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The Columbia River Guide and Panorama

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From Portland to The Dalles

Myths - Legends - History - Geology
Lewis & Clark Notations

Penland Guide Series

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Columbia River Guide and Panorama

Myths, Legends, History, Geology—Lewis and Clark Exploration, Vancouver Expedition Notes

Price 75 cents

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Foreword

The publishers wish to express their appreciation to the following people from whose books and letters of information much of the material contained herein was received.

Frederick H. Saylor's "Oregoniana" (a collection of stories and legends of Oregon, many of which were written by Mr. Saylor).

Ira A. William's "Mineral Resources of Oregon". This book is out of print but may be had at the Public Library.

Wm, D. Lyman's "The Columbia River".

Lewis McArthur, Sec'y of the Oregon Geographical Board.

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MYSTERY, quaint legends, history as thrilling as the story of the Crusades; towering natural spires, cataracts that tumble from lofty crags, unsubdued forests, make of the Columbia —the great river of the Pacific Northwest—an adventure and a fairyland.

This stream, explored by Captain Meriwether Lewis and William Clark, in the early days of the Nineteenth Century, when they made their epochal overland journey to spy out a land known only as a rumor, floats the ships of the world. It has fish to feed a nation, and its waters keep green the lands of an empire.

Broad, deep and swift, the Columbia has the distinction of being the only river in the Western Hemisphere that rises in one mountain range and breaks through two others to reach the sea.

Along each bank, man has built a highway, and of these, the one designated as the Columbia River Highway, on the southern bank, has already become famous. Travelers from the five continents are unanimous in pronouncing the scenery along this highway, the most beautiful of its kind in all the world.

Much has been written concerning the beauty of the Columbia, but no word painting can adequately describe this masterpiece of nature's handiwork. There is a mystic beauty lurking in its vales and dells, which lifts the soul above the realms of time and space, and makes the beholder sense the presence of the divine.

From the time when the first grey streaks of dawn steal over the eastern mountains, until the last warm glow of evening's painted sunset, fades in the Golden West, the spirit of enchantment enfolds the green forest slopes and the many-hued rock-faced cliffs of the Columbia.

Whether it be the sunny days of summer, or the dull, damp days of December, a mantle of beauty is ever provided for the passing season.

The Columbia is for everyone! Whether it dashes gleefully through the narrow confines of a rock-ribbed gorge, or winds in lordly majesty along its destined pathway, the spirit of welcome is expressed in every movement, not only to the rich and powerful of earth, to the wise and good, but also to the poor, the unhappy, the unfortunate.

For all men, there awaits a welcome and a message, a message which lifts the heart from

the limitations of earth to the joyous liberties of heaven.

COLUMBIA—what a wealth of history that name suggests! Distant centuries tramp pageant-like before us, and we see and hear the men of former years.

"Here lived and loved another race of beings, beneath the same sun that rolls over our heads, the Indian hunter pursued the panting deer, gazing on the same moon that smiles for you, the Indian lover wooed his dusky mate. Here he warred, the echoing whoop, the defying death song, both were here; and when the tiger strife was over here curled the smoke of peace." Upon Columbian shores he worshipped his God, around council fires now dead he told the legends of the enchanted waters, once told to him. Here his children felt the mystic spell, they knew the magic and the fairies and feared the river spirits still imprisoned in solitary rocks and lofty crags.

HISTORICALLY, the Columbia is the mythical river of the West, the Straits of Anian, as the geographers used to call it. It corresponded, as they thought, to the Straits of Magellan, making a northwest passage to the Atlantic.

For 200 years it baffled Spanish, Russian and English explorers; Juan de Fuca, Bruno Heceta, Vitus Behring, the celebrated Captain James Cook, and Vancouver, until at last it was discovered, in 1792, by Robert Gray, an American sea captain, who named it after his ship Columbia Rediviva.

In 1578 the British called the entire Northwest country "New Albion," while in 1792 and 1806 they applied the names "New Georgia," and "New Caledonia" to parts of it only. The Spanish gave "The coast of California in the South Sea" as a name to our entire western shore.

In 1805, the Lewis and Clark expedition sent out by Thomas Jefferson completed its explorations, traveling down these very waters.

It would not be extravagant to say that the history of the whole northwest is centered around this very river. The fur traders and missionaries came here first; the pioneers followed. Their settlements determined whether or not this portion of the northwest should be English or American. Indeed, Fort Vancouver (now Vancouver) was established by the Hudson's Bay Company on the north side of the river (though about a mile east of the present

city) because Dr. McLoughlin, a chief factor of that organization, thought the river would be the dividing line between the American and British possessions.

Under the protecting influence, and often with the direct help of their rivals, the American pioneers poured in and soon possessed the land.

Naturally enough the land around Vancouver was settled first; later, that across the river on the banks of the Willamette.

Lewis and Clark in speaking of the land around the present site of Portland (pp. 258, 288), called it the garden spot of the Columbia, and said that it would be able to support a population of fifty thousand people.

Vista House — Crown Point

VANCOUVER (pop. 12,637), on the Washington side, is located on the place called "Belle Vue Point" by Lieutenant Broughton, of the Vancouver expedition. From this city a very good view of Mt. Hood is to be had. Vancouver claims distinction in that it was once (1846) covered with cinders during an eruption of Mount St. Helens; also in that it was the scene of a sham attack by Indians.

The red men changed their minds upon seeing the strong defenses of the trading company, and went ashore as friends — saying they had come to visit their white brethren.

The trip through the Columbia gorge can be made by train, boat or automobile. There is a highway on either side of the river. The Evergreen Hiway (North Bank Highway) on the

Washington side, is partly paved. The Columbia Highway, on the Oregon side, is paved its entire length.

ALTHOUGH the Washington side is full of interest, it lacks much of the detail that makes the Oregon side so exceptionally beautiful. The Columbia Highway cost about $22,000 per mile, an amount much larger than necessary, but for the fact that it was desired to have the roadway follow a course that would show the scenery to good advantage. For this reason, the Columbia Highway is America's most scenic motor road.

The shortest routes out of Portland (population 258,288) to this highway are Sandy Boulevard and East Stark street. The former becomes Sandy road at the city limits, and the latter, Base Line road. These roads lead over a fertile plain for about fifteen miles to the Sandy River where they merge into the scenic highway.

This broad plain between Portland and the beginning of the highway was once the home of the Multnomah Indians, a peace loving tribe of the Chinook Nation. The Chinooks inhabited the Columbia gorge from the Cascades to the mouth of the river and somewhat southward along the coast. The Multnomahs once held the whole Willamette valley, but were driven northward by the warlike Callipooias, a tribe thought to be of Apache origin. Lewis and Clark mentioned that this rolling plain abounded in deer and elk, and added that the land just west of the Sandy River would make a "good wintering place."

Fairview (population 184) and Troutdale (population 191) are little towns at the western edge of this broad land.

* * *

Across the river, on the Washington side, is Mt. St. Helens (9750 feet high), a snow capped mountain, conical in shape, and easily visible from the plain just crossed. This mountain was named after Lord St. Helens, by the Vancouver expedition. The Indians called the mountain "Loo-wit" and "Lou-wala-clough" (smoking mountain). Lewis and Clark called it Mt. Hellen and made the following comment: "It is emensely high and covered with snow, riseing in a kind of cone, perhaps the highest pinecal from the common leavel in America." They also said that they first saw this mountain while on the Musselshell River (Montana.)

THE distant mountain, easily seen on a clear day, and but slightly to the right of the line of travel, is Mt. Hood (alt. 11,225 feet). Mt. Hood is the pride of Oregon and was long considered the highest mountain in the West. Oregonians were almost heartbroken when first they heard that Mt. Rainier-Tacoma is about 2000 feet higher. Since that time, Oregonians have consoled themselves by saying that Mt. Hood is the more beautiful.

The first recorded ascent of Mt. Hood was in 1854. A Mr. Belden claimed the accomplishment of the feat in October of that year — the altitude he gave as 19,400 feet. He claimed that his party ascended as high as possible with showshoes, then with ice hooks and spikes.

When they reached a point some 18,000 feet high, respiration became very difficult, owing to the rarity of the atmosphere. At length, the blood began to ooze through the pores of the skin, like drops of sweat, their eyes began to bleed, then the blood gushed from their ears. Then they commenced their downward march. At the point where they commenced the ascent they had left their pack mules and two men to guard them. The men went out hunting, and when they returned, found that the cougars had killed two of their mules.

The above account was first published a short time after Mr. Belden made the ascent. About twenty years later, after the true height of the mountain was known, the account was published again. The author of the later book put in a foot-note saying: "Lying seemed to have been reduced to an art in those days."

Mt. Hood is now climbed annually by hundreds of people.

* * *

AT the Sandy River, called "Quicksand River" by Lewis and Clark, the highway proper begins. If the traveler comes in the spring of the year, and it attended with good fortune, he may have the opportunity of seeing the "smelt run," as it is called, when the river is black or glistening with these small but delicious fish, on their way up the river to spawn. If the traveler has the time to spend, he should walk to the water's edge, where he will often find it easy to dip out several of the fish at a grasp.

For the next six miles the roadway winds through a fine farming country. It passes through several villages, and gradually rises until an elevation of 925 feet is reached.

Recent excavations on a bench of land, along the river near Corbett, have produced many Indian relics. These seem to verify the stories told by the early settlers, which say that Casanov, the last chief of the Multnomah Indians, kept a lookout station at this place to guard himself against attacks from "up the river." Casanov was chief at the time of the "great sickness" (measles), a disease that almost exterminated his tribe. Before this plague Casanov not only had ten wives, but he also kept an hired assissin. Casanov killed the latter when he found him trying to run off with one of the wives. Dr. McLoughlin, of the Hudson's Bay Company, had great confidence in Casanov and considered him a very noble Indian.

During a "Smelt Run" Near Troutdale

From Summit to Crown Point, the road descends 200 feet. At the latter place, Portland people have spent almost $100,000 in building the "Vista House," a monument dedicated to the Oregon Pioneers who came to the land of promise through the Columbia Gateway. It is a fitting memorial to the immigrants who had come across the "great American desert," only to lose their lives in the fearful rapids when but a short distance from their goal, as well as a monument to those who suffered from exposure in making the terrible passage.

With a view extending far up and down the river, this site presents a picture unexcelled in grandeur. Across the river and a little to the west is a prominent point of land, called Point Vancouver. It was the camping place of Lieutenant Broughton. It marks the highest point reached by him in his explorations, and was named by him in honor of his commander, Captain Vancouver. Vancouver was sent to search for the river that Captain Gray

View Toward the East from Crown Point

had, unknown to him, discovered shortly before. Beyond this point are the cities of Camas (population 1843) (an Indian name for an edible bulb similar to the hyancinth), and Washougal (population 765).

Just over the parapet of the lower driveway (on the Oregon side) can be seen a tall monolith, called "Rooster Rock," said to have been an object of Indian worship.

Here the beautiful Makiah came to question the confined spirit about her future lover, but was prompted by the calling of a bird to look among the rushes along the river bank where lay the wounded warrior, Maniquon.

About these people a tragic story is told, as interesting and as worthy of preservation as any myth of the Nibelung Ring that has inspired Wagner to cherish the memory of the tales of the old world.

* * *

LONG ago, the Wishram tribe held the fishing grounds at Tumwater (Celilo) Falls, several

miles east of The Dalles.) They were a large tribe and a brave people, but were ruled by a cowardly chief. Of their fishing grounds the warlike Wascos had long been jealous. The time was ripe for the Wascos to secure it. With chosen warriors they attacked their enemy and after a short battle, conquered them. Before the battle was over the cowardly chief of the Wishrams mounted a fleet pony and escaped to Cape Horn. Here he was joined by a faithful wife. Here his daughter Makiah was born.

Twenty-four times the winter snows had come and gone in the land of the Wascos, when Maniquon, the son of the conqueror of the Wishrams, prepared to go through the Columbia Gorge alone. This was the last achievement necessary to prove to his people his right to be a chief.

Wounded and dying he was found by the beautiful Makiah, a girl of fifteen summers, on her way to consult the oracle at Wootlat. She put him into her canoe and paddled to her home across the river where she cared for him until he returned to health.

Then at evening time, they would steal out and take long rides upon the wide river and speak of love and happiness to come. Maniquon told Makiah of his coming power, of his wealth in horses and promised that some day with her at his side he should rule broad lands whose war trails led to distant nations. Then with his hands raised toward the heavens and his eyes fastened upon the blue sky above, he cried, "Witness this vow, O, Manitou."

Many moons passed by, but Maniquon still remained. He longed to return to his home again for he had heard that Makiah was the daughter of the cowardly chief of the Wishrams. Not even his love for her would permit him to marry her now. He told his benefactors that he must go home for a while, but that his absence would not be long. He tried to leave unaccompanied, but the attentive maiden asked to start him on his journey. In her presence he could not speak of the strife within his breast.

Arriving at the southern side of the river, he looked up at the golden tresses of Wah-se-ah-le (Multnomah Falls) waving in the sunlight Maniquon, startled with fear, faced the astonished Makiah. He denounced her as a sorceress and disappeared upon the shore. The brokenhearted Makiah returned to her home once more.

After many years had passed, the Multnomahs planned a great gathering to be held on Wapa-

too Island (Sauvies Island) at the mouth of the Willamette. Makiah was now the wife of their great chief. Indian rulers and their families came from distant lands. Maniquon brought his wife and daughter to the council. Though Makiah recognized Maniquon, she was not known by him. The first day's revelry was enjoyed by all, save two, these two were so engaged in mutual love that for them the other pleasures had no interest. These two were the daughter of Maniquon and the son of Makiah.

The following day the guests were taken up the river to a high mountain (Council Crest) where a large council fire was built.

Looking about her, the watchful Makiah noticed the devoted pair. Seeing an opportunity for the revenge long hoped for, she fitted an arrow to her bow and shot the guiltless maiden through the heart. Turning around, Maniquon saw the stricken body of his child. He lifted her from the ground and threw her lifeless form upon the funeral pyre, upon whose flames the ardent lover also cast himself, that he might be consumed with the same fire. Recognizing the fleeing Makiah, Maniquon started in pursuit.

Nearing the edge of the cliff, Makiah turned about and with a strong clear voice cried out, "Witness the vow, O Manitou. Vengeance is mine, the last signal fire of the Multnomahs has been kindled, and by it Manitou summons us to judgment. Come." Turning about, she jumped into the river.

Maniquon was never seen again, but his last footprints were found on the water's edge beside those of the deserted Makiah.

* * *

ACROSS the river from the Vista House and a short distance to the right, is the extinct volcano, Mt. Zion, 1458 feet high. It is also called Biddle Butte. A good road leads to its summit, which in turn offers a far-reaching view up and down the gorge.

Below Mt. Zion, and a little to the east, is Cape Horn. This point was named in 1812 by boatmen who experienced great difficulty in rounding it during stormy weather.

Continuing the journey from Crown Point, the Highway makes a series of graceful curves. At the "figure 8" it descends 205 feet in a forty acre tract, with a road but little more than four thousand feet long. At this point the roadway drops to an elevation but little higher than the

Young's Creek Falls, Sheppards Dell

river, which height it maintains for many miles.

Most of the water-falls along the river, and by far the more beautiful ones, are found on the Oregon side. Beginning with Latourelle, there are nine of these clustering on the southern side, in a space of as many miles.

THE most important of these falls were made by the crafty god, Speelvie, to wreck vengeance on his enemies. Latourelle Falls (224 feet high), which now bears the name of a pioneer family, is really but the flowing tresses of the wicked beaver woman, Was-ke-wa, a wife of Speelyie.

Was-ke-wa once took her children and tried to desert her husband. Speelyie followed her and tried to persuade her to return, but neither she nor her children would listen to his plea. The outraged husband then grabbed his wife and threw her to her death over the mountain top, allowing only her beautiful hair to be seen. The children turned into pillars of stone can be seen even now, standing but a short distance from the Highway.

At Sheppard's Dell, a stream called Young's Creek, flows down a wall into a charm-

ing cove. The falls seem too shy to show itself, yet its beauty can be seen from the bridge or by descending the rustic steps, which lead down to it.

The bridge at this point reaches across a chasm 150 feet wide. Its 100-foot single arch span is an example of the combined artistry and engineering that has made this highway seem to be a growth of nature, rather than the work of man.

Bridal Veil is a thriving lumbering town. The highway bridge crosses above the falls, from which the village derives its name. Unfortunately, much water has been taken from the stream above to supply a lumbering flume, with the result that at some seasons of the year, scarcely any water comes over the precipice.

Near the middle of the river a large isolated rock can be seen . Legend says that once the giants fought across the river between Fork Rock and Cape Horn and as night drew near, a wearied Titan threw this stone that failed to go across.

Bishop's Cap — From Sheppard's Dell Bridge

Mist Falls drops from its lofty height of 1200 feet, shimmers in the sunlight and disappears in vapor. It is said to be even more beautiful than the justly famous Staubbach Falls of the Swiss Alps.

Wah-Kee-Nah Falls — 242 Feet

Wah-Ke-Nah Falls (an Indian name, meaning "most beautiful") is a succession of falls coming over giant steps from an elevation of 242 feet. The upper falls, which help to compose it are known as Little Fairy Falls and Ghost Falls. Accommodations are provided for picnic parties at Wah-kee-nah . It is also the station of the Motorcycle Highway Police patrol service.

Possibly the most beautiful short climb on the highway is to be had by taking the path at Wah-kee-nah, climbing to its juncture with "Perdition Trail," then following the latter until it stops at the top of Multnomah Falls. From there descent is made to Multnomah by way of the Larch Mountain Trail. It takes about one and one half hours to make this trip.

Via the highway, one half mile of traveling brings us to what has been called the "queen of cataracts", Multnomah Falls. Its total drop is 610 feet, consisting of two falls, the upper 541 feet, and the lower 69 feet. Its origin is similar to that of Latourelle.

SPEELYIE, creator of the Indians, once became so captivated by the graces of one of his creations, that he took her to wife. Two sons were born, who, coming to manhood, fell in love with the same woman — Wah-se-al-li, the goddess of sorcery.

Multnomah Falls
610 Feet High

Wah-se-al-li could never decide between the two. For a time she would seem to favor the one who was warlike and haughty, then later she would smile upon the other, so gracious and bland. Again, she would care for neither, and escape from their attentions by dashing up the mountain side and disappearing behind the cliffs.

Speelyie, outraged at the conduct of the sorceress, told his sons that he would take them to her and make her choose between the two, and that in any case the loser should abide by her decision. Each confident of success, agreed.

On arriving at the home of Wah-se-al-li, Speelyie caused the sun to shine. The goddess, thinking the sunshine for her, came out. She ventured to think that possibly she could make Speelyie a victim of her wiles; but Speelyie thunderously commanded her to choose between his sons.

Begging for time to decide, Wah-se-ah-li entered her canoe and tried to escape, but a storm caused by the angry Speelyie caused her to return. Her reason seemed to leave her, for in an unguarded moment when pressed for an answer, she replied, "My ancestors were of the gods, your sons of earth, the eagle mates notwith a dog."

Spellyie became violent. He caught the escaping Wah-se-ah-le determining to make her pay for her rashness with her life.

Turning about he saw his jealous sons engaged in mortal strife. Placing a rock upon the hair of the struggling sorceresss, he ran to separate his sons. They accused their parent of being the cause of their unhappiness and declared they would have revenge. They would lead the people to open war against their father. The flatterer, with smooth words would incite the people, the warlike son should lead them in the battle.

The grieved Speelyie decided that he must punish his sons. He did not wish to blot them out of memory, but he did wish to make them permanent examples to the people. He decided that the flatterer should become a lone rock (Woot-lat) far below, where his imprisoned spirit would warn the anxious wanderers of foreshadowed harm or good. The warlike one should become a high rock (Beacon Rock) left standing alone, with sides so high and sheer that his spirit could never get down. Here he has dwelt through the ages hearing only the shrieking of the winds above and the moaning of the waters below.

As for Wah-se-ah-le, she sought to tear away from the rock that held her. In her frenzied attempt, the rock and earth beneath her gave way, and left her hanging from the recessed cliff thus formed. She begged for mercy, but the relentless Speelyie would not forgive. Still her golden hair. glistening in the sunlight, looked so beautiful that he cut it from her head and hung it over the cliff where it still gleams in the sunlight, teaching folk to be faithful in love and thoughtful for the feelings of others.

Here the Lorelei maiden of the Columbia is imprisoned, the noise of her sobs is heard in the dashing water bewailing a fate that shall never end.

TRADITION also has a story. Once an Indian maiden, beseiged by her lovers, vowed she'd climb to the top of these falls and leap over to her death, but was kept from her rash design by a suitor who loved her so much that he offered to give her up if she would desist from her mad purpose.

* * *

After leaving Multnomah, the highway follows along the base of the cliffs. For a time

Oneonta Tunnel

it goes almost over the water's edge upon a viaduct, then upon a shelf supported by a rock faced wall of dry masonry. Later it leaves the river and continues to follow at the foot of the heights.

Far up, on the right, silhouetted against the sky, are two rock crags, Winema Pinnacles, towering 1500 feet into the air. Winema was the Pocahontas among the western Indians, having saved the lives of several soldiers in the Modoc war.

A short distance further takes us to one of the gems of the highway, namely: Oneonta Gorge. It extends eight hundred feet back from the pavement, a moss covered chasm. At the farther end is the Oneonta water-fall, 100 feet high. A trail has been built that leads back to the falls.

Oneonta Tunnel is just ahead. It is of interest to note that the immense weight of over two hundred feet of rock is held up by an eighteen foot wall between the roadway and the track.

On the side of this promontory, facing the river is the profile of a large face. This can be made out easily when the tunnel is approached from the west.

Oneonta Gorge

Horsetail Falls is just beyond. The water drops 208 feet to a pool below, and gives a cool breeze to the Highway that runs so close.

A stretch of level highway takes us past receding bluffs and towering crags far enough away from the highway to permit us to view the summits hundreds of feet above. St. Peter's Dome, on the edge of the heights is a well named monument of stone.

On the water's edge, are several little towns, Dodson and Warrendale. Across the river is the little town of Skamania (the Indian name for "peace and plenty.")

McCord's Creek is the location of the first of the many fishwheels that have since been placed upon the shores of the Columbia. Every spring the salmon, though salt water fish, come to fresh water to spawn. They follow the banks of the rivers, seeking the smaller streams which they ascend.

They sometimes jump bodily out of the water as they climb the rapids and falls until at last they reach a quiet pool where they deposit their eggs. True to instinct, they never ascend a river whose source is toward the sea.

From McCord's Creek bridge, a good view of Elowah Falls (289 feet) can be had. A few feet beyond the east end of the bridge in the embankment on the right is a petrified tree of some coniferous forest. Many such were found in the early days when the woodsmen, seeking fuel, found the logs were made of stone.

Across the river is the huge monolith, Beacon Rock, the prison of Speelyie's warrior son. It is 850 feet high, 150 feet higher than the Washington Monument and though it covers about the same amount of space, it is almost twice as high as the Great Pyramid of Gizeh. Biddle Trail, little more than 4000 feet long, now leads to its summit. Before 1901 no white man was ever known to have ascended it. For a long time there was a standing reward of $1000 to anyone who would plant the Stars and Stripes upon its top. In that year, however, the rivalry between two steamboat lines became so keen that several men of the Regulator line ascended it and planted their banner upon it. The achievment was later repeated by the competing Oregon Railway and Navigation Company.

INDIAN tradition has a story. According to it, the daughter of the head chief of this locality slew the lover of his daughter, whereupon she climbed the rock and was never seen again.

Oneonta Falls

The story is as follows:

The maiden Wehatpolitan loved and was loved by the young chief of a neighboring tribe. He sought her hand in marriage, and sent a messenger to her father to beg his consent. The father slew the messenger. Resolving not to be defeated in their love, the young people were secretly married.

Being satisfied that he had broken off the attachment between them, the father gave Wehatpolitan to another chief in order to accomplish certain designs. Then he heard of the clandestine meetings between his daughter and her lover. Affecting friendship, he sent for the young man. His message promised forgiveness and assured the lover that nothing would longer separate him from the maiden whom he loved so much. The young man went, but was treacherously murdered.

A short time after this, a child was born to the broken-hearted Wehatpolitan. Her father declared that the child should also die like its parent. Learning this, the girl and her child vanished from among the people. After days of search, without finding her, some one heard the faint wailing of a child upon the rock. The father called to Wehatpolitan to come down, but she did not return. Conscience stricken, the father offered large rewards to anyone who would ascend and bring his daughter and her child to him. At last, after several futile attempts, he determined to go himself. Bidding his people good-bye, he started on the ascent from which he was never to return. Eager eyes from below saw him for the last time as he disappeared over the summit.

The wailing ceased and nothing was ever heard of the cruel father or of his children whom he had wronged. The Indians think that when he reached the top, he discovered his dying children and lay down with them to die.

A Stretch of the 4000-Foot Biddle Trail Up Beacon Rock

Whenever the west winds steal gently up the valley, the wailing of Wehatpolitan can be heard above the waters, and the valley people think that her spirit is sobbing because it cannot be among the departed of her people.

There is also a story that says that the rock is hollow, and that the bodies of the dead of former years have been turned to stone and placed within.

Arrow and spear heads found at the base differ from the others found in that vicinity. This may suggest some of the warfare that was waged among these people in the days of long ago, when whole nations and tribes were driven out or exterminated by the unknown conquerors of the past.

Moffett's Creek Bridge

LEWIS and Clark gave the rock its name, but spelled the word "Beatin." They paced the distance around it and estimated it as 400 yards. The height they modestly estimated as 600 feet. Here they first noticed the influence of the tides and concluded that they were but a few miles from the ocean.

When the annual fur brigade of the Hudson's Bay Co. arrived here with its load of furs from Canada and the Red River country, the voyagers burst forth in the home-coming songs. They had passed the last rapids —they had made the last portage; their danger from the Indians was over, and they were almost at the end of their voyage.

Another mile to the east takes the traveler to Moffet Creek. This stream is crossed by the largest flat three hinged arch bridge in the world. It has a span of 170 feet, in which the supporting arch of concrete rises only seventeen feet higher in the middle than at the ends.

It may be of interest to note that the bridge center rises and falls about four inches as the temperature varies from summer to winter.

At Bonneville, is situated the largest trout and salmon hatchery in the world. Here the eggs of Rainbow trout, Royal Chinook, and various kinds of salmon are artificially propagated.

In 1805, Captain Clark wrote "One man giged a salmon trout which we had fried in a little bear's oil, which a chief gave us yesterday, and I think the finest fish I ever tasted."

In pools about the hatchery, young fish of different sizes may be seen. When the young salmon are old enough they are marked by clipping a fin. Later, they are put into the river which they instinctively follow to the ocean. They stay there until mature, when they return to the very river from which they came, where they spawn and die.

Fish Wheel

BONNEVILLE is named after the famous Capt. Bonneville, whom Irving has immortalized in his famous book, "The Adventures of Capt. Bonneville." Bonneville was a soldier of fortune and an explorer. He tried to establish a fur trading post on the Columbia but was unsuccessful.

Eagle Creek, approached over a beautiful stone faced arched bridge, is the favorite camping place on the highway. All the comforts, including plenty of fuel, are provided for auto-campers by the Forest Reserve. The stream is known for its trout and for its rugged beauty. A trail has been made which leads back to Wahtum Lake 3000 feet above the sea. Two miles back from the highway is the justly famed Punch Bowl and Metula Falls.

Just east of the camp, is Sliding Moun-

tain. The enormous weight of rock here presses so heavily on the softer strata beneath, that it pushes the latter toward the river. The railroad tracks on both sides of the river have to be adjusted frequently.

Below this point is Bradford's Island, the place where Colonel Steptoe and Lieutenant Phil Sheridan (later, the daring cavalry leader of the Union Army) hanged nine Indians condemned for taking part in the massacre at Cascade Locks.

THE roadway is now at the "Narrows," or the "Great Shute," as Lewis and Clark called it. Here the river drops 60 feet in two and one half miles, twenty-five feet of which is at the locks. This is the crest of the Cascade Range, once called the "Presidents' Range", in which all the snow covered peaks were named after our Presidents. Mt. Adams on the north and Mt. Jefferson in central Oregon are the only two that retain these names . Mt. Hood was then called Mt. Washington; Mt. St. Helens was called Mt. John Adams.

In the early days portages were made around the rapids at the "Narrows," vestiges of which can still be seen. On the north side was Bradford's portage, on the south was Ruckle's portage. A flood in 1894 washed out about a mile

Rodney Falls — Near Mt. Hamilton (Washington Side)

of the railroad track along the river bank on the Oregon side. The railroad on the Washington side was not yet built. The old "Middle

Block House" at Sheridan's Point was also destroyed at this time. Sheridan's Point is on the Washington side about halfway between Eagle Creek and Cascade Locks, and can be identified very easily from the highway.

In 1896 the government completed the locks at the Cascades at a cost of about four million dollars.

THERE is an Indian legend which says that once there was a natural bridge across this part of the river, with Table Mountain as the north abutment. This "Bridge of the Gods," as it was called, remained until the people became so wicked that the Great Spirit, Sahale, broke it down and the great stone from it fell and choked the river.

* * *

Long, long ago, nobody knows how long ago it was, a land was given to two brothers, the older of which wanted more than his share, so claimed it all. Grieved at such conduct, the Great Spirit carried them to this far western land by this broad river, where he gave each an arrow to be shot high into the heavens. He decreed that each must then go where his arrow fell. To one was given the land on the north side of the river, to the other the land on the south. The Great Spirit commanded them to live as brothers should. Then to be a reminder of his words and to unite the brothers as if in one land, he placed the broad "Tamanowis" bridge over the intervening river, which bridge should remain as long as peace was kept.

However the love did not last long, for the people soon became very wicked, so wicked that the Great Spirit hung a mantel of clouds over the sunlight and kept the people in darkness for many days. Snow and wintry winds came. The people became numb with cold. They decided that if they could but get some of the fire that an old woman named Loo-wit kept burning in her cave, they could keep themselves from death, but Loo-wit kept her fire burning to appease the outraged deity. They tried to steal it from her, but the braves, benumbed with cold, could not overtake the faithful Loo-wit.

The people pled for forgiveness and asked to have the warmth of former days returned to them again.

As a reward to Loo-wit for her faithfulness, the Great Spirit offered to grant any request that she might make. She asked that she might become young and beautiful and that she might keep an ever-burning fire upon the Tamanowis

bridge as an emblem of his goodness and a warning against wrong doing.

Many suitors worshipped at the feet of the changed Loo-wit, now so beautiful and young, but only two among so many were given any encouragement by her. One was Wi-ye-est, the other Klickitat. One came from the valley people, the other from the upland plains. The contest was taken up by everyone until jealousy and hatred took the place of the promised love, and wickedness abounded everywhere again.

The Great Spirit pronounced judgment against the race. He decreed that the people should have snow and cold in winter but as a recompense could have the fire to keep them warm. For the principals he reserved another fate. They should be changed into lofty forms for an enduring example of what their evil had brought them to.

The Tamanowis Bridge was broken down. Wi-ye-est was put on the high mountain to the south, (Mt. Hood); Klickitat was sent to another on the north (Mt. Adams), while the young and beautiful Loo-wit was put between the two (Mt. St. Helens). Here they stand, clad in their snow white robes, an everlasting monument begging people to do good and walk in the paths of peace.

Metula Falls and Punch Bowl
(Two Miles Back from Eagle Creek)

IN his book, "The Bridge of the Gods" (a romance of Indian Oregon), F. H. Balch vividly describes the falling of the great bridge, and the consequent breaking up of the Willamette confederacy; the death of Multnomah, chief of that tribe, and the tragic end of his only child, Wallulah.

Wallulah was the daughter of Chief Multnomah and his Asiatic bride, a Hindu woman of high caste, whose ship had been driven to the Oregon coast and wrecked. Here she was rescued along with much of the treasure aboard, consisting of silks and jewels. The daughter grew to be like her mother—intelligent and beautiful. While the mother lived the two were constant companions, after her death the daughter secluded herself and spent her time among the things that had been her mother's. Such a person was Wallulah, unlike any of the peopeople about her.

According to tradition, the power of the tribe would break with the falling of the bridge.

On the last day of the great council of the Willamette confederacy, everything seemed to be in a state of turmoil. Wapatoo Island, the scene of the gathering, was teeming with its hundreds of dissatisfied people. Everything seemed at the point of dissolution, one rebellion had already been stopped, others were brewing, when lo, a faint and distant rumbling, growing louder and louder until it became a roar proclaimed to the tribes the long expected event—the "Magic" bridge had fallen and the confederacy was no more.

Subsequent events must not be mentioned. Suffice it to say, the lover of Wallulah was slain and she was given to another, a merciless war-chief, whom she virtually hated.

The council was broken up, the unhappy Wallulah was to be taken from her home and its memories to a distant land among strange people. Broken hearted, she prayed that death might come to her relief. Arriving at the narrows (caused by the falling of the "Magic" bridge) her canoe was caught in the rapids and she was drowned. Her body was recovered and buried nearby on the northern side. The grave was covered with a mound of stones after the custom of her people. The funeral procession passed on.

* * *

An iron suspension bridge is being built to span the river where the mythological one once was. This will connect with the Evergreen Hiway on the Washington side and complete a hundred mile loop road with Vancouver and Portland at the western end.

CASCADE LOCKS has been the scene of Indian troubles since white men first explored the river. Lewis and Clark had great trouble in keeping the thieving Indians from stealing their baggage. The fur companies paid toll for their passage up the river. The immigrants did the same.

In 1814, the Northwesters, a fur company that held Ft. George (Astoria), decided to teach the Indians a lesson for the killing of two trappers. They ascended the river with eighty-five men and two cannon and camped in an exposed position on Strawberry Island. The two native interpreters that accompanied them, were so impressed with the formidable array that they could not sleep nights thinking of the destruction about to be visited upon their neighboring people.

After five days of fruitless parleying in which the Northwesters lost fifty guns and other equipment taken from their camp at night, besides having many men wounded, they returned again to Fort George to have a council of war. In an expedition shortly after, the Northwesters employed strategy and regained their stolen guns and much of the other property, without the shedding of blood.

This part of the gorge was occupied by the Klickitat tribes, a nation very skilled in the manfacture and use of weapons. Their power was felt from Puget Sound on the north to the valley of the Umpqua on the south. They have been called the Iroquois of the Pacific. The word "Klickitat" means "robber" and seems to have been rather appropriately applied.

Because of the trouble which threatened, three forts were built at the Cascades. The upper block-house, the middle block-house, and Fort Raines (the lower block-house). In 1856 the Yakimas planned a massacre in which many whites were killed. At that time the middle block-house was the only fort there. It was defended by only seven men and a corporal.

Early one morning when men were at their work, the Indians sprang from their coverts, and with guns, tomahawks, and firebrands, determined to close the gateway to the Pacific. Many of the whites gathered at a store where they endured much suffering but held the Indians at bay until help arrived. Word was somehow received at Vancouver and The Dalles. Phil Sheridan with forty men from the former place and Colonel Steptoe with soldiers from Fort Lee (The Dalles) came and dispersed the Indians. Pieces of shell are still found which

attest the fervor with which Steptoe's howitzer was used on that occasion.

STEVENSON(population 348), and Carson (population 250) on the north side, and Wyeth on the south, are thriving towns that hug the water's edge. Wyeth was named after the unsuccessful fur trader, Nathaniel Wyeth, who established Fort Williams on Sauvies Island at the mouth of the Willamette, but could not compete with the Hudson's Bay Company.

From Wind Mountain (on the Washington side east of Carson) Speelyie once blew upon the Salmon God who had become too greedy. Powerful gales still sweep the river around this mountain. There is a striking profile of a great stone face on the river side of this mountain. It is known as the Washington Sentinel. Wind River was called Crusat's River by Lewis and Clark. Peter Crusat was considered the best boatman in the exploring party.

Shell Mountain, on the Oregon side, opposite Wind Mountain, for many years seemed to be an insuperable obstacle to the completion of the highway owing to the loose stones of which the mountain is composed. When the Pioneers arrived here, they loaded their belongings onto rafts and floated past. Later, an insecure road

Wind Mountain

was made part way up on the mountain side.

Across the river is Collins, behind which is the Columbia National Forest. On the Oregon side is Viento (windy). The sunken forest of which Lewis and Clark spoke is visible near here during low water.

Directly south of Collins, on the Oregon

side is Mt. Defiance (4960 ft.) the highest mountain in America completely covered with timber.

At Mitchell's Point, the traveler obtains an inspirational view of the Columbia. The highway goes through a 385 foot tunnel lighted by five windows. The view obtained here is said to be more wonderful than the famous Axenstrasse of the Swiss Alps. Its name is derived from a man who leaped to his death from this place while fleeing from the Indians.

The natives called its summit "Storm King," because they said it separated the storm clouds driven up the river, sending part toward Mt. Adams and part toward Mt. Hood.

Several more miles takes up to Hood River (population 3195) a word that has almost become synonymous with good apples and fine fruit. The city is situated at the head of a rich valley watered by one of the glaciers of Mt. Hood.

The Mt. Hood Loop Road, from Portland, encircles the mountain and meets the Columbia Highway here. It is a scenic route of unusual interest.

Underwood and White Salmon (population 619) are across the river. One writer has said

Mitchell Point Tunnel

that when the latter city is viewed from the river, it is the "Swissiest" looking city in America. Perhaps no better view of Mt. Hood and Mt. Adams can be had from any place along the river than from the cliffs on the northern side.

