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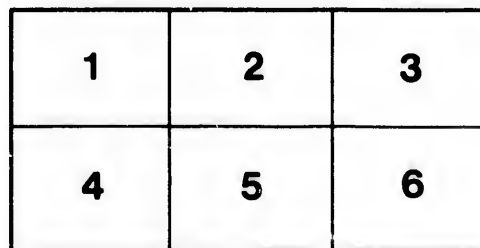
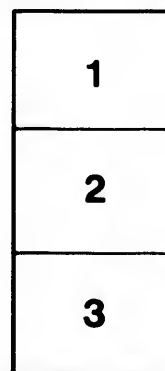
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CASTLE ROCK.

ATLANTIS ARISEN;

OR,

TALKS OF A TOURIST

ABOUT

OREGON AND WASHINGTON.

BY

MRS. FRANCES FULLER VICTOR.

ILLUSTRATED.

PHILADELPHIA:

J. B. LIPPINCOTT COMPANY.

1891.

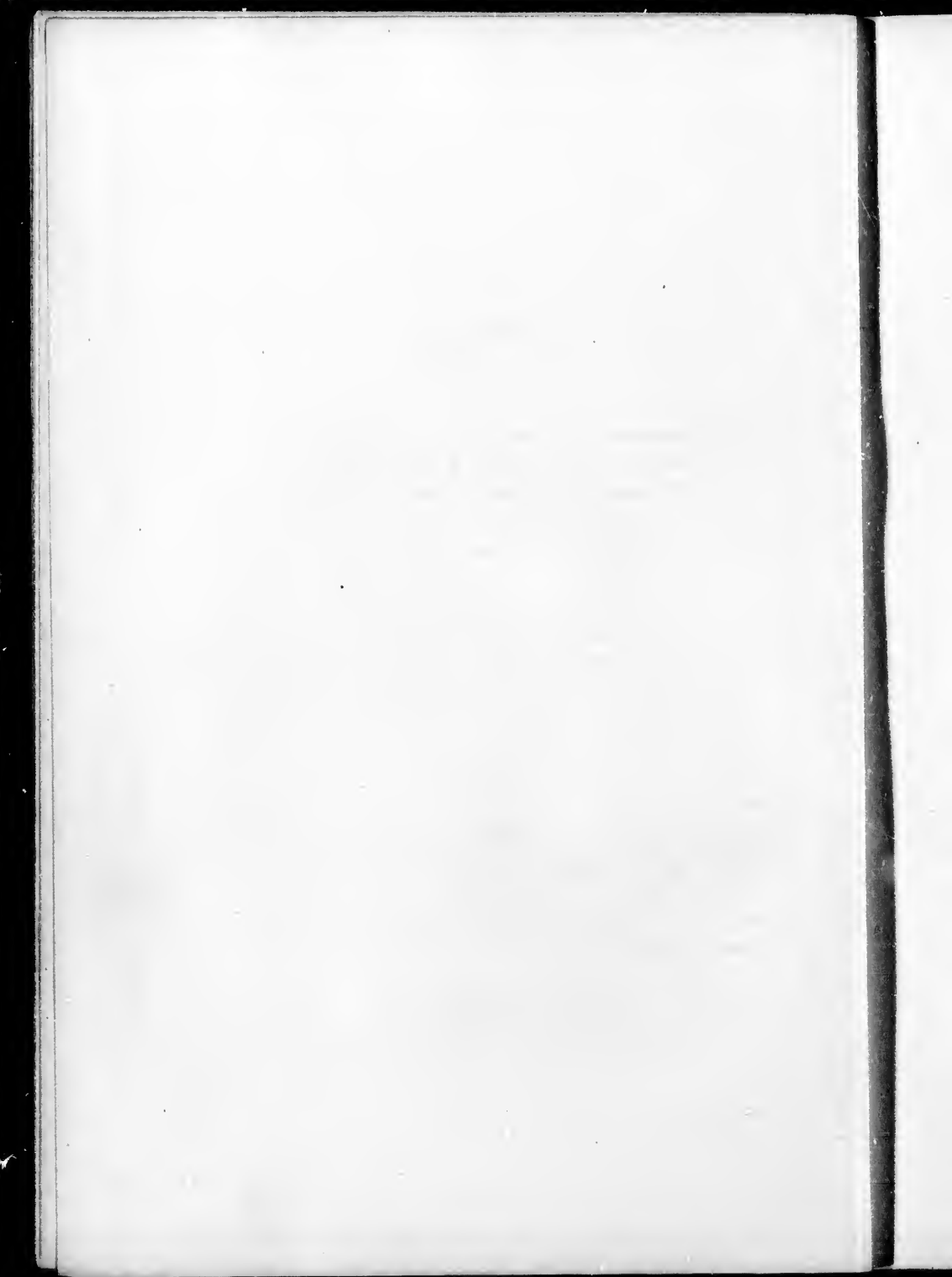
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PREFACE.

