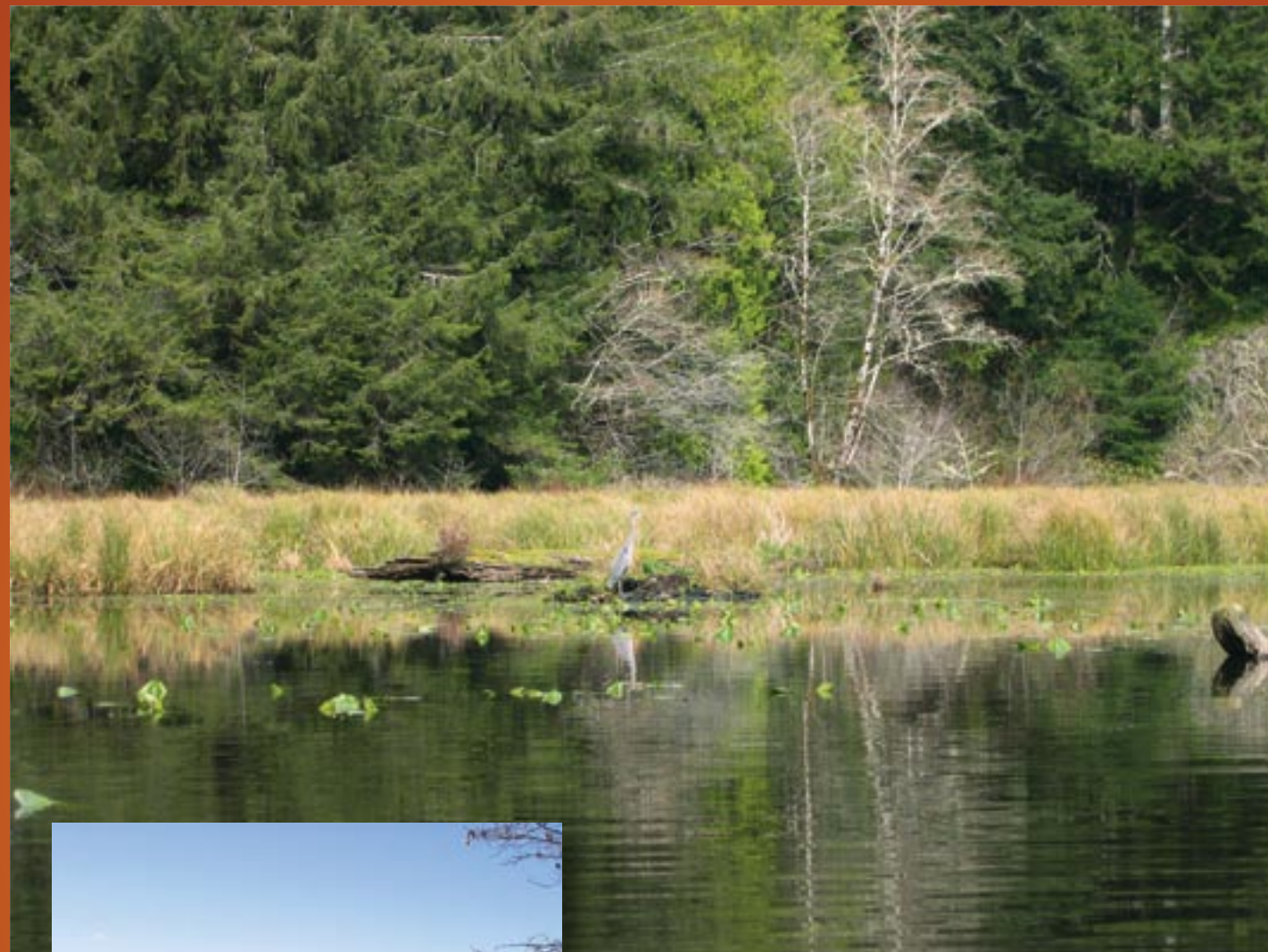




Nature
HISTORY
Discovery

Joseph Stewart State Park

Nature Trail



Welcome to the Joseph Stewart State Park nature trail. This brochure will help you explore the diverse plants, animals and geology of the area. The numbers in this guide correspond to the numbered posts on the sides of the path. Please allow about an hour to fully enjoy the 3/4-mile trail. The terrain is moderate.

Check out other
Oregon State Parks by visiting
www.oregonstateparks.org

Oregon Parks and Recreation Department
725 Summer St. NE, Suite C
Salem, OR 97301



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This brochure is available in alternative formats on request.
Write to OPRD, 725 Summer St. NE, Suite C, Salem, OR 97301;
or call (503) 986-0707 (for the hearing impaired 1-800-735-2900).



1

Poison oak

(Toxicodendron diversilobum)

Leaves of three, let them be! Poison oak is one of the most widespread and adaptable shrubs of North America. It can look like a small shrub, as well as climb like a vine or crawl along the ground. Poison oak is easy to spot in spring, summer and fall—look for shiny green, red or yellow leaves in groups of three. Beware of poison oak during all seasons. The oil found in the stems, roots and leaves may cause a severe skin rash. If you come in contact with the leaves, wash your skin and clothes with soap and water. Your best protection is to learn to recognize poison oak and avoid areas where the plant lives.



2

Manzanita

(Arctostaphylos manzanita)

These “little apples” aren’t for snacking. The word “manzanita” is Spanish for “little apples.” Manzanita produces berries year ’round, which change from white in early summer to deep red in late summer. These berries are not edible. Manzanita can grow as a bush like the one growing here, or reach heights of 20 feet as a single-trunk tree.

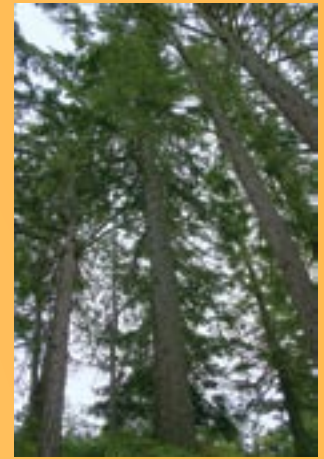


3

Douglas-fir

(Pseudotsuga menziesii)

Renowned for its great strength and lumber. Douglas-fir is the most common conifer and one of the most important timber trees in the Pacific Northwest. First documented in 1791, the Douglas-fir has been on the forestry radar ever since. The trees are easy to recognize, with their flat needles, thick and furrowed reddish-brown bark and distinctive cones. They can live as long as 1,000 years, reach heights of 325 feet and diameters of 10-15 feet. This tree is 110 feet tall and 12 feet in diameter.



Walk, Look and Listen

Walk quietly. What sounds do you hear? Look along the sides of the trail. Can you find animals that make their homes here, or signs of the recent fire that burned uphill? What smells tickle your nose? Remember them and note how they change later in your walk.

4

Basalt boulders

Take a look back in time. These boulders formed in the late Tertiary period (1.6 to 38 million years ago). They likely broke off a larger basalt block and were carried here by mudflows. Over time they were covered by sediments and hidden from view. Millions of years later, human activities, water and wind re-exposed the rock, which gives us a peek into the past.



5

Western gray squirrel

(Sciurus griseus)

Noisy chatterboxes with

large, bushy tails.

Because squirrels are active during the day, we see and hear them in trees as they search for plants, fruits and nuts. Squirrels have well-developed jaw muscles and chisel-like front teeth that they keep sharp by gnawing on hard objects. The gnawing also helps file the squirrel's other growing teeth. If the teeth are not filed, they will continue to grow until they inhibit eating and the animal starves.



Photo courtesy of the Oregon Department of Fish and Wildlife.

6

Lost Creek Lake

Multiple uses mean

multiple levels.

The water level behind the dam fluctuates dramatically throughout the year, ranging from a high of 1,872 feet to a low of 1,751 feet. The U.S Army Corps of Engineers allows the reservoir to fill in the spring and winter, and then draws the water level down each summer. This reduces flooding downstream, controls water quality and temperature, and provides water for irrigation, recreation and power generation. Look carefully at the shoreline. Can you see the high water mark?



7

Honeysuckle

(Lonicera ciliosa)

A tasty treat for birds

and bees.

The large, orange, trumpet-shaped flowers of the honeysuckle are favorites of hummingbirds and bees. In late summer, the flowers are replaced by orange berries, which most people consider inedible, and are possibly poisonous. The year-round vines were used by some Native Americans for weaving, binding and lashing.



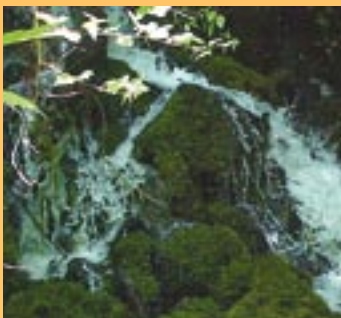
11

Diamond Creek Falls

Can you hear the roar of

water?

You are listening to Diamond Creek Falls. Formed where Diamond Creek cascades down a talus, or rock slope, to a bench, the falls demonstrate how water will always move downslope. The falls are fed by water traveling in underground stream channels, as well as along the surface. The water continues to flow a short distance downslope until it concludes its surface journey at Diamond Pond.



12

Downed tree

Hooray for decay!

Decay of large logs, like the one here, is connected to the lives of many common forest creatures. Insects such as bark beetles, wood borers and termites feed on the decaying wood. Larger animals, such as rodents, woodpeckers and bears, forage in the logs for grubs and adult insects. Eventually insects, fungi, bacteria and weather will recycle the nutrients from this log back into the soil.



The trail splits here. Stay to the left and continue to group camp.

13

Plants protect themselves.

Plants have developed various means of protecting themselves. In response, herbivores (plant eating animals) developed means of overcoming plant defenses. Hungry predators place stress on plants. Natural selection favors those that can withstand the stress effects. Most plants have one or more defenses, which may include toxins, physical structure, irritants and bad flavor. Look carefully at the plants ahead. How do they protect themselves?

The Western pond turtle (*Clemmys marmorata*) is a shy reptile that loves quiet waters. Diamond Creek Pond is the perfect home for the Western



Photo courtesy of Oregon Department of Fish and Wildlife.

turtle. The logs and muddy banks along the shore are ideal for basking in the sun. A scavenger and opportunistic predator, the turtle eats both plant and animal material such as insects, earthworms, fish, tadpoles and frogs. This turtle is considered a sensitive species in Oregon and monitored to ensure it does not become extinct.

The trail splits here. Stay to the left and continue to group camp.

16

Western sword fern

(Polystichum munitum)

Fronds on the forest floor. The sword fern may have 75-100 fronds that can reach 3 feet in length. If you turn over a frond, you will see rows of brownish-orange dots. These are spores used by the fern for reproduction. Native Americans found the sword fern particularly useful. They used the fronds to line berry baskets and steaming pits. The rhizomes, or underground stems, were eaten in lean times.



19

The skin you're in.

The bark of a tree is formed from dead, hardened tree cells and serves as a protective armor. For many tree species, it also is a distinguishable physical characteristic. Remember the red cedar and Douglas-fir you saw earlier? Look ahead. Based upon the bark, can you tell which tree is which?



20

Pacific madrone

(Arbutus menziesii)

Popular with birds

and people.

The Pacific madrone is recognizable by its peeling outer bark and smooth and greenish-brown trunk. The twisty branches make excellent nesting sites for birds, which also find the berries a delicious meal. Native Americans also ate the berries, used the bark in medicinal tea to soothe stomachaches and the leaves as an ointment for cuts. Today, Pacific madrone is prized for use in exotic flooring, furniture, cabinetry and other decorative pieces.



8

Vine maple
(Acer circinatum)
New England fall colors in the Pacific Northwest. Along with the brilliant red and gold leaves that paint the forest in the fall, the vine maple has many traditional uses. The wood was used to build bows, frames for fishing nets, snowshoes and cooking tools. Boiled bark served as a cold remedy. Standing alone as a small tree or growing almost horizontally, the vine maple has a gnarled and crooked appearance. Over time, the twisting and spreading limbs of a single tree can turn an open space into a dense, impassable thicket.



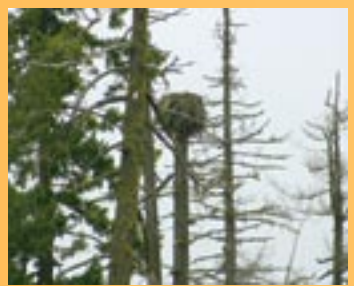
9

Oregon grape
(Mahonia aquifolium)
A timeless tradition. Before it became Oregon's state flower, the bark of the Oregon grape was used by Native Americans to produce yellow dye. They also used the bark and berries medicinally for liver, gall bladder and eye problems, and to treat shellfish poisoning. Today, people continue to gather Oregon grapes. Although the tart, blue berries aren't pleasant to eat, they can produce decent jelly and wine.



10

Osprey nest
(Pandion haliaetus)
Home of the "fish hawk." Look toward the snag directly ahead. Notice the large stick nest at the top? Welcome to an osprey's home! Osprey—migratory birds that return from South America to Oregon each April—nest in large dead trees or on nesting platforms near lakes and rivers. With long, curved claws, these birds are fishing specialists. They dive feet first from 30-100 feet above the water's surface to catch fish to eat or feed to their young.



14

Western red cedar
(Thuja plicata)
The tree of life. So named by some Native American tribes, traditional uses for the red cedar include making canoes, house planks, tools, utensils, clothes, baskets, ropes and fishing nets. Western red cedar remains extremely valuable today. Its heartwood resists decay, and is prized for use in areas exposed to weather. Soft in texture, straight grained and pleasant smelling, the red cedar is an attractive and useful member of the forest.



15

Diamond Pond and Western pond turtle
Where does the water go? Fed by Diamond Creek, this pond maintains a relatively small size due to its unusual discharge characteristics. It does not have a typical surface outlet, such as a stream. Instead, water flows out of the pond for a short distance before disappearing into the ground. Please venture to the pond edge for a closer look.



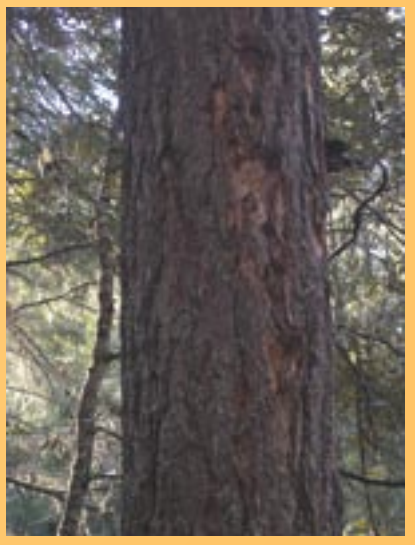
17

A nursery of trees
Competing for space. These young Douglas-fir, vine maple and Western red cedar trees are all competing for soil nutrients, water and sunlight. Space to grow will be at a premium as the trees mature. Over time, the healthiest and strongest trees will prevail and help sustain the forest.



18

Douglas-fir and woodpeckers
Working together for healthy forests. Can you see the woodpecker holes in the Douglas-fir ahead? Woodpeckers and Douglas-fir both benefit from their close, symbiotic relationship. Woodpeckers dig for insects and insect larvae in the tree trunk and under flakes of bark. This benefits the tree by eliminating potentially harmful insects and spreading seeds. If the tree does become diseased or dies, woodpeckers still profit by digging larger holes for nests in the tree.



21

Diamond Creek
Diamond Creek is fed by a natural spring. The groundwater emerges from the Diamond Creek spring and flows into the creek. The large volume of water emitted by the spring flows a short distance in the creek before pooling in a small grass meadow, and then flows several hundred feet farther to Diamond Creek Falls.



- The Diamond Creek Ecosystem**
Riparian environments support a wide variety of plant life. How many of the following plant species can you find around Diamond Creek?
- Ginger
 - Sword fern
 - Oregon grape
 - Vine maple
 - Pacific madrone
 - Bracken fern

To help conserve our natural resources, you may return this brochure to the information board at the end of your journey!

For your safety, this trail has been designated as a hiking only trail. Please watch for low hanging branches, narrow bridges, poison oak, uneven or broken pavement and trail debris.

Please remain on the trail, refrain from smoking during fire season and do not litter.