

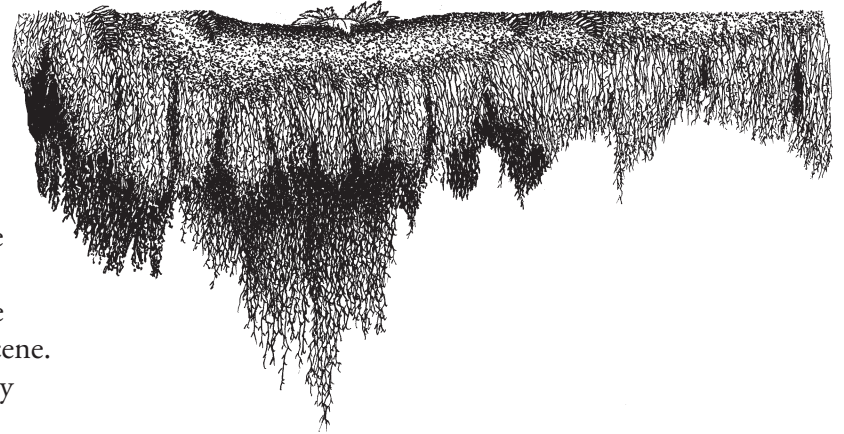
## Rain Forest

### The Olympic Rain Forest: A Timeless Classic

**G**laciation, geography, weather and time have produced a rain forest of great age and complexity. The stage was set during the last Ice Age, when glaciers carved broad U-shaped valleys out of west flowing river courses in the Hoh, Queets, and Quinault valleys. Geography and climate are also scene builders along a narrow strip of land about 2,000 miles long from coastal southeast Alaska to southern Oregon. Here a drama of life, death and rebirth has been reenacted for millennia.

#### The Rain Falls, the Curtain Rises!

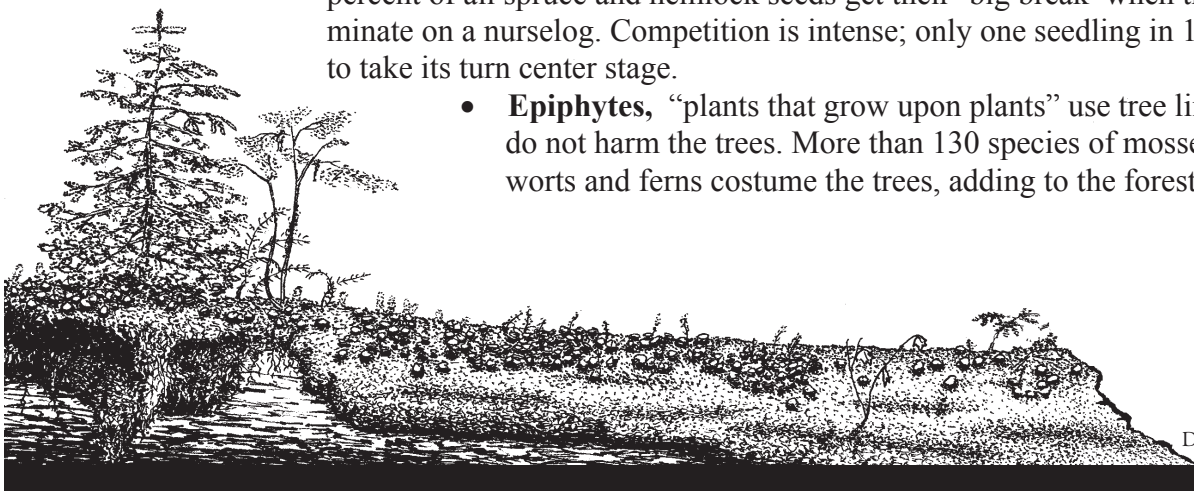
Enormous amounts of precipitation, mild winters and cool summers nurture the abundant green these rainforests are famous for. Shrubs like salm-onberry and huckleberry, eight species of ferns, and a variety of mosses and other plants carpet the forest floor, adding color and texture to the stage. Bigleaf maple draped in spikemoss and vine maple dripping with cat tail moss fashion a primordial scene. Some describe it as a Tolkein landscape or a Disney set. What feeling does this forest invoke in you?



#### Cast of Characters

As this melodrama of life and death unfolds, complex relationships develop with no conflict between good and evil; the characters work together as one.

- **Rain** averages 140 inches annually! Even during the fairly dry summer months, the valleys trap moist fog.
- **Large, old trees** such as Sitka spruce and western hemlock take center stage, some reaching over 200 feet tall and living over 500 years. The plot thickens when powerful winter storms bring down large, shallow-rooted trees each year. Death now sets the stage for life.
- **Dead wood** plays a key role. Coastal temperate rainforests in North America produce the largest accumulation of organic (living or once-living) matter on the planet, surpassing even the tropical rain forest.
  - **Nurselogs** open the next act. Mosses and seedlings colonize downed trees. Ninety-six percent of all spruce and hemlock seeds get their 'big break' when they land and germinate on a nurselog. Competition is intense; only one seedling in 10,000 will survive to take its turn center stage.
  - **Epiphytes**, "plants that grow upon plants" use tree limbs as props and do not harm the trees. More than 130 species of mosses, lichens, liverworts and ferns costume the trees, adding to the forest's character.