WHOEVER reads my book will discover that the author is no hasty observer. In fact, I have been up and down the coast a good deal, and have studied it from many points of view, from Mexico to British Columbia. I have, during different periods of residence in the East, had occasion to notice and to regret the want of knowledge of this northwest corner of the United States, and some years ago published "All over Oregon and Washington," which is now not only out of print, but out of date, owing to the immense strides in improvement made by these two commonwealths since the era of railroads.

It was frequently suggested to me to revise and republish that book, but upon devoting a summer of travel to the acquisition of new facts, I found that practically a new book would have to be written. This is here presented. If readers of the former detect some familiar passages, they are those I found necessary to preserve, because I did not see how they could be omitted without injustice to my subject. To the majority I have little doubt that the whole will be what I have meant it to be,—instructive.



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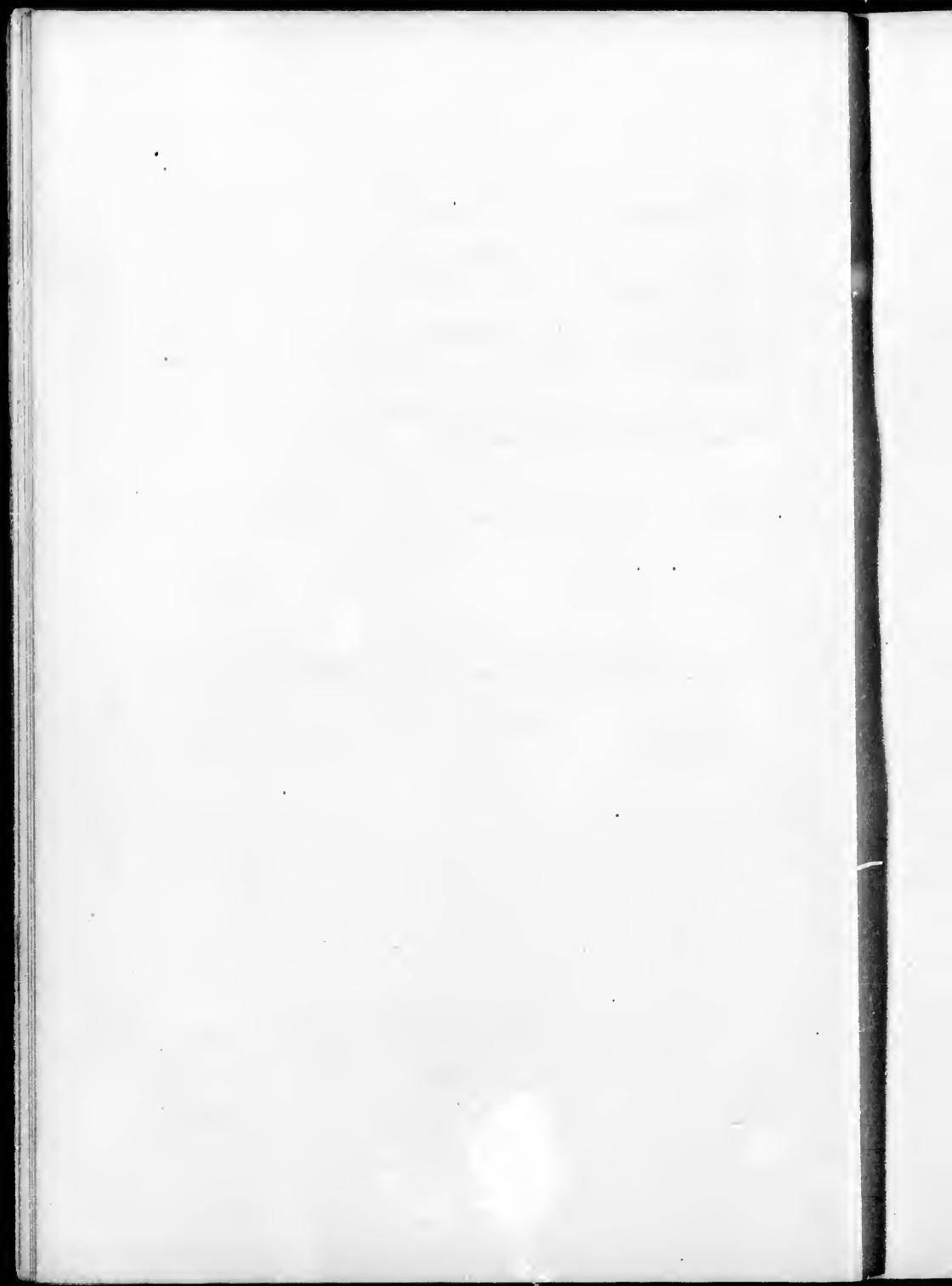
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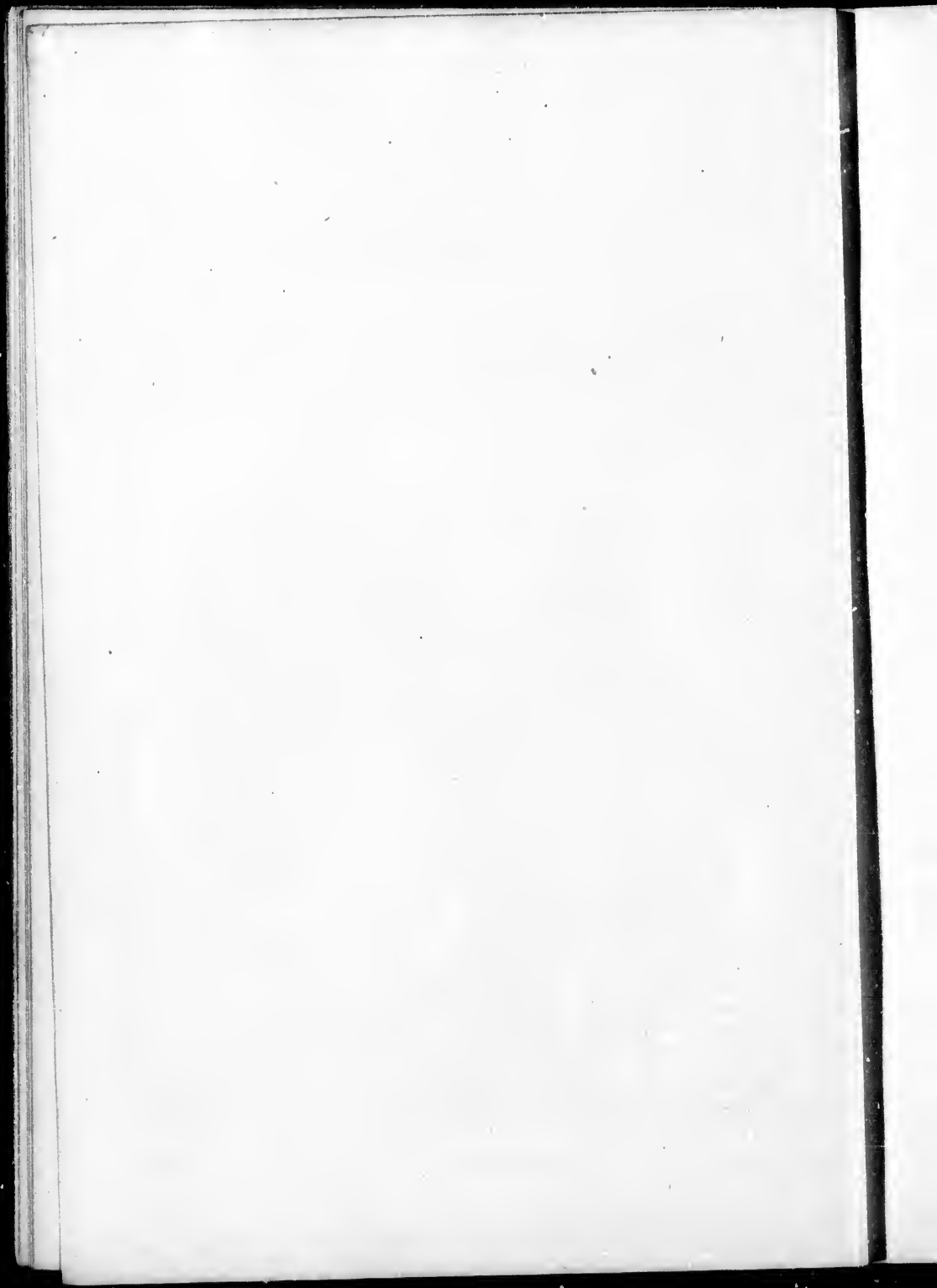
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ATLANTIS ARISEN;

