National Park Service U.S. Department of the

Olympic National Park

Coast to Glaciers

Superlatives about the trees abound, for several specimens

reach record sizes. In some locations, the forest canopy is so

thick that falling snow is caught in the trees and never reaches

There are four basic types of forests on the Olympic peninsula:

Temperate rain forest, lowland, montane, and subalpine. Tem-

perate rain forest is found at low elevations along the Pacific

Ocean coast and in the western-facing valleys of the penin-

sula where lots of rain, moderate temperatures, and summer

fogs exist. Sitka spruce is the dominant tree, but trees typical

of the lowland forest also grow here, including western redcedar

Lying above the temperate rain forest along the coast and in

the western-facing valleys and growing from the lowest ele-

vations inland from the coast is the lowland forest. You will

not find Sitka spruce here, but may see grand fir. Western

hemlock will probably be the most common tree, although

stands of Douglas-fir may prevail where fire or drier condi-

tions caused by the rain shadow give them an advantage.

zone have been reached.

Western redcedar is never an abundant tree, but its gradual

disappearance is a true indicator that the upper limits of this

Gradually the lowland forest gives way to the montane forest.

Unless you are an expert you may have difficulty recognizing

when the change occurs. If silver fir is present you know that

you have moved into the montane zone, but in drier parts of the park, the montane zone may look much like the lowland

forest, with the exception that the western redcedar will no

As elevation increases, temperatures cool and more mois-

pine zone takes over. Silver fir grows here as well as in the

montane zone, and in the western portion of the park may be

prevalent. The presence of subalpine fir, mountain hemlock,

or Alaska cedar groves assure you that this is the subalpine

continuous forest, but in the upper part of this zone the forest

thins out. Delightful alpine meadows graced with wildflowers

and glacial lakes often intermingle with stands of firs. Subal-

oine fir is especially well adapted to the heavy snows and

snow, often putting down roots from them where they touch

rounded by skirt-like arrangements of longer, lower branches.

Increasing elevation causes even more severe climatic con-

ditions. Trees become fewer, shorter, and more misshapen.

Trees may be mere shadows of their cousins living lower

down the mountain. Here a 100-year-old tree may be only

your eye in a vivid display that is an effective foil to the

three feet tall. Eventually timberline is reached, beyond which

trees do not grow, but a profusion of wildflowers often rewards

scenery below, now visible because the trees no longer block

From seashore to mountaintop Olympic is blessed with an

incredibly rich plant community created by varying environ-

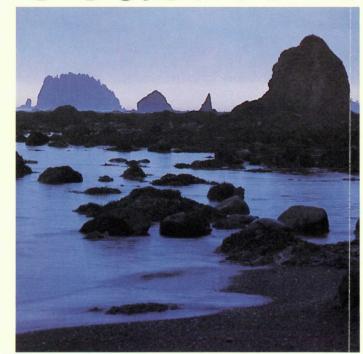
cold temperatures experienced here. Its spire-like shape

sheds snow. It also extends its lower branches under the

the ground. When the snow melts the trees may be sur-

zone. The lower portion of the subalpine zone consists of

ture falls as snow; growing seasons get shorter and the subal-



THE COAST

Some 57 miles of Pacific Ocean coastline form a vital component of Olympic National Park. This coastline has remained little changed over time except for the impact of the pounding surf and storms upon the mainland. The coastline looks much as it did when early Indians built their first villages upon these shores, thousands of years before European explorers arrived.

The coast is where the land meets the sea, vibrating with life and energy. Drift logs cast high on the beach; sculptured arches and sea stacks; the roar of crashing waves; the calls of gulls, bald eagles, and black oystercatchers; three-dimensional clouds: dramatic sunsets: the sheer vastness of the ocean and a myriad of other elements impress themselves upon

Scooping up a handful of sand, you discover that it is virtually impossible for you to count the shades of colors or to classify shapes, so varied are the grains. At low tide you can walk toward the surf stopping at tidepools along the way. If you squat down and spend some time just looking, you will be amazed at what you see as your eyes start ferreting out objects that look like rocks, but which in fact are small sea animals. Slowly extending your horizon, you may see some raccoons feeding on shellfish that are reachable now that the tide is out and the danger of the surf is withdrawn. You are likely to find the footprints of shore birds all over the beach but you will also find those of bear, deer, raccoons, river otters, and a host of other creatures.

Beware of the Tides

on an incoming tide. Rising wate where the tides come in to the base retreating. People have lost their lives by foolishly thinking that they could of cliffs and headlands. Never attempt o hike around a point or headland beat the water. Always carry a tide table or copy down the tide times. know when the tides occur; don't

The sheer quantity of flotsam and jetsam cast upon the beach is astonishing. Probably the most exotic are the glass floats that Japanese fishermen use to support their nets. It takes the ocean currents about one year to carry the floats across the Pacific to the Washington coast. Among the debris cast upon the shores are huge trees felled from inland stream bank sites by rushing rivers and washed out to sea. They are repeatedly thrown and banged against sand and rock. Limbs are removed and trunks are sanded smooth by the action of the waves. Finally a great storm may toss them high on the beach to join

The Olympic coast is a wild place, a place for endless

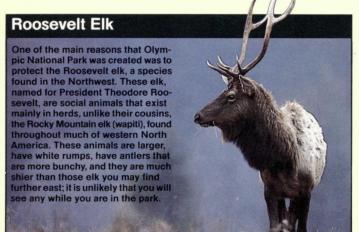
Olympic National Park welcomes you to a diverse and stunning world—a fog-shrouded coast with booming surf and wave-manicured beaches, spectacular alpine country dotted with sparkling lakes, lush meadows, glaciers, and North America's finest temperate rain forest. People have lived here for thousands of years, but the earliest inhabitants lived primarily along the coast taking food from the sea and berries, roots, and meat from the land. From the nearby forests they cut cedars that provided hulls for their canoes, building materials for their lodges, and many of the miscellaneous items of

everyday life. By any standard the Indians of the Olympic Peninsula lived a sophisticated, well-ordered life in 1592, when the first European—Juan de Fuca—may have come to these shores. Reliable evidence of European penetration is not available until 1774, when Juan Perez sailed along this coast. In the next 25 years a bevy of British, American, and Spanish explorers visited the area. The most enduring work was done by Robert Gray, an American, and George Vancouver, an Englishman. Both men explored the area thoroughly, establishing rival claims to this land for their own countries. Not until 1885 was any real attempt made to explore the interior of the Olympic Peninsula. That year Lt. Joseph P. O'Neil led the first documented expedi-

tion into the interior. In 1889-90 the Press expedition led by James Christie made a north-south crossing in five and one-half months. In 1890 Lt. O'Neil returned and made an east-west crossing. Slowly a movement got underway to set aside some of the peninsula as a national park. In 1897 President Grover Cleveland created the Olympic Forest Reserve, a portion of which President Theodore Roosevelt designated a national monument in 1909. In 1938 President Franklin D. Roosevelt signed legislation creating Olympic National Park, a place for the soul to expand and for the mind to be refreshed with the beauty of life—a place of serendipi-



The Olympic Mountains are not very high—Mount Olympus, the highest, is just under 8,000 feet-but they rise almost from the water's edge and intercept moisture-rich air masses that move in from the Pacific. As this air is forced over the mountains, it cools and releases moisture in the form of rain or snow. At lower elevations rain nurtures the forests while at higher elevations snow adds to glacial masses that relentlessly carve the landscape. The mountains wring precipitation out of the air so effectively that areas on the northeast corner of the peninsula experience a rain shadow and get very little rain. The town of Sequim gets only 17 inches a year,



while less than 30 miles away Mount Olympus receives some 200 inches falling mostly as snow.

These mountains have arisen from the sea. For eons, wind and rain washed sediments from the land into the ocean. Over time these sediments were compressed into shale and ocean floor and lava flowed forth, creating huge underwater mountains and ranges called seamounts. As the plate upon which this portion of the ocean floor was located inched toward North America about 35 million years ago, most of the 27 North Fork sea floor went beneath the continental land mass. Some of the sea floor, however, was scraped off and jammed against the mainland, creating the dome that was the forerunner of today's Olympics. Powerful forces fractured, folded, and overturned rock formations, which helps explain the jumbled appearance of the Olympics. Radiating out from the center of the dome, streams, and later a series of glaciers, carved peaks and 36 Tipperary 37 Hayes River valleys, creating the beautiful, craggy landscape we know today. Ice age glacial sheets from the north carved out the 39 Chicago Camp 40 Happy Hollow 41 Elwha Basin Strait of Juan de Fuca and Puget Sound, isolating the Olympics from nearby landmasses. Surrounded on three sides by water and still crowned by alpine glaciers, the Olympics retain 43 Sixteenmile the distinctive character that developed from their isolation. Several plants and animals are unique to the Olympics— 46 Francis Creek 47 Wolf Bar examples of how genetic diversification occurs when geo-48 Irely Lake 49 Three Lakes 50 Three Prune graphical isolation exists. The most striking example is the Olympic marmot, with its distinct chromosonal and behavioral patterns. Others include Plett's violet, Piper's bellflower, 51 Lake Beauty Olympic Mountain daisy, Olympic chipmunk, Olympic snow mole, and Beardslee and Crescenti trout, as well as others. **54** Pyrites Creek

vations well in advance. Names, addresses, and 98331, 206-962-227 Angeles, WA 98362, 206-928-3245; Lake lot Springs Resort pen Memorial Day to mation about accommotion, P.O. Box 625, Port Angeles, WA 98362; or to the Olympic Peninsula Resort and Hotel Asso ciation, Colman Ferry Terminal, Seattle, WA Camping The park has 18 estab-Most consist of individual sites with tables and fireplaces; piped water and toilet facilities are

located at Port Angeles, at Lake Crescent, and at the Hoh Rain Forest. All main access to the park roads leading to the interior. No roads pass maps, and staff members along the Hoh, Queets, fires, nature walks, and and Quinault rivers. Hur ricane Ridge, accessible grams are posted in the via a paved road, affords a superb part of the Olympic wilderness. The Pacific Coast area is actages, cabins, and lodge cessible from U.S. 101 rooms are available within the park. It is addirectly at Kalaloch and by spur roads to the

Visitor Information

of the centers have ex-nibits, publications,

sting evening camp

campgrounds.

Accommodations

Several motel units, cot

nouth of the Hoh, to La Push, and to Rialto

are available at Fairholm Visitor Service Area and ies only can be bought at Sol Duc Hot Sp Laundries are at Log Cabin Resort and Sol Duc Hot Springs. Horseback Riding

tters can be obtain at visitor centers or by dent. There are restric tions or closures to stock in certain sections of the Check with a ranger.

Mountaineering Climbing parties are asked to register and to show that they have standard climbing gea at the ranger station nearest their route. Never climb alone or attempt technical climbs unless you are with experienced climbers and

Winter Sports als, ski tows, and ski in

unless you have the proper equipment.

cial punchcard is nec

steelhead and salmon can be rented at Fair-Lodge

o preserve this parl for future visitors, we Stay on trails; short

■ Make sure a wood fire

s out before you leave Dogs and cats are pro Vehicles are not al

beach, round the head lands only on the outgoing tide to avoid being trapped against the overland trails where

> Olympic National Park National Park Service

WA 98362

*Open only part of the year

6 Hyak

12 Hoh Lake

24 Boulder Lake

25 Happy Lake

29 Dodger Point

31 Marys Falls

34 Stony Point

38 Camp Wilder

42 Low Divide

32 Canyon Camp 33 Elkhorn

isually near a cluster of

laundries, or utility connections are provided in any of the park camp-

55 Enchanted Valley **Backcountry Sites** shown on the map on the ber that backcountry use permits are required **60** Dose Forks 61 Hart Lake

1 Ericsons Bay 63 Upper Duckabus 66 Camp Pleasant 7 Twentyone Mile 8 Mink Lake

70 Lake Sundowr 71 Success Creek **72** Upper Lena Lake **73** Tenmile

75 Home Lake 17 Happy Four 80 Lower Camero 81 Moose Lake 21 Boston Charlies

84 Dose Meadow 85 Bear Camp

86 Deception Cree 87 Hawk Creek 88 Cox Valley 89 Lake Angeles 90 Heather Park 91 Spruce Botto 92 Smith Place 93 Bob Creek 95 Big Flat

The Backcountry As a backpacker you may encounter hazards you might get wet, you could get a blister or two, and you will have to work hard to see all that Olym offer. But if you enter the backcountry as a prehiker, you are guaranteed an unforgettable experience. Please help preserve the wilderness by observing the backby leaving no trace of your stay. Backcountry

They are free and can

be obtained at trailheads

Sanitation Use privie when available; do not dump garbage in them nole at least 100 feet rom a water supply an thoroughly cover when

Campsites Camp in ar established site when one is available. Avoid ration, where jute netting and small plants have been placed to aged soil. On the coast ather than in the forest is recommended throughout the park. If you make a wood fire On the beach be sure to

wood West of the Flwha and North Fork of the Quinault, only stoves are allowed above 3.500 eet. East of this line only above 4,000 feet. (See water looks cool and re ardiasis, a debilitating Either pack in your owr water, boil stream and with rangers regarding

Temperate rain forests are rare. They can be found only in New Zealand, southern Chile, and here on the northwest coast of the United States in the valleys of the Quinault. Queets and Hoh rivers. What defines a rain rest quite simply is rain-lots of it. On the Olympic coast precipitation averages 145 inches, more than 12 feet, every year. The mountains to the east also protect the coastal areas from severe weather extremes. Seldom does the temperature drop below freezing in the rain forest and summertime highs rarely exceed 80°F. The dominant species in the rain forest are Sitka spruce (1) and western

emlock; some grow to tremendous

size, reaching 300 feet in height and 23 feet in circumference. Douglasfir, western redcedar, bigleaf maple (2), red alder, vine maple, and black cottonwood are also found through out the forest. Nearly every bit of space is taken up with a living plant Some plants even live on others. These are the epiphytes, plants that earth, but also are not parasites. They are partly responsible for giving the Mosses (spike moss 3), lichens, and ferns (licorice fern 4 and sword fern 5) cover just about anything else. Sorrel (6) is also a common ground cover. But because of this dense

ground cover it is hard for seedlings to get a start, because of the con petition for available soil. Many seed lings start out on fallen, decaying decaying vegetable matter, and as they grow they send their roots down the log to the ground. Eventually the log rots completely away and a row of young trees is left, up on stiltlike roots, all in a row. The thick and pro tective vegetation also provides excellent habitats for the animals of the rain forest. In turn, they contribute to the health of the forest by keeping the rampant vegetation under con-

prohibited throughout

the park.