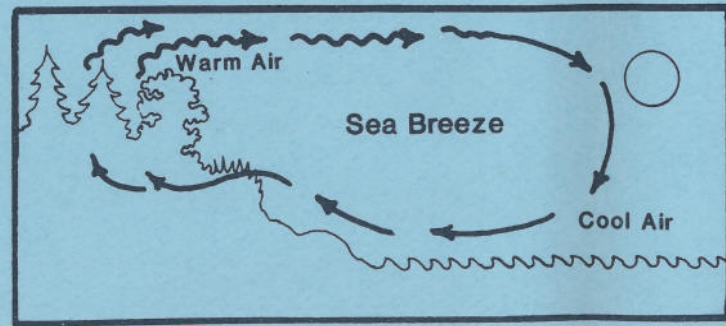


- 1 Had you stood upon the ice sheet which blanketed north-western Washington 15,000 to 20,000 years ago, this beach would have been more than one mile beneath you. The glacier which traveled slowly south between the Olympic and Cascade mountains carved out this inland sea. Puget Sound is one of the deepest salt-water basins in the United States, and forms a natural harbor due to its depth and calm water.
- 2 Every wave lifts millions of sand grains, and deposits each grain in a slightly different place. And with more than 300 waves per hour, one grain moving only one-tenth of an inch per wave can travel 70 feet in a day!
- 3 Cement blocks placed offshore provide a habitat for fish and other marine animals. Divers explore this underwater "park", and fishermen enjoy the increased fish population.
- 4 During the day, air over Puget Sound is much cooler and heavier than that over Point Wilson, due to the cooling effects of evaporation, and because water absorbs a greater amount of solar heat. As the lighter, warmer air on land rises, cooler air rushes in to replace it, resulting in the "sea breeze" you feel. At night this process reverses, causing a "land breeze" which blows towards the water.



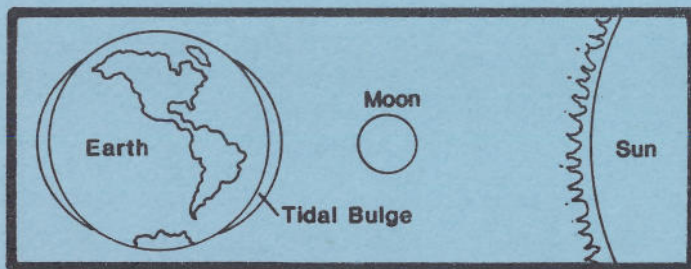
- 5 The waves you see breaking on shore are probably caused by either wind or passing ships. Waves travel about 20 miles per hour until they reach the "surf zone". Here, friction with the sloping shore causes the base of the swells to slow down, while the faster-moving water on top crowds over. The waves get higher, form crests, and plunge onto shore.
- 6 Before you leave the beach, explore the tangle of logs and other debris. You may find shells, kelp, fishing floats, and other "treasures" washed up from the deep. And what about the logs? They may have traveled for hundreds of miles before washing up on this beach!

As you near the end of the beach, on your left will be a log post with a white band. This marks the bark-covered trail which will lead you across Point Wilson.
- 7 The plants surrounding you live in a harsh sand dune environment where only very specialized species can grow. Plants must be resistant to wind, sand abrasion, salt spray, and tolerant of occasional drought or sand burial. Many species have spines, hairy leaves, and thick outer layers. These adaptations help protect the plants from wind, abrading sand, and water loss.
- 8 Look at the misshapened Douglas fir trees on the hill in front of you. The wind has broken many branches, and salt spray has burned the buds on the windward sides. But the needles have formed tough outer layers in order to withstand wind, salt, and sand. Here, the individual trees have made special adaptations which enable them to survive the harsh environment.

9 Many ships have wrecked on and around Point Wilson. The first lighthouse was erected in 1895 in order to alert navigators to the danger. In 1913, the Coast Guard built this 51 foot high lighthouse. Its alternating red and white light can be seen for 13 miles. A fog signal and radiobeacon have been added to further aid ships.

10 *"Either sand is being removed from some place that people wish it would stay or it is being deposited some place where it is not wanted, or both."* - Willard Bascom -

11 Where does the water go to when the tide goes out? Water "bulges" form on the sides of the earth opposing and facing the gravitational pull of the moon. These bulges change location as the earth rotates, causing high tides in those areas closest and farthest from the moon, and low tides on the other two sides of earth. This high and low tide cycle occurs twice per day, about every 12 hours and 25 minutes.



12 The cyclic rising and falling of the sea shapes the life patterns of the plants and animals which live in the "intertidal zone". Those living closest to the beach receive a longer exposure to sun and air, while those further away spend more time underwater. Each species lives where conditions for its survival are best.

13 During low tide you may explore the pools around the exposed rocks. Look closely to see the limpets, snails, tiny fish, and pink-tinged anemones. Listen to the barnacles "hiss" as they pull tightly into their shells. How many different kinds of seaweed can you find? The best place to look for critters is around the base of the larger rocks. Please avoid walking on the smaller rocks in order not to crush the small animals living underneath them.

To return to the starting point of the trail, locate the log post with a white band (the same spot you entered the beach). Continue on the trail, past Battery Kinzie. When you reach the interpretive display, turn left towards the white gate. Follow the road until you reach the starting point of the trail.

We hope you have enjoyed your walk. You may take this trail guide home, or leave it in the box at the trailhead. (Please don't litter.)

Fort Worden State Park
Port Townsend, WA 98369



WASHINGTON STATE PARKS and RECREATION COMMISSION
7150 Cleanwater Lane
Olympia, Washington 98504

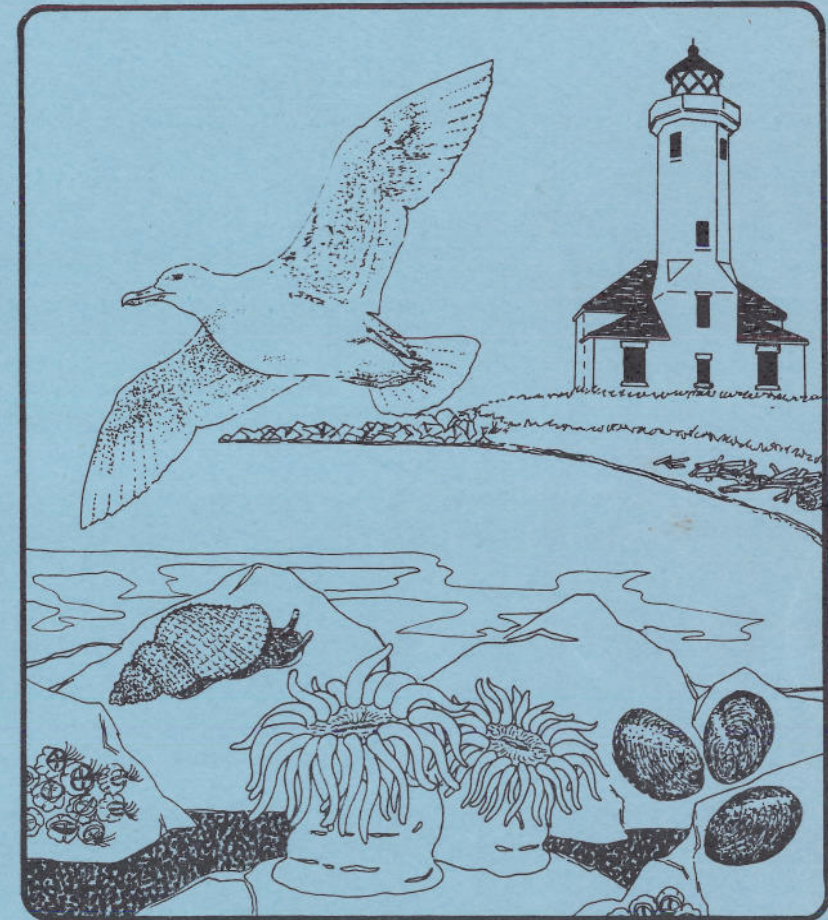
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Point Wilson Discovery Walk



This self-guided trail introduces you to the marine environment of Washington's inland seas. Point Wilson marks the meeting of Puget Sound and the Strait of Juan de Fuca. To "discover" the interesting features of this area, read the stations in about the same locations as shown on the map inside. Begin walking towards the lighthouse. Your first station is on the beach directly in front of you.