OR,

TALKS OF A TOURIST ABOUT OREGON AND WASHINGTON.

CHAPTER I.

A TALK ABOUT DISCOVERY.

FROM the year 1513, when Balboa discovered the Pacific Ocean at Panama, the navigators of Spain, and of every rival naval power which arose for the following two hundred and seventy-nine years, were searching for some strait, or river, which would furnish water communication between the two great oceans that border the American continent. The Strait of Magellan, discovered soon after the Pacific, afforded a way by which vessels could enter this ocean from the western side of the Atlantic; but it was far to the south, crooked and dangerous. After the discovery by the English buccaneer, Drake, of the passage around Cape Horn, the search was continued with redoubled interest. Not only the Spanish and Portuguese entered into it, but the English, who had found the great inland sea of Hudson's Bay penetrating the continent towards the west, endeavored, by offering prizes, to stimulate the zeal of navigators in looking for the Northwest Passage.

A rumor continued to circulate through the world, vague, mystical, and romantic, of half discoveries by one and another power; and tales, wilder than anything but pure fiction, were soberly listened to by crowned heads,—all of which went to confirm the belief in the hoped-for straits, which one pretender to discovery even went so far as to name, and give latitude and longitude. The Straits of Anian he called them; and so, all the world was looking for *Fretum Anian*.

All this agitation could not go for nothing. By dint of sailing up and down the west coast of the continent some actual discoveries of importance were made, and other hints of things not yet discovered were received. There even appeared upon the Spanish charts the name of a river somewhere between the fortieth and fiftieth parallels,—the San Roque,—supposed to be a large stream, possibly the long-sought channel of communication with the Atlantic; but no account of having entered it was ever given. Then vague mention began to be made of the "River of the West," whose latitude and longitude nobody knew.

Just before the War of the Revolution, a colonial captain, one Jonathan Carver, being inspired with a desire to know more of the interior of the continent, travelled as far west as the head-waters of the Mississippi. While on this tour, he heard, from the Indians with whom he conversed, some mention of other Indians to the west, who told tales of a range of mountains called Stony Mountains, and of a great river rising in them, and flowing westward to the sea, which they called *Oregon*, or *Origan*.

After the War of the Revolution, Great Britain resumed her voyages of discovery. A fleet was fitted out to survey the northwest coast of America, which it was thought might be claimed by her on account of the voyage to it by Captain Cook, some years previous. The surveys conducted by Captain Vancouver were elaborate and scientific. He, too, like those who had gone before him, was looking for the "River of the West," or the Northwest Passage.

But that obtuseness of perception which sometimes overtakes the most sharp-sighted overtook Captain Vancouver when his vessel passed the legendary river; for it was broad daylight and clear weather, so that he saw the headlands, and still he declared that there was no river there,—only a sort of bay.