## All the Forest's a Stage

Cougars, black bears, elk and small mammals such as squirrels and moles give birth and die upon this stage. Standing dead trees shelter dozens of species including bats and woodpeckers. River otters, salmon, frogs, salamanders and other aquatic species play out their lives in the rivers and streams.

### Behind the Scenes

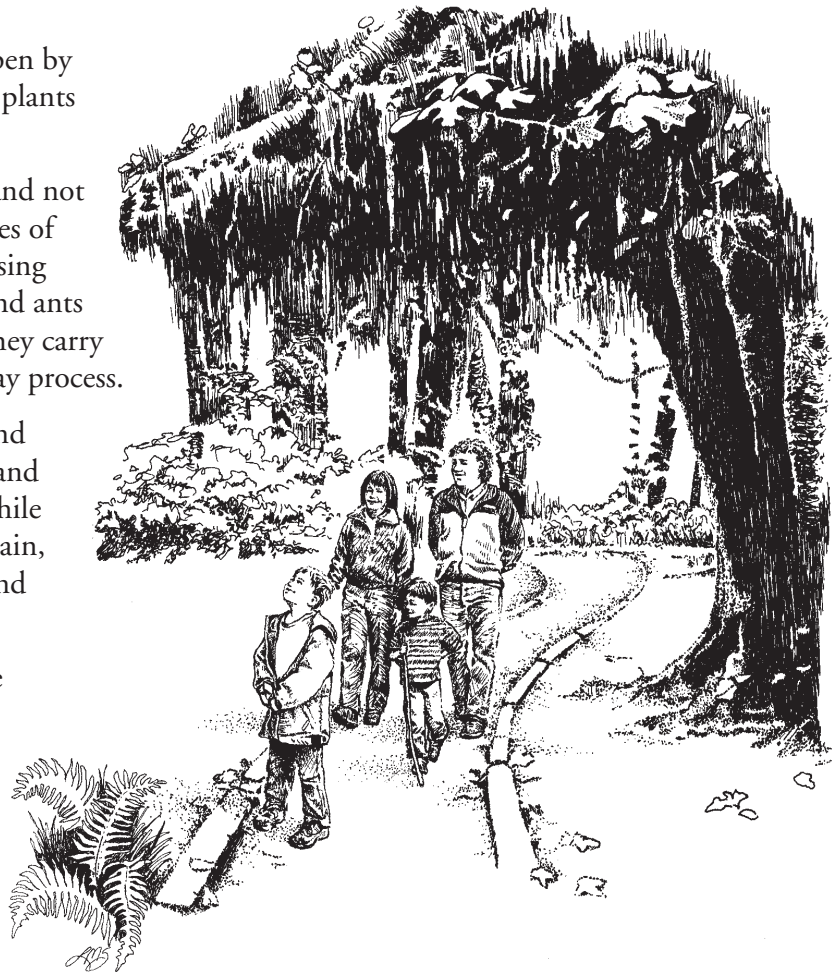
**Set designers.** Roosevelt elk keep the understory open by browsing and trampling, allowing a rich variety of plants to flourish on the forest floor.

**Stage hands** work unseen by the human audience and not always appreciated! No one knows how many species of insects crawl on or under the forest floor, decomposing and recycling forest litter. When beetles, termites and ants bore into weak or dead trees to feed and lay eggs, they carry spores of fungus into the tree, continuing the decay process.

**Up in the rafters.** Microscopic fungi, algae, yeast and bacteria colonize billions of needles in the canopy, and in turn are grazed upon by mites and springtails, while predacious insects feed on the leaf eaters. This domain, called the “scuzz,” supplies nutrients to the forest and repels harmful insects.

**The sound stage.** The simple haunting notes of the varied thrush, the complex melody of the winter wren and the staccato beat of the pileated woodpecker permeate the set. Rain can fall gently or drown out all other sound, sometimes accentuated by the thunder-like crash of giant falling trees.

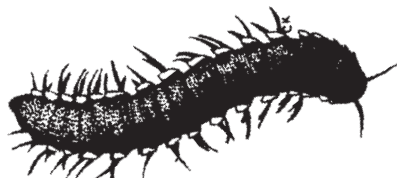
**Special effects.** Sun and rain provide ever-changing moods as soft light filters through the mists. To some this ethereal quality creates a place for solitude, reflection and renewal. To some early pioneers, this forest felt dark and foreboding.



Drawing by Lisa Shindler

### The Final Scene

The ending is not written yet. This drama of life, death and rebirth might continue for millennia, until nature, or humans, alter its course. Those who fought to establish Olympic National Park in 1938—largely to protect these incredible rainforests and the elk that shape them—hoped for a never-ending story. Although we may never know what triumphs or tragedies lay ahead, we all play a role in how this story might unfold.



### The World Stage

This forest benefits the world by taking in carbon dioxide, replenishing Earth's oxygen and storing water and carbon. Fallen trees also supply nutrients to the rivers and ocean, and become the huge beach logs that anchor the coastline. This rich forest preserves incredible biodiversity of plants and animals. Its global significance has been recognized by the park's designation as a World Heritage Site and International Biosphere Reserve.