A series of graceful curves with easy grades takes the traveler from the Hood River level to the heights beyond.

Bingen on the Rhine has no more beautiful setting than the Bingen that nestles at the foot of the hills on the opposite shore.

Mosier (population of 259) on the Oregon side, is a beautifully situated town whose delicious apples have won praise wherever shown.

FROM a point on the Highway, about two miles east of Mosier, the traveler can see the ancient burying ground of the Indians. Memaloose or Sepulchre Island. On it is a tall white shaft, the monument of Vic Trevett. Though this pioneer had fought the Indians in the Cayuse War, he still considered them his friends and made the dying request that he be buried with those whom he had never known to break a promise. Strange though it may seem, Trevett was the last man, white or red, to be buried at this place.

When Lewis and Clark passed by this island they noticed the "dead houses" upon it and going inside, found the remains of the recently deceased as well as the bones and belongings of others long dead. It was the custom to place everything with the deceased that would be required in the after life. Occasionally relics are still found upon the island, but the flood of 1894 swept away the "dead houses" and the deposits of the centuries have been taken to the sea.

According to Indian legend the "dead" came to life at night time and had their gatherings

Indian Life at Underwood

as had been their custom while still alive. But that was long ago, and had it not been for the disobediance of the mother of a young chieftain probably it would have never stopped. Here is the story the Indians tell:

Once there lived a young chief and maid whose love for one another was so great that they found their only joy when they were together. But the young chief became very sick and died and was carried away to the spirit land. The girl's grief became so great that it

seemed she could not live. Her lover in the spirit land could find no joy without her so he longed for the day when she too should join the spirit people. Thus it happened that the girl suddenly had strange visions at night calling her to the spirit land and to her lover.

Following the directions given in the dream, the father of the girl prepared a canoe and in the darkness of night pushed from shore toward the island of the dead.

Suddenly they caught the sound of beautiful singing and dancing coming faintly over the water. It grew more beautiful as they neared the other side. Four spirits met them, greeted the girl, and bade the father go away. They guided her to the great dance hall where she met her lover. He was stronger and more handsome than when on earth. The night was one of great joy. Toward daybreak, when the first light of the morning flashed over the eastern hills, and the chirping of the birds by the water edge announced the day dawn, the singers and dancers fell asleep. The maiden with them. When she awoke she found herself among a host of hideous skeletons. Though her lover was near her, his head was but a gaping skull, gazing derisively at her.

Screaming with terror, she rushed to the edge of the island, found a boat and returned to her parents on the other shore. Fearful lest the girl should offend the spirits and bring destruction upon the village, her father rowed across to the spirit land again that night. Here she met her lover again and spent another night of unbounded bliss. After a time, a child of indescribable beauty was born to the girl. It was half spirit and half human. The spirit bridegroom wishing that his mother might see the child too, had a spirit messenger bid her to the island.

Only one condition had to be met. The child must not be seen until the eleventh day. Although the mother agreed to all this, an evil moment came and she lifted back the coverlet and saw the sleeping child. The child died. Overcome by this act of foolishness and perfidy, the spirit people decreed that they would never more have council with the living.

ON the Washington side near Memaloose Island is a turbulent mountain stream, called Major Creek. At its mouth is a rock faced cliff called Coyote Wall. According to legends, Speelyie once passed by almost famished for food; he did something to satisfy his appetite that immediately filled him with a sense of shame and remorse. Fearing that his secret would get out, he started to build a high wall about it, but as

fast as it was hemmed in on one side, it would break out at another. Disheartened, he tried to escape from it by hastening on his journey, but the first person he met spoke to him of his crime. Every village he went to knew of his wrong doing before he entered it.

The Highway loses none of its interest as it approaches The Dalles. At one moment the roadway is close to the river's edge, at another it is far back, winding among the valleys, for a time it is close to the river's level, a little later it is on top of a precipice. Grandeur, the grandeur of mass and color is all around.

At Rowena Loops, the roadway goes through a series of graceful loops, that viewed from an engineering standpoint, make this place the climax of the highway.

Just beyond these "loops" is Grand View Mountain or Ortley Point (1750 feet high) from whose lofty crest, thousands of acres appear to be rolled out like a scroll. This viewpoint is reached by taking the old "seven mile hill" road from either Mosier or The Dalles. It was the only road that connected these two places for many years.

At the mouth of Mill Creek (The Dalles) and

Twin Tunnels

near the present site of the large oil tank, Lewis and Clark made their camp. They called it Fort Camp, because of its fortified position. From this place, they made celestial observations, to find their exact location.

At The Dalles, another portage was made in the early days. The river here is very narrow and of great depth; in fact, the river seems to be turned on edge and in places where it is

only about 200 feet wide, it is said to be over 400 feet deep. The name "The Dalles" is derived from the French, and means "flat stones."

The Indians have an account of how the river became so narrow. They say that long after the Great Spirit had broken down the Tamanowis (magic) Bridge, Klickitat and Wi-ye-est still quarrelled over Loo-wit. Sheets of flame burst from their peaks and they threw large rocks at one another. Being unable to throw far enough, the rocks fell into the river and blocked it.

The Dalles (pop. 5807) was the end of the "Oregon Trail," and the "Overland Trail," via the Columbia River "cut off." From this point westward the difficulties of the pioneers became greater. Many a pioneer, when almost at his journey's end, perished here from sickness or exposure. Many tried to float their things down the river on rafts, but were drowned. Others finding it impossible to drive their oxen through mud knee-deep on the improvised roads, were forced to leave their belongings behind them. Often without food or shelter, these heroes of the past still pressed forward, until they had reached the land of promise or occupied unmarked graves, when but a few miles from their destination.

THE distance from The Dalles to Portland, which often took as long as four weeks to cover, can now be made in as many hours.

In 1814, the Northwesters, from Astoria, the rivals of the Hudson Bay Compnay, had trouble with the Indians here. While going up the river, they were approached by Indians who tried to rob them. After fighting in vain with their oars, they resorted to their guns, and in the affray which followed, two Indians were killed. The trappers immediately intrenched themselves with the determination to sell themselves dearly. The hills about soon blazed with signal fires. Forty-eight Northwesters were sent ashore to arrange for a parley, and pay for the dead, but the Indians refused to talk about the matter. The fate of the whites hung in the balance. At the critical moment, Morning Star, a young chief, came forward and eloquently pled for the whites. He gave them credit for the success which his people had attained in conquering their enemies —through the use of the white man's gun— ending his plea with the threat that if the Indians should attack the fur traders, he and his men should die with the whites.

The Dalles was known as Fort Lee during the

Cayuse War. The old fort being located where the railway station now stands. The old Methodist Mission given up at this time, was situated on the ground now occupied by the high school.

Beyond The Dalles, the nature of the country changes. Instead of having an opulent growth of vegetation, the land becomes almost devoid of it. Scarcely any rain falls here; yet, it is one of the greatest wheat raising sections of the United States. Farmers depend upon the snow of winter to moisten the soil to produce the grain. The climate here is different, too, for instead of having tempered weather throughout the year, the summers are warm and the winters are very cold.

The Walla Walla brothers of Indian lore keep the land benumbed with snow and ice, until, at last, the Chinook boy steals out in the night time and beginning with the mountain sides, breathes his warm breath upon the land and makes it warm again.

GEOLOGY

Geologists tell us that the entire Willamette Valley was once covered with water, making what they now call the "Willamette Sound." A low mountain range (Coast Range) rising in the West, divided it from the ocean. This was long, long ago.

In the process of time, a large delta was formed over this vast area, by water coming from the mountains, and a mass of gravel and sand came that piled up so thick that it even covered Mt. Tabor. This mountain shows such a strata now.

Following this period, there came a rising of the land, caused by some disturbance in the earth, and the gravel and sand that had just been deposited as a delta, was taken off by the same water action that had brought it to the valley. The rising of the land at that time lifted Mt. Tabor "high and dry" above the surrounding country.

Years and years went by, then there came a slight lowering of the land again, which caused another delta deposit.

In the course of time, the land with its "last deposit," was gradually lifted up and as the river receded to its present channel, it leveled off the land by adding a loose gravelly sand deposit. On top of this the wind blew its bur-

den of dust, swept up from the disintegrating mountains, and a deep silt layer was piled up that forms the broad fertile plain that stretches from Portland Heights to Sandy River.

It is well to note in passing that there were many volcanoes in those olden days that emitted molten lava from the earth. Mt. Tabor and Rocky Butte, close by, are such. They are composed of early lavas and about their bases the more recent river laid deposits have accumulated. The crater of Mt. Tabor is at the northern edge of Mt. Tabor Park, and can be easily recognized by the volcanic cinders, ash, and slag about it.

Rocky Butte, a ridge of basic gray andesite (an eruptive, usually dark greyish rock) also seems to be a volcanic vent. Along its eastern side the rock is worn away, as though a river had flowed past it.

On either side of the Sandy River, at Troutdale, especially on the eastern side, where the roadway has made excavation necessary a stratum of loose gravel, leaves, and sediment can be seen covered by a sheet of molten lava. This deposit is similar to the delta accumulations left by large rivers, and indicates that it, too, was left by a large slow moving river, or was formerly part of a low-lying coastal plain.

For convenience, this stratum is given a name once applied to similar strata found covering vast areas in Washington, namely, the "Satsop Formation."

It should be kept in mind, that this formation was once a level water-laid deposit. Where it is seen now, at high elevations or low, merely indicates that the earth beneath it has risen much or little. From this it would follow that the satsop formation lies many feet below the surface at Portland and gradually rises as the East is approached.

The occasional "cuts" along the highway between the upper Sandy river bridge and Crown Point, show the continuous presence of this stratum, overlaid as it is with silt and loam blown to it by the winds in more recent times.

A mile of highway before reaching Crown Point shows this formation very clearly. Beneath the Vista House are sheer cliffs of dark basalt (black or dark-colored basic rock of volcanic origin, tough and heavy, but without a glassy lustre). They rise perpendicularly to a height of four to six hundred feet. Resting on top of these cliffs is the gravel bench (satsop formation). It, in turn, is covered with andesite lava. Across the river from Crown Point, is Mt. Zion, said to have emerged and become a flourishing volcano in satsop times, but now extinct. On the southern side of the mountain, a little below its summit, the reddish slag and volcanic cinders can still be seen. The land to

the west of this elevation and descending to Vancouver, is similar in structure to that already described on the Oregon side.

Above the 400 feet of columnar basalt which forms the palisades at Cape Horn, a layer of satsop, shows itself. It in turn is covered with a deposit of andesite, which recedes towards the summit of Mt. Zion.

The towering walls of Rooster Rock, just below Crown Point, are said to be composed of columnar basalt, which the river was unable to move while forcing its channel. One theory is that the channel of the lower Columbia was lowered in recent geological times so that a large amount of ocean water came in and drowned the original well defined but much narrower outlet. This would seem possible, because of the numerous islands in the lower Columbia, the great width of the river, and its slow current.

From Crown Point, a good idea can be had of the geological formation in a broad way. First, it is well to know that geologists assert that the Rocky Mountains were the first of the several western ranges, to be formed. The Coast Range came second, and lastly, the Cascade Range. From Crown Point, it will be noticed that the land gradually descends toward the coast, and that the land becomes higher as the crest of the Cascades is reached.

Just after passing Crown Point, a clear-cut face shows the andesite lava which evidently came in a molten sheet and seared the top of the satsop so that it appears reddish in color.

After leaving Crown Point, the road gradually descends until it is almost at the level of the river again. By noticing carefully, one can find the place where the satsop leaves off and the basalt below it, begins. This point is about 650 feet high. As these two strata carry all through the journey, it is well to find them now where the opportunity to observe them is so good.

The basalt rock has a very uneven upper edge and looks as though it had once been exposed until its surface became marked with small ravines and crevices. The freshness at the top is gone, too, for it is badly stained. Often the basalt has crumbled into an earthy looking mass, showing how water has been able to penetrate it and dissolve its soluable contents. The deduction made from this is that before the gravel deposits came, the basalt was itself the land surface.

Latourelle Falls drops 224 feet over a cliff of black columnar basalt. The recess which it has formed, keeps a perpendicular face, due to the columnar jointings which break away parallel to the cliff. The under-cut near the base is doubtless caused by the hammering of the water on the flaky structure of the strata.

At Shepperd's Dell, the water falls comes down between two basalt cliffs. The tree covered island at its mouth is but the sediment deposited by this stream.

Just beyond is Bishop's Cap, whose top of basaltic rock rests on broad columns of the same material. This columnar formation seems especially designed to carry the heavy load upon it. The tendency of this once molten lava to separate along fairly definite planes is thought to be caused by the severe strain being put upon it while cooling.

At Bridal Veil, and a little beyond, looking up several hundred feet above the roadway, the outcropping edge of the satsop formation can be seen.

Fort Rock, just beyond, is crested with a brown like andesite rock. This is the first of the lava we have seen of which the great Cascade formation is composed.

At Multnomah Falls, the water makes the first drop of over 500 feet, without an obstruction. This is due to the hard slow wearing basaltic rock near its top. This rock is of columnar formation, but is not so massive in scale as is elsewhere seen. Each of the thick beds of basalt reperesents an individual flow.

Just below the top of the falls and to the west, some grayish rock can be seen. This is said to be petrified wood.

The immense rock, whose perpendicular walls are pierced by a tunnel at Oneonta, is about 200 feet high. A horizontal seam is apparent in the middle, which separates the two great flows of basalt, of which it is composed. It also indicates that this same basalt must have flowed over vast areas in its molten state. Elsewhere in the gorges, these different strata of rock are occasionally separated by a clay-like substance. This shows that between their flowing periods enough time elapsed to permit vegetation to grow. Petrified wood is often found in certain recesses at this line of contact.

It is presumed that Oneonta Gorge is a water-formed canyon. The theory being that once the water flowed over the face of the cliff near the highway at a much higher elevation, but that with the passing of time, the water wore away the surface of its bed and the face of the cliff until it has receded to its present position.

St. Peter's Dome and Katani Rock rise trembling 2000 feet above the Columbia. They are made of basalt, layer upon layer, and are similar in construction to the adjoining cliff. They show that they were once a part of it. That they are in a state of disintergation is shown by the accumulation of rocky debris at the base of the cliff, to which is being added year after year, the flaky contribution of the wall above.

Nesmith Point, plainly seen from Tamault Creek, is a former vent from which much andesite lava came.

What has been said with regard to the "satsop formation" will be repeated. This waterlaid formation is not visible at Portland, but as soon as the Sandy River is reached, it is seen to have been lifted, by some action of the earth, to a point several feet above the highway. At Crown Point it is over 700 feet high, resting upon a foundation of basalt. It continues to rise with it foundation of basalt emerging more and more from the ground as the road goes eastward. At Multnomah Falls, this "satsop" is over 1300 feet high, while at McCord's Creek, it lies upon the basalt 1800 feet above the ground.

Here we have a chance to see what underlies and supports the mass of basaltic rock. In a cut along the highway, and especially on the canyon walls below the falls, a substructure of pebbly-gray volcanic matter, filled with angular blocks of andesite lava and other boulders, shows itself. Upon this "Tuff Conglomerate," as it is called, rests from 2000 to 3000 feet of basalt rock.

At Elowah Falls, this softer substructure is eaten away more rapidly than the rock above, with the result that the columnar basalt above breaks off when its support is taken away.

A few feet east of the bridge at McCord Creek, and imbedded in the bouldery "tuff conglomerate," is a petrified tree of the coniferous species.

At the mouth of Moffett Creek is a fossil bed, containing many leaves, stems, and seeds.

Beacon Rock, across the river, is a massive lone pinnacle of jointed lava. The river side shows a face of long upright columns, which are probably what remain after the outer casing of inclined or horizontal columns, formed in cooling, has been worn away by the Columbia. It is thought possible that it may have been the "plug" (filler of a volcanic cone) of an old volcano of an early period. Apparently the mountain about this rock has been carried away, leaving only the solidified lava that filled its center.

Mt. Hamilton, across the river, is covered with basalt, all of which rests on a more or less hilly layer of the "tuff conglomerate," showing that the latter was worn into hills and valleys before the lava flowed upon it.

This "tuff conglomerate" bearing its burden of basalt is clearly seen on the Oregon side between Warrendale and Bonneville. At the latter place, the excavation for the highway has opened up a cut which shows a grayish material with boulders and occasional petrified logs.

If the question should arise as to what lies below the "tuff conglomerate," which has been

noticed since passing McCord's Creek, the question can be answered by stopping at Bonneville. Just east of the fish hatchery, across the railroad track, and down toward the river, the "tuff conglomerate" has been washed away and has left exposed a warped layer of rock-surfaced stratum which appears to be basaltic. This is the lowest strata that the river shows. Evidently this is the center of the Cascade Range.

The "tuff conglomerate" below the Columbia River basalt is again in evidence at Eagle Creek. Here a large number of plants have been found. Twenty in all have been identified. Black oak, walnut, birch and elm, are among the number.

At the west end of the Eagle Creek bridge, the purple colored sub-basalt rock may be seen protruding into the gray "tuff conglomerate" above it. The latter strata seems to be baked or seared. Geologists say that this searing was done at a time when the settling "tuff conglomerate" was attacked from beneath in many places by heated lavas seeking to escape. This they say explains the origin of many of the prominent peaks of the Cascades.

Across the river may be seen Table Mountain, and Red Bluffs, whose perpendicular walls of basalt rise 1000 feet above the sloping heap of matter at their bases of "tuff conglomerate." Red Bluffs evidently is an old volcanic vent. It derives its name from the reddish volcanic slag which the southern cliff exposes.

A short distance above the rapids at Cascade Locks, Lewis and Clark noticed the exposed trunks of trees standing in the water. They estimated that these were submerged in some places to a depth of 30 feet. In low water, some can be seen even now. Lewis and Clark called it a remarkable circumstance and concluded that something had choked the water but a short time before. Geologists say it must have been over 1000 years ago.

Concerning this, there are two theories — first, that there really was a natural causeway across the river, made by a lava-flow crossing over a softer conglomerate, which later washed away, leaving only the bridge above it. According to this theory, the bridge fell and blocked the river and formed many of the small islands that are scattered near the rapids.

The other theory has it that the mountains at the narrows were forced toward the river by recent volcanic action. This region is the scene of old-time land slides, which still go on. Trees on the Washington side are found lying in all directions, due to the sliding earth at their roots.

Railroad tracks on both sides of the river have to be adjusted frequently. This is partly caused by the weight of solid rock upon the less stable "tuff conglomerate." Another reason ascribed to it is the presence of an ashey clay which, when moistened by seepage, forms a

self lubricated sliding plane. The result is that matter is constantly going to the already narrow channel where it has to be forced away by the river.

Although the "tuff conglomerate" formation can be seen for several miles, the strata is on the decline.

At Herman Creek, a turbulent stream, which runs parallel to the river for several miles, the traveller will be attracted by a large hillock of light gray rock. A pool of water lies at its base. The southern side of this rock is identified by geologists as an old channel of the Columbia. The rock, itself, is composed of a kind of lava, not seen before on the highway.

In this connection, it should be said that between Carson and Wind River, there appears to have once been an erosional valley, which, cut even into the "tuff conglomerate." Here is found a lava flow of the same material as the unidentified rock on the Oregon side. The deduction made is that the lava flowed from the north, filled up the valley there and crossed the Columbia to the wall of basalt rock there—thence moving down stream. The result was that the Columbia's well defined channel was blocked. The water rose hundreds of feet, until its pent-up energy broke through the wall of lava and through the years has worn it away again. The two remaining hillocks on the Oregon side give silent testimony to this.

Wind Mountain and Shell Rock Mountain are just beyond. These great piles of rock are some of the most interesting on the trip. They are huge cones of light colored flakes. Shell Rock Mountain is enclosed by walls of basalt which seem to be uplifted as though pushed up through the ground. The theory advanced is that hot lava of this composition tried to force itself through the ground, lifting the Columbia River basalt in its attempt, and that due to the slow cooling, permitted the mass to attain a crystalline state, which would have been impossible if chilled suddenly. Probably the two mountains were once connected and the intervening rock removed by the river.

A few miles beyond is Mt. Defiance, the highest peak along the highway. It, too, was an active volcano, and its upper slopes show the scouring of glacers which, owing to its heighth, originated there in glacial times.

The satsop formation is visible high up at Mitchell's Point, but its elevation is not nearly so great as at the Cascades. This shows that the tendency of the grade is downward again as the road goes toward the east. The layers of basalt on this promontory are inclined to the south and afford a good opportunity for their study. It is also very interesting to know that the different flows which made up these huge masses were sometimes very thin and years, sometimes, elapsed between their flow-

ing. This is shown by the seam of coaly material that is pressed in between two such flows.

Much time must have elapsed between these deposits in order to let the material for these coal deposits accumulate.

Underwood Mountain, on the opposite side, is a volcanic cone of recent origin. White Salmon, beyond doubt, rests upon a lava plain, which issued from Underwood Mountain, and other sources nearby, for the lava has a new appearance.

At Hood River there was evidently a lowering, for the strata appears like an inverted rainbow or syncline. The bench on which the city is built may have been a water covered recess of the Columbia before it forced its way throught the present channel.

Beyond Hood River, the well-known satsop formation is seen again. It rises in several places to great heighths. The Bingen anti-cline, visible on the Washington side, shows well the warping of the several strata. It is followed by the Ortley anticline, then joins The Dalles

The Dalles is thought to be the site of a great inland lake; indeed, fossils found on land since elevated, would indicate this fact.

APPENDIX

For many years, it was thought impossible to build a roadway through the Columbia Gorge, but with the coming of the automobile, the need for a roadway became so great that a few men got enthusiastic over the matter, with the result that the highway was actually accomplished in a very few years. Among this number was Henry Wemme, to whom must be given the credit for the first unit — a stretch of roadway between Bridal Veil Falls and Hood River County.

A little later, Samuel Hill advocated the building of the present scenic highway. In the face of doubt, Simon Benson gave $10,000 to build the road around Shell Rock Mountain, a feat said to be absolutely impossible. Oswald West, then Governor of Oregon, supported Mr. Benson, by supplying convict labor. Later, J. B. Yeon gave two years of his time, in which he acted as supervisor.

Before beginning the highway, Samuel C. Lancaster was sent to Europe to visit the famous highways on the Continent. Upon returning, he was put in charge of the work. Several years later, the work was taken over by the State Highway Commission and the following men were given responsibility for the work at various points, namely: H. L. Bowlby, J. A. Elliott, Herbert Nunn, and J. H. Scott.

Mr. Biddle, a good roads enthusiast of Washington, has done much to provide roads in his State.

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