Fortunately, a sharper eye than his had scanned the same opening not long before: the eye of one of that proverbially sharp nation, the Yankee. Captain Robert Gray, sailing a vessel in the employ of a firm of Boston traders, in taking a look at the inlet, and noticing the color of the water, *did* think

there was a river there, and so told the English captain when his vessel was spoken. Finding that his impressions were treated with superior scepticism, the Yankee captain turned back to take another look. This second observation was conclusive. He sailed in on the 11th of May, 1792.

From the log-book of the "Columbia," Captain Gray's ship, we take the following extracts: At four o'clock, on the morning of the 11th, "beheld our desired port, bearing east-southeast, distant six leagues. At eight A.M., being a little to the windward of the entrance of the harbor, bore away, and ran in east-northeast, between the breakers, having from five to seven fathoms of water. When we were over the bar, we found this to be a large river of fresh water, up which we steered. Many canoes came alongside. At one P.M. came to, with the small bower, in ten fathoms; black and white sand. The entrance between the bars bore west-southwest, distant ten miles; the north side of the river, distant a half mile from the ship; the south side of the same, two and a half miles distant; a village on the north side of the river, west by north, distant three-quarters of a mile. Vast numbers of the natives came alongside: people employed pumping the salt water out of our water-casks, in order to fill with fresh, while the ship floated in. So ends."

No, not so ends, O modest Captain Gray, of the ship "Columbia!" The end is not yet, nor will be until all the vast territory, rich with every production of the earth, which is drained by the waters of the new-found river shall have yielded up its illimitable wealth to distant generations.

The "Columbia's" log-book certainly does not betray any great elation of mind in her officers on reaching the "desired port." Everything is recorded calmly and simply,—quite in the way of business. Only from chance expressions, and the determination to make the "desired port," does it appear that Gray's heart was set on discovering the San Roque of the Spanish navigators,—the "River of the West" of the rest of mankind. No explorer he, talking grandly of "minute inspections" and of "unalterable opinions!" Only an adventurous and, withal, a prudent trader, looking out for the main chance, and, perhaps, emulous of a little glory.

No doubt his stout heart quaked a little with excitement as

he ran in for the "opening." We could pardon him if it shrank somewhat at sight of the hungry breakers; but it must have been a poor and pulseless affair of a heart that did not give a throb of exultation as his good ship, dashing the foam from her prow, sailed between the white lines of surf safely—through the proper channel, thank God!—out upon the broad bosom of the most magnificent of rivers.

We trust the morning was fine, and that Captain Gray had a perfect view of the noble scenery surrounding him: of a golden sunrise from a horizon fretted by the peaks of lofty hills, bearing thick unbroken forests of giant trees; of low shores embowered in flowering shrubbery; of numerous mountain spurs putting out into the wide bay, extending miles east and west, and north and south, forming numerous other bays and coves, where boats might lie in safety from any storm outside; of other streams dividing the mountains into ridges, and pouring their tributary waters into the great river, through narrow gaps that half revealed and half concealed the fertile valleys nestled away from inquisitive eyes; and that, as he tried in vain to look beyond the dark ridge of Tongue Point, around whose foot flowed the broad, deep current whose origin was still a mystery, he realized by a prophetic sense the importance of that morning's transaction. No other reward had he in his lifetime, and we trust he had that.

From the ship's log-book, we learn that he did not leave the river for ten days, during which time the men were employed caulking the pinnace, paying the ship's side with tar, painting the same, and doing such carpenter-work as was needed to put the vessel in repair after her long voyage out from Boston. All this time "vast numbers" of natives were alongside continually, and the captain must have driven a thriving trade in furs, salmon, and the like. On the 14th he sailed up the river about fifteen miles, getting aground just above Tongue Point, where he mistook the channel among the many islands; but the ship "coming off without any assistance," he dropped down to a better anchoring-place.

On the 15th, in the afternoon, Captain Gray and Mr. Hoskins, the first officer, "went on shore in the jolly-boat, to take a short view of the country." On the 16th the ship returned

to her first position off the Chinook village, and was again surrounded by the canoes of that people. The Chinook village remains to-day, but its people are no longer numerous.

