⓯ **Wetland Habitat** This quiet pond brings you near the end of the trail, at the edge of the old forest. These riparian wetland areas are some of the most productive natural areas in the world. They are habitat for waterfowl, wildlife, frogs, newts, insect larvae, and a multitude of other aquatic species. How many can you identify? The viewing platform may assist you in getting a closer look at this environment.

The trail over the bridge will take you back to your starting point. We hope you have enjoyed your walk through the coastal sitka spruce forest. Please come again to see the forest in all its seasons.

Mike Miller Park is located 1.2 miles south of Yaquina Bay Bridge on the east side of Highway 101.

Newport, Oregon

We ask for just a few considerations while you are on the trail:

- Stay on the trail. This is for your personal safety and to protect the more fragile plants.
- Please do not pick the flowers and berries. These seasonal features are a special attraction. Leave them for others to enjoy.
- Please help keep the area free from litter. If you find some, please pick it up and carry it out.
- Take your time and enjoy your stay.
- The trail is closed during storms and high winds.

A special thanks to Mike Miller, former commissioner, for his foresight in setting aside this property for use as a county park.

ACKNOWLEDGMENTS

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Lincoln County School District
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Oregon Department of Fish and Wildlife
Lincoln County
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Boy Scouts of America
Small Woodlands Association
Oregon Department of Parks and Recreation
Angell Job Corps
U.S. Forest Service
Soil Conservation Service

MIKE MILLER PARK

EDUCATIONAL TRAIL

LINCOLN COUNTY

Welcome to the Mike Miller Park Educational Trail

This trail will take you through a slice of one of the most productive and unique forests in the world, the Northwest Coast sitka spruce forest. Forests of this type are found only in a long narrow stretch along the coasts of Oregon, Washington, and British Columbia. Sitka spruce forests thrive in the uniformly wet and mild climate of the coast. This allows the conifers (evergreen, cone-bearing trees) such as sitka spruce, western hemlock, Douglas fir and grand fir to reach unparalleled size and age.

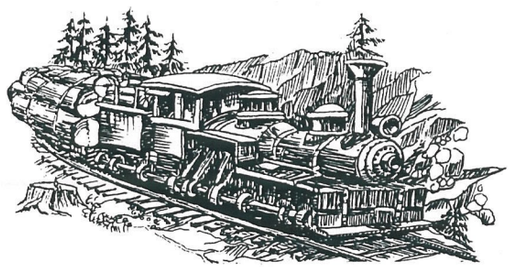
The trail will lead you past remnants of thick forests, old beaches, logging sites and railroads. The trail takes about 45 minutes to walk. There are numbered posts along the way that correspond to the numbered paragraphs in this brochure; use them as your guide.

❶ **Stabilized Sand Dune** As you can see, part of this hillside is an old stabilized (not moving) sand dune. This dune was once along the shore of the Yaquina River. As the river changed course, the dune eventually formed a soil layer that supported an increasing amount of plant life. These soils are fragile and highly susceptible to wind erosion if a plant cover is not maintained. Many of the forests along the Oregon coast are growing out of old dunes like this one.

❷ **Historic Railroad Grade** This smooth even path is actually an abandoned railroad bed that extends the length of the park. During World War 1, a logging railroad carried spruce logs from Yachats to Yaquina Bay. The spruce logs were used for airplane construction. Later this same

railroad was used for carrying passengers and mail before the construction of the present Highway 101. You will see this rail bed again at the end of the trail.

❸ **Lush Vegetation** Walking along this lush, shrub-lined path, you may feel that you are really far removed from civilization. Flowers abound here in the spring and berries are abundant in summer. Pacific rhododendron, with its large, showy pink blooms, is the dominant plant, some growing 30 feet tall. Salal and huckleberry add to the lushness of the vegetation. Most trees are shore pine with an occasional Douglas fir.



❹ **Changing Vegetation** As the path takes you across the top of the stabilized dune and into the areas beyond, notice the changes in the types of plants that are found. What would cause different types of plants to grow in areas that are so close together? (Check stop #7 for one of the answers.)

❺ **Nurse Logs** The sitka spruce forests produce trees that grow to be very large and very old. Even though this is an old forest, there is new life emerging all around you. The dead and decaying stumps and fallen giants nurture a new forest. Notice the hundreds of seedlings on old stumps and fallen logs around you. These forest remnants are called nursery logs because they provide a place for new plant growth to begin. A decaying nurse log can host more organisms than there are people in the world! Only a few seedlings will survive. The work of nurse logs is readily visible in coastal forests by observing mature trees growing along the lines of their former nurse logs.

❻ **Old Tree** This large sitka spruce is probably the oldest tree in Mike Miller Park. How old do you think it is? Some of the larger trees in the park were left by early loggers because of poor quality. Other large trees have grown since the logging took place. Some nearby trees show signs of interior rot. Notice the conks or fungal bodies on the bark. If you sit quietly in this spot, you might be lucky enough to see a great horned owl fly through the forest.

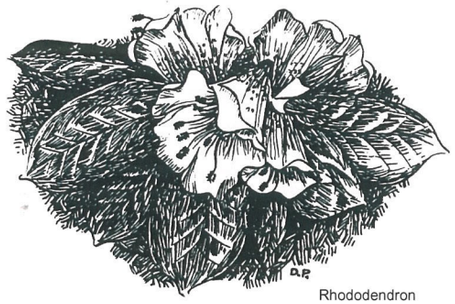
❼ **Changing Soil Types** A journey down this side path will lead you to a soils pit where you can see a soil profile. One reason the trees are able to grow so much taller on this side of the pond is because of a difference in soil. The soil profile in front of you shows a dark topsoil that holds far more moisture than the sandy soil in the dunes where the rhododendron and pine are growing. Also, notice the gray soil layer about two feet below the surface. This layer restricts root movement. Many sitka spruces spread their roots in the shallow rich soil layer near the surface. This makes them more easily blown over in windstorms, as we will see later in our walk.

❽ **Forest Canopy** Have you noticed a sudden change in vegetation? If you look up, you will see that you are in an opening in the forest. The plants in this area are different from those you just passed through because of the increased sunlight that reaches this area. The removal of the forest canopy allows plants to grow here that would not thrive in the shady forest. Eventually, the sitka spruce forest will reclaim this spot.

❾ **Edges** You have come to the edge of the old forest. The young western hemlock forest in front of you was planted in the mid-1970's and is growing quite vigorously. Edges between different biotic communities (forest and fields; fields and beaches; beaches and sea) are areas rich in plant and animal diversity. People also are attracted to edges, coastlines, foothills, and confluences of major rivers. Just over this hill and through the trees is the City of Newport and the bustling harbor of Yaquina Bay. Civilization has greatly increased the number of edge communities by creating many large holes in the once continuous forest.

❿ **Springboard Notches** You have probably already noticed the remnants of early logging on this hillside. Many of the large stumps left by loggers are already playing nurse to numerous seedlings. If you look closely toward the top of these stumps, you will see a large notch. Loggers made these notches above the basal (root) area of the tree and then placed a short plank or springboard into the notch. These springboards served as platforms for the loggers to stand on while they felled these forest giants. It often took a full day to cut one tree.

⓫ **Snags** These upright rotting trees are called snags. When you see a snag, you are looking at a tree that has been under attack for a very long time. The process of decay begins long before we can detect it. A broken branch, insect borings, a scar, or root contact with nearby trees all make trees vulnerable to decay. Even though these snags are dead or dying trees, they are still a vital part of the forest. Snags are the preferred home sites for many birds and animals. This snag will eventually take its place on the forest floor, perhaps becoming a nurse log and renewing the forest cycle.



Rhododendron

⓬ **Blowdowns** In this area trees have been blown down by wind and storms. As a forest gets older many factors combine to make trees more susceptible to blowdown. Forest harvesting activities create an edge effect and open up the stand to winds. With the opening of the forest, the edge trees can sometimes be blown over, exposing trees to the full force of the wind. The clear-cut to the south of the trail has caused this blowdown area, but naturally occurring forest openings have the same effect in other parts of the forest. Notice how the root systems spread out instead of going straight down.

⓭ **Tree Plantation** The trees that were harvested in the clear-cut viewed to the south are now serving us as building materials, fences, and endless paper products. Young sitka spruce trees were planted in 1986 and evidence of healthy growth can be seen. How will the area look in ten years? From this vantage point, notice the nest in the top of the dead tree at the bottom of the young tree plantation. What type of bird would make this type of nest? Possibly an osprey, eagle or hawk?

⓮ **Natural Regeneration** This area was once covered with tall trees and very little undergrowth. When the adjoining land was clear-cut, the trees blew down and sunlight was able to reach the ground. Young western hemlock tree seedlings have thrived in the setting providing the promise of a new forest to take the place of the fallen giants.