left will notice the amazing wood sculpture by Pat McVay, "[Life Cycle](#)." The sculpture depicts the life cycle of the Pacific salmon, from tiny hatchlings to adults returning home to spawn, producing new eggs, and restarting the cycle. The shape of the sculpture is in a helix; the flow of the sculpture returning to its origin just like the Pacific salmon.

The original sculpture was installed at Chism Beach Park in 1998. It was carved from the wood of a Sitka spruce tree. Over the course of many years, the sculpture endured sun and water damage. In 2014, the Bellevue Art Commission voted to have the original artist re-create the sculpture. Using the same concrete foundation, the artist used a piece of salvaged cedar wood instead of Sitka spruce to recreate the art. He applied a vapor barrier to the foundation and a marine finish to the wood to further protect it from damage. The re-created art was then installed in a more protected location in the park.

The wood of the Sitka spruce has high strength-to-weight ratio and regular knot-free rings. The wood is an excellent conductor of sound and is widely used to produce pianos, harps, violins, and guitars. It is also used in building sailboats and airplane wings. The Wright brothers' "Flyer" was built from the wood of the Sitka spruce. In World War II, when aluminum was scarce, the wood was used as a substitute to build aircraft.

The wood of the western red cedar was likely used in the re-created sculpture. Like the spruce it has few knots. The soft red-brown wood is valued for its distinct appearance with a tight straight grain. It has a high natural resistance to decay and is therefore used for outdoor construction. It is also used for the framing of lightweight sailboats and kayaks. Guitar manufacturer use this wood for its soundboards due to its dark warm resonance. What a great choice for this enduring outdoor sculpture!





# 21 Douglas Fir (*Pseudotsuga menziesii*)



As you continue on the path, as it starts to bend left, it will be hard to miss the small group Douglas fir on the right. Though the branches are hard to see, you can tell they are Douglas fir by the impressive trunk, purple-grey bark, and the distinctive cones on the ground near the trees. The diameter of the closest stump, approximately 24 inches in diameter, indicates it was approximately 40 years old when it fell. The very large Douglas at stop 16 is approximately 57 inches in diameter making it approximately 94 years old, and still growing. In certain conditions, particularly saturated unstable ground, Douglas fir are one of the most likely trees to fall. Their relatively shallow root system makes them even more susceptible in a wind storm. Since the root system of the stump is intact, it may have "fallen" for different reasons.



If you look more closely, you will see a number of cavities on the tree trunks. This tree stump has a relatively large cavity. A tree cavity may be created by humans, weather, disease, or wildlife. The placement of the cavity at the trunk close to the root system and the cavity size may affect the health of the tree. Do you think the cavity shortened the life of this Douglas fir? Woodpeckers, owls, chickadees, nuthatches and others are cavity nesters. In fact, half of all birds nest in cavities. Woodpeckers and some nuthatches excavate a cavity for nesting. The **red-breasted nuthatch** creates its nest 5 - 40 feet above the ground usually in a stump or snag. The entrance hole is usually about 1.5 inches in diameter. Which one of the cavities might be a red-breasted nuthatch nest?



## 22 Atlas Cedar (*Cedrus atlantica*)



On the left of the path a little further uphill, you will see a blue-green conifer; this is the **Atlas cedar** (*Cedrus atlantica*). The Atlas cedar is originally from Morocco. This tree is listed as endangered. There are four types of true cedar trees belonging to the genus *Cedrus*. Faux cedars like the Western and Eastern Red cedar belong to the cypress family. True cedars include the Atlas cedar, the Cyprian cedar, the Himalayan cedar, and the Lebanon cedar. Due to its striking blue-green color and beautiful form, it is often used as an ornamental landscaping tree. There is an Atlas cedar planted at the South Lawn of the White House. In branches of the White House Atlas cedar, President Carter designed and had built a tree house for his daughter Amy. The tree house design was self-supporting in order to preserve the tree.



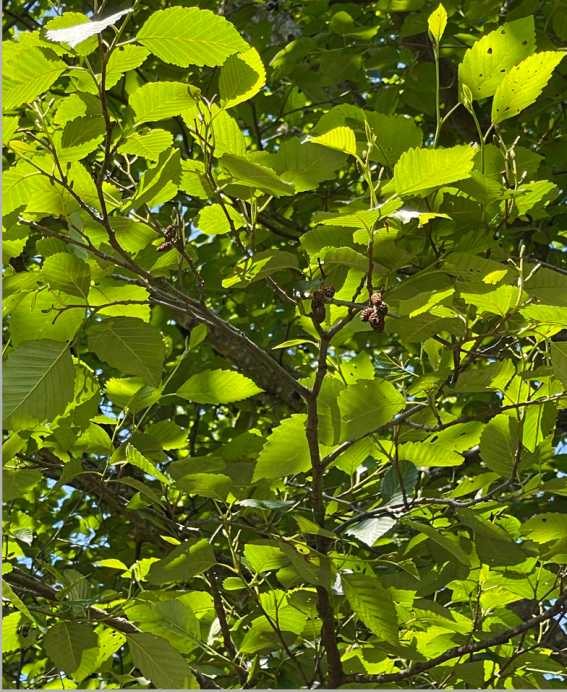
Since the Atlas cedar is originally from Morocco information on its impact on wildlife in North America is limited. There are reports of the **yellow-bellied sapsucker**, a species more prevalent in the mid-West and Eastern North America, drilling neat rows of holes in the Atlas cedar feeding on its sap. It also eats insects and tree tissue from the tree.

Given its name, you might think that the **cedar waxwing** is impacted by a true cedar like the Atlas cedar but, in fact, the cedar waxwing favors false cedars like the Western and Eastern red cedars. This bird feeds on the juniper berries of the red cedars which is how its name was derived. It may be found in the Pacific Northwest year-round. It may nest in the branches of an Atlas cedar as well as other trees.





## 23 Red Alder (*Alnus rubra*)



The next tree is a tree type seen earlier on the tour: the **red alder** (*Alnus rubra*). At stop 5, if you stopped at the bench, you were under the canopy of the first red alder of the tour. The red alder is native to western North America. It is largest species of alder in North America and one of the largest in the world. The tallest red alder, located in Oregon, stands at 105 feet tall. The bark is usually mottled, ashy-gray, and smooth, but when bruised or scraped develops a rusty-red coloration; this coloration is the reason for its name. Remember that to distinguish the red alder from other alders look for the slight curve at the very edge of its bluntly serrated leaves. Before falling in autumn, the leaves turn a bright yellow adding a spectacular brightness to our autumn colors in the Pacific Northwest.

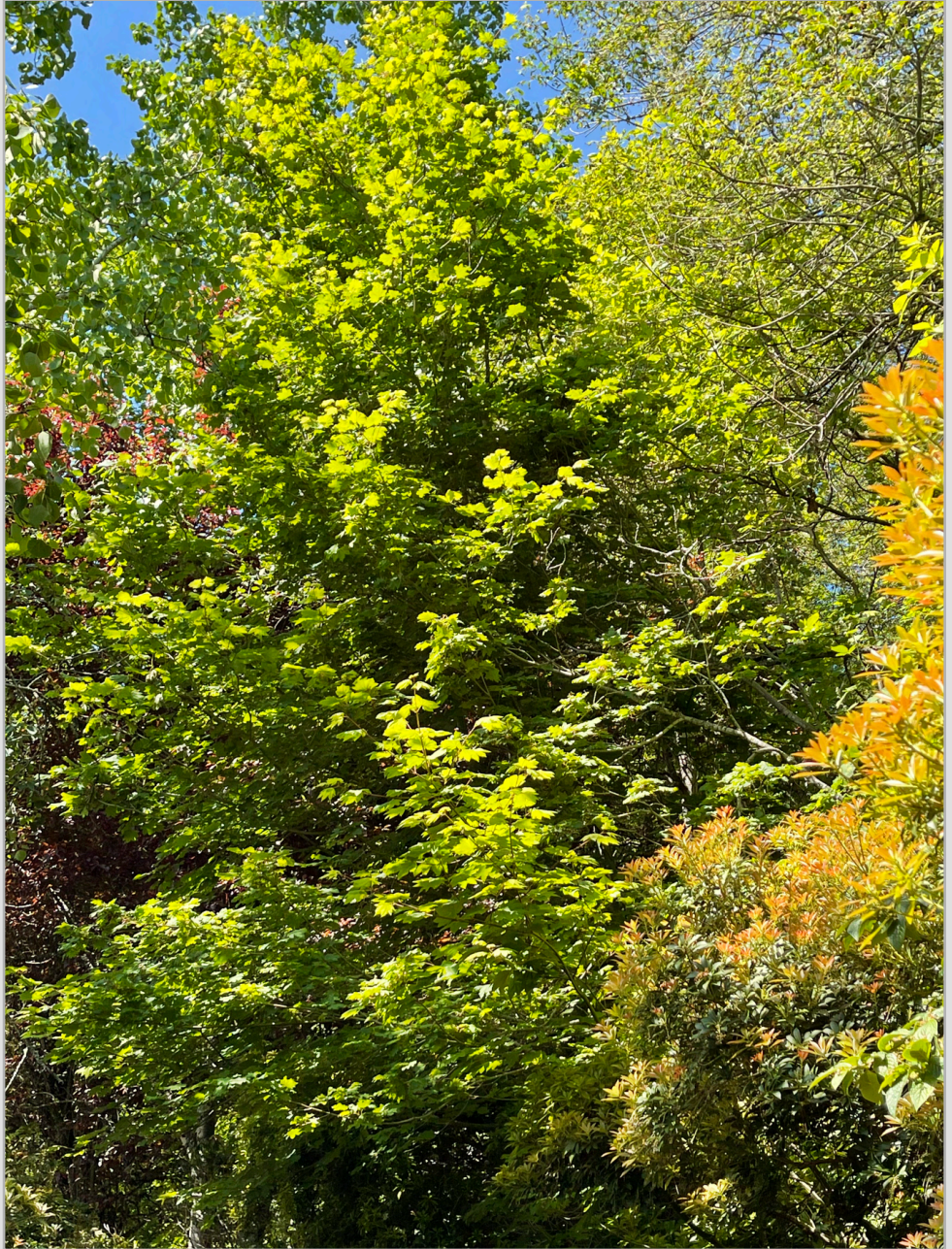


Like many finches, the **common redpoll** enjoys foraging the seeds of the red alder. The common redpoll is considered one of the "winter finches" which nest in the Arctic. They are the smallest of the red finches and are surprisingly tolerant of the cold arctic climate. From September to December, they migrate south to southern Canada and the northern United States where they may be seen through May. It is uncommon to see a common redpoll as far south as Washington State but keep an eye out during an irruptive migration, when birds migrate further south than expected. During a recent irruption, a common redpoll was seen as far south as New Mexico. 2020 will be remembered for many reasons: one unique event was the biggest irruption of northern finches!





## 24 Vine Maple (*Acer circinatum*)



The next tree, the **vine maple** (*Acer circinatum*), is native to western North America, usually within 190 miles of the Pacific coast. A member of the *Palmatum* family of maples, it is the only member of this maple group native to North America. This particular vine maple is typical of the tree: growing more like a shrub than a tree, with a height between 15 and 25 feet tall, and growing below a much taller forest. The leaves are nearly circular with 7-11 lobes and a thinly hairy underside. In the fall, the leaf colors range from yellow to bright red, making a brilliant display. Their relatively slender flexible trunk and branches allows the tree to bend easily, forming natural arches when the top of the tree touches the ground and roots. The vine maple is only maple capable of this arching called "layering."



During the summer, the vine maple's abundant foliage is a preferred food of deer and elk. Deer like to browse the growing branch tips of the vine maple. There are four subspecies of deer in Washington State: the **Rocky Mountain mule deer**, **Columbian black-tailed deer**, white-tailed deer, and the Columbian white-tailed deer. The Columbian black-tailed deer is the most common deer west of the Cascades to the ocean. They prefer brushy logged areas and coniferous forests. The black-tailed deer may be distinguished from the mule deer by the larger black marking on their tail. The black marking on the mule deer tail is limited to just the tip. The white-tailed deer are found in Eastern Washington. Their tail has a white underside and is the largest of the others.





## 25 Purple Leaf Plum (*Prunus cerasifera*)



Just a few steps further you will be drawn to the stunning red/purple leaves of the **purple leaf plum** (*Prunus cerasifera*). This tree is native to Europe and Western Asia but has naturalized to the British Isles and North America. The flowers are white to pink and are some of the first to appear in the spring. The edible fruit, called a **drupe**, ripens to a yellow or red color in July to September. The fruit is used to make jam and is a key ingredient in Georgian cuisine.

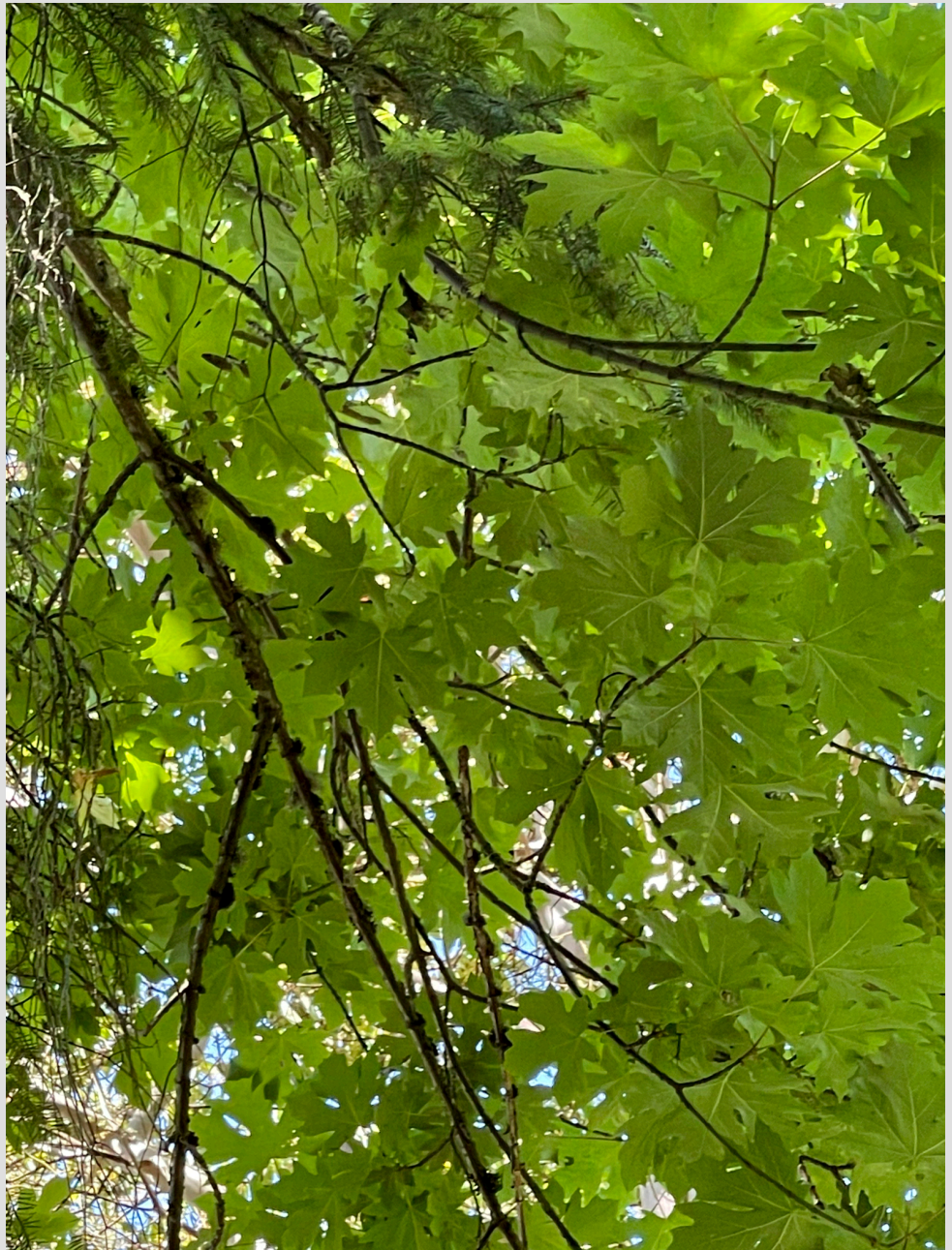
This is the last tree stop on the loop trail before returning to the parking lot. If you want to explore Chism Beach Park further, once you reach the parking lot look to the right and you will see the entrance to a maintained peat trail. Take the left trail for a short walk in the woods and some more beautiful trees.



The purple leaf plum is a larval host plant to the **Eastern Tiger Swallowtail** (*Papilio glaucus*) butterfly. The Eastern and Western tiger swallowtail are some of the most recognizable butterflies seen in Washington State. These butterflies are most commonly seen from May - September. They are quite large; their outstretched wings measuring up to 5.5 inches from tip to tip. The bottom edges of the back wings are especially colorful with bluish scales and one or more red spots. If you see a group of butterflies grouped together in a damp area, this is a rare sight called "**puddling**" when male butterflies come together to drink water containing sodium and amino acids which allow them to live longer.



## 26 Big Leaf Maple/Douglas Fir



The peat trail to the left borders the parking lot. About 100 feet on the left of the peat trail you will see a group of trees with a **big leaf maple** and a **Douglas fir** intertwined - indicative of the important relationship of these trees in the mixed forests of the Pacific Northwest. These trees are not usually intertwined but their combined presence in the forest is vital for the ecosystem. The big leaf maple is a coastal broad-leaved tree which grows predominately in the southern coastal western zone. When big leaf maples grow in a forest, shaded by other trees, it develops a tall trunk without branching until 1/2 - 2/3 up the tree. The dense canopy of big leaf maples allow only 1 - 2% of the light falling on the tree to reach the ground below. On a hot sunny day it is several degrees cooler in the shade of these glorious often moss-covered giants.



The peat trail gives you the experience of a mixed forest. The Pacific Lowland Mixed Forest occupies a north-south valley between the Coast Ranges and the Cascade Mountains. Elevations range from sea level to 1,500 ft. It comprises the 14,900 square miles of Puget-Willamette Lowland. The Puget Sound Valley is covered by glacial till, glacial outwash, and lacustrine deposits. Before cultivation, a dense coniferous forest dominated. Principal trees were western red cedar, western hemlock, and Douglas-fir. In the interior valley, the coniferous forest is less dense than along the coast and often contains deciduous trees, such as big-leaf maple, Oregon ash, and black cottonwood.



## 27 Pin Oak (*Quercus palustris*)



At the end of the peat trail, you are just up the road from the parking lot. Looking towards the lake you will notice two magnificent trees at the edge of the road in the parking lot. These are oak trees. The first one you will encounter is the **pin oak (*Quercus palustris*)**. The pin oak is native in eastern and central United States and in the extreme south of Canada. Young trees have a straight, columnar trunk with smooth bark and a pyramidal canopy, and are often covered with leaves year-round. By the time the tree is 40 years old, it develops more rough bark with a loose, spreading canopy. Unlike many oaks, the pin oak is a wetland tree developing a shallow, fibrous root system. They generally live no more than 120 years reaching a height of 59 - 72 feet with a canopy of 26 - 46 feet.



Oak trees are considered a "keystone species" which means a species which supports an entire ecosystem and stabilizes complex, highly connected food webs. For example, oak trees are the number one trees which support the most insect biodiversity, particularly moths and butterflies - supporting up to 557 species of both. The **Mourning Cloak and Hairstreak butterflies** are examples of Puget Sound butterflies supported by this majestic tree. Oak trees are also called 'mast trees' which is a tree that forms acorns or other nuts which sustain wildlife as an essential food. Oak tree acorns are foraged by songbirds, woodpeckers, ducks, turkey, quail, mice, squirrels, raccoon, and deer.



# 28 Northern Red Oak (*Quercus rubra*)



Further towards the water from the pin oak is the **northern red oak** (*Quercus rubra*). Like the pin oak, the northern red oak is native to North America, in the eastern and central United States and southeast and south-central Canada. The pin oak and northern red oak are often mistaken for one another - what a great time to compare them side by side!

	Pin Oak	Northern Red Oak
Leaves	5-7 lobes	7-11 lobes
Acorns	Smaller	Larger
Trunk	Single, side branches	Single, no side branches
Lower Branches	Descending	Not descending
Bark	Light grey/brown	Darker grey/brown



The seeds and acorns of the northern red oak are enjoyed by many different wildlife including the mountain quail. The **mountain quail** inhabits pine-oak woodlands, coniferous forests, and lower scrublands. They often hide in dense cover so they are hard to spot. When approached, they also sit motionless making spotting one even harder. In the spring the males' frequent loud echoing "kyork" or "woook" may be heard making the mountain quail easier to locate. Their shallow depression of a nest site is usually on ground sheltered by a shrub, log, or grass clump. Lined with grass, pine needles, leaves, and feathers, 6-15 creamy white to pale buff colored eggs may be found. Watch your step! Mountain quails can be found in this area!





## 29 Wildlife Tree/Snag



Looking upward and towards the lake, you will notice a remarkable "snag." A snag, also known as a "wildlife tree," is a standing dead or dying tree. Like its "wildlife tree" name implies, a snag is important for wildlife - maybe even more important than when it was alive. Wildlife, like birds and small mammals, use snags for nests, nurseries, storage areas, roosts, perches, and foraging. In the Cascade region, more than 100 species of birds, mammals, reptiles, and amphibians need snags for nesting, roosting, shelter, denning, and feeding. Nearly, 45 species alone forage for food in them. Many living trees, with features such as cavities, hollowed trunks, and dead branches, can provide similar wildlife value as snags. Large snags, like this one, also offer ideal hunting perches for hawks, eagles, and owl. Snags of both deciduous trees (those that shed leaves in winter) and conifer trees (evergreens) are used by wildlife. Douglas fir and western red cedar snags are highly favored but big-leaf maple and cottonwood are also used.

The importance of snags may not be well known and many are unfortunately removed without appreciating the significance to the surrounding wildlife ecosystem. There are management options that can safely prolong the existence of a wildlife tree or living tree with snag features. Consider incorporating one or more wildlife tree into your landscape by keeping old hollowed trees, or trees with cavities when possible - the surrounding wildlife will thank you!





## 30 European beech (*Fagus sylvatica*)



The last tree of our tour brings you back to the parking lot where the tour started. This beautiful purple color tree is a **European beech** (*Fagus sylvatica*). It is often regarded as a native of southern England. The lifespan of a beech tree is typically 150-200 years allowing it to reach heights of 160 feet. Whereas an American beech requires 40 years to reach full maturity, a European beech requires only 30 years. A mature beech tree produces a full crop of seeds; before then, only smaller crops of seeds are produced. The European beech is used as an ornamental tree for its beauty but its timber is also valuable. The wood's short fine grain makes it easy wood to work with for any application other than heavy structural support. Beech nuts are eaten by animals and in smaller quantities by humans due to toxicity.



Beech nuts, are eaten by a variety of birds and mammals. These nuts are rich in fat, allowing birds and mammals to build up fat reserves for the winter. Squirrels, chipmunks, black bear, deer, foxes, ruffed grouse, ducks, and bluejays all forage for beechnuts.

**Steller's Jays** are quite numerous in dense coniferous woods of the mountains and the Northwest coast. In courtship, the male feeds the female - perhaps scrumptious beech nuts. The jays are able to crack open a beech nut or acorn with their beaks. The jay's nest site is usually 10-30 feet above the ground in a coniferous tree, but sometimes in a deciduous tree or shrub. In the nest you may find 3-5 pale blue-green, finely brown or olive spotted beautiful eggs.



# 31 Burrow's Cabin

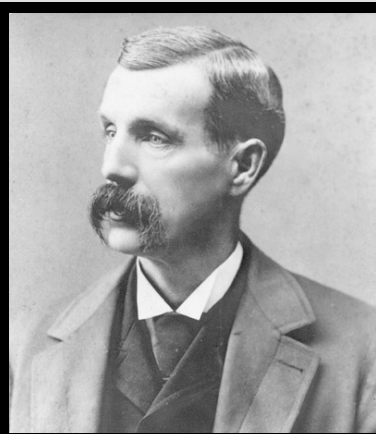


The final stop is a historic landmark in Bellevue: the Burrow's cabin.

After his wife, Martha, died in 1876, pioneer Albert Burrow travelled to the West coast to start a new life. In 1882, he arrived in the Seattle area with his four children. He claimed 160 acres of land in what is now the Killarney area for homesteading. There at the foot of Southeast 15th Street near Lake Washington, Albert Burrow built this cabin for his family in 1883. Later in spring of 1884, he donated additional land to Bellevue to build its first school house. His daughter, Calanthia, was the school house's first teacher. In 1894, Albert became a member of the Washington State legislature. He died just a short time later in 1895 or 1896.

The grandson of Albert Burrows, Roland (Rody) Burrows, was born in 1907 and lived in the cabin. Ty Thorpe grew up next door when Roland Burrows lived there. In the 1930s the cabin was moved to where Bellevue Square is located today. The cabin was again moved in 1946 to a property owned by Roland Burrows on 112th Avenue Northeast. The adjacent property was sold by Rody to Ty Thorpe's parents. Rody Burrow was apparently frequent visitor at his next-door neighbors. In 1956 an addition, doubling the cabin interior space, was completed by Rody. The cabin suffered an interior fire in the 1960s but retained many of its original handmade features. In 1965, the Thorpes purchased the cabin and the property. Serving as a rental property for many years, the cabin was inhabited by many residents outside of the Burrows and Thorpe families

When Ty Thorpe decided to finally sell his Downtown Bellevue property, he was concerned about the fate of the cabin. Ty and Terry Thorpe decided to donate the cabin to the City of Bellevue. The city council then voted to provide \$150,000 for the cabin's relocation. On August 26, 2016, the historic cabin was moved from its 112th Avenue Northeast location to Chism Beach Park on the upper lawn.



Left: Pioneer, Albert Burrows



Below: Roland (Rody) Burrows Burrows next to calf



# Bellevue Neighborhood Tree Canopy

Thank you for participating in our Chism Beach Park Tree Tour and for your interest in our trees. Hopefully, you have gained a deeper appreciation of the beauty and importance of the trees in Bellevue. The City of Bellevue has a goal to reach an overall Urban Tree Canopy (UTC) of 40% by 2050. Currently, Bellevue's UTC is 37% with variation throughout the city. While some neighborhoods such as Cougar Mountain/Lakemont had nearly 50% canopy cover others had less than 20%. Downtown Bellevue, for example, had a UTC of just 10%. The diagram below illustrates the variation in UTC in the neighborhoods of Bellevue. Help us reach our overall UTC goal of 40% by planting one or more tree!

For more information about trees in Bellevue or the Neighborhood Tree Ambassador Program, please visit [Neighborhood Tree Ambassador Program](#).

If you have questions or would like to share feedback about this tour, please email: [trees@bellevuewa.gov](mailto:trees@bellevuewa.gov).

September 2018

Urban Tree Canopy in Bellevue by neighborhood