Captain Gray was thinking of getting to sea again by the 18th; but on standing down the river towards the bar, the wind came light and fluttering, and again the anchor was dropped. He must now decide upon a name for this great stream, which from its volume he knew must come from the heart of the continent. The log of the 19th says, "Fresh and clear weather. Early a number of canoes came alongside: seamen and tradesmen employed in their various departments. Captain Gray gave the river the name of Columbia's River; and the north side of the entrance, Cape Hancock; that on the south side, Point Adams."

On the 20th of May the ship lifted anchor, made sail, and stood down the river, coming, as the following extract will show, near being wrecked: "At two the wind left us, we being on the bar with a very strong tide, which set on the breakers. It was now not possible to get out without a breeze to shoot her across the tide; so we were obliged to bring up in three and a half fathoms, the tide running five knots. At three-quarters past two a fresh wind came in from seaward; we immediately came to sail and beat over the bar, having from five to seven fathoms water in the channel. At five P.M. we were out, clear of all the bars, and in twenty fathoms water."

Captain Gray proceeded from Columbia's River to Nootka Sound, a favorite harbor for trading vessels, but in dispute at that time between Spain and Great Britain. Here he reported his discovery to the Spanish comandante, Quadra, and gave him a copy of his charts. In the controversy which afterwards happened between Great Britain and the United States concerning the title to the Oregon territory, the value of this precaution became apparent: for in that controversy the comandante's evidence destroyed the pretensions of Vancouver's lieutenant, Broughton, who, on having heard of Gray's discovery, returned to the Columbia River, and made a survey of it up as far as the mouth of the Wallamet, founding upon this survey the claim of Great Britain to a discovery-title. The subterfuge was resorted to of denying that the Columbia was

a river below Tongue Point: it was claimed that it was an inlet or sound. Were it not a fact patent to every one that a river must extend as far as the force of its current is felt, the pretence would still be perfectly transparent, since Gray must have passed Tongue Point, and been in what Broughton claimed to be the actual river before he grounded. Years afterwards, the log-book of the obscure Yankee trader, and the evidence of Comandante Quadra, overbore all strained pretences, and manifest destiny made Oregon and its great river a portion of the American republic.

Captain Robert Gray was the first man to carry the flag of the United States around the world, having, in the spring of 1792, just returned from a voyage from Nootka to Canton, and from Canton to Boston, by way of the Cape of Good Hope. He continued to command a trading vessel up to the time of his death, in 1809. Gray's Harbor, on the coast of Washington Territory, was discovered and named by him, the name remaining as a memorial. Ought he not to have some other?

In October, 1792, Vancouver having finished the survey of Puget Sound, in which the Spanish fleet was also engaged, Broughton was despatched to the Columbia River with the "Chatham," which grounded just inside Cape Hancock; was got off and anchored in a small bay on the north side of the river, known as Baker's Bay. In this cove he found, to his surprise, another vessel, the brig "Jenny," from Bristol, England, commanded by Captain Baker, from whom he had parted in Nootka Sound. The cove was thence named Baker's Bay. From this time the Columbia continued to be visited by trading vessels up to the war of 1812, which interrupted this sort of traffic for the time.

CHAPTER II.

A SYNOPSIS OF EARLY HISTORY.

IN the commencement of the present century, when we paid for our teas and silks with sealskins, cocoanut oil, and sandalwood, not to mention turtle and abalone shells, the United States were bounded by the British provinces on the north, by the Spanish possessions, called Florida, on the south, and by the French possessions, called Louisiana, on the west. Our sea-coast extended only from the northern boundary of Maine to the southern boundary of Georgia; and the Mississippi River represented our western water-front, although the settlements in that part of our territory were chiefly French. Beyond the Mississippi was an expanse of country whose extent was undreamed of, as its geographical configuration was unknown. The explorations of the British fur companies in the north had revealed the existence of high mountains and great rivers in that direction; while the little knowledge obtained of the sources of the Missouri, the Columbia, and the Colorado, together with the immense volumes of these rivers, at so great an apparent distance from their springs, was sufficient to stimulate public inquiry and scientific research. How long such inquiry would have been deferred, but for a fortunate turn in the public affairs of the United States, can only be conjectured.

Our young republic had barely established her independence, and shaken off the lingering grasp of Great Britain from the forts and towns bordering on the Great Lakes,—had only just begun to feel the young giant's blood in her veins, and to trust her own strength when measured with that of an older and adroit foe,—when the nineteenth century dawned, in which so much has already been accomplished, though its ninth decade is but just completed.

The first event of importance marking this period, and bearing upon the history of Oregon, was the purchase from France of the *Louisiana* territory. This was a vast area of country,

drained by the waters of the Mississippi, and originally settled by the French from Canada, especially in its more northern parts. Notwithstanding the Spaniards had discovered the Lower Mississippi, and claimed a great extent of country under the general name of Florida, King Louis XIV. of France, in consideration of the fact that the region of the Mississippi remained unoccupied by Spain, while it was gradually being settled by his own people, thought proper to grant to Antoine Crozat, in 1712, the exclusive trade of the whole of Southern Louisiana, the country included in this grant extending "from the seashore to the Illinois, together with the Rivers St. Philip (the Missouri) and the St. Jerome (the Ohio), with all the countries, territories, lakes in the land, and rivers emptying directly or indirectly into that part of the River St. Louis" (the Mississippi). Spain not being able to offer any successful opposition to this extensive land-grant of territories to which she laid claim by the right of discovery, Crozat remained in possession of Louisiana, under the general government of New France, until 1717, when, not finding the principality such a mine of wealth as he expected it to be, and having suffered a great private grief which took away the love of power, he relinquished his title, and Louisiana reverted to the crown. The Illinois country was afterward added to the original Louisiana territory, and the whole once more granted to *Law's Mississippi Company*, which company held it until 1732, when, the bubble of speculation being hopelessly flattened, Louisiana once more reverted to the French crown, and remained a French province until 1769.

In the mean time, however, certain negotiations were being carried forward which were to decide the future boundaries of the United States. In 1762, on the 3d of November, a convention was held at Paris, to settle the preliminaries of peace between France and Spain on the one part, and England and Portugal on the other, in which convention it was agreed that France should cede to Spain "all the country known under the name of Louisiana, as also New Orleans and the island on which that city is situated." On the 23d of the same month this cession was formally concluded, giving to Spain, with the consent of Great Britain and Portugal, all the country drained by the Mississippi and its tributaries, except a small portion north

of the Illinois country, which was never mentioned in the boundaries of Louisiana.

In less than three months after the cession of Louisiana to Spain a treaty was concluded in Paris between the same high contracting parties, by which Great Britain obtained from France Canada, and from Spain Florida, and that portion of Louisiana east of a line drawn along the middle of the Mississippi, "from its source to the River Iberville, and thence along the middle of the Iberville, and the Lakes Maurepas and Pontchartrain, to the sea."

This treaty defined the limits of the territories belonging to Great Britain, and set aside any former grants of English kings, made when the extent of the continent was not even surmised. Thus, at the close of the Revolutionary War, when the United States became heirs of all the British possessions south of Canada, their western boundary, as before mentioned, was the Mississippi, as far south as the River Iberville and Lake Pontchartrain,—New Orleans and the mouths of the Mississippi belonging to Spain.

Florida, during the time it was in the hands of Great Britain, had been divided into two provinces, separated by the Appalachicola River, and settled chiefly by emigrants from the south of Europe, to whose numbers, also, a few Carolinians were added. This colony of foreigners was used, in connection with the savage natives of Florida, with great effect against the southern colonies during the War of Independence. However, while they were directing their energies against Georgia, the Spaniards of Louisiana seized the opportunity for making incursions into these nondescript British provinces, and captured their chief towns, thereby rendering them worthless to Great Britain; and in 1783 Florida was retroceded to Spain, in whose hands it was in the beginning of the nineteenth century, then forming the southern boundary of the United States.

In all these transactions the limits of neither Florida nor Louisiana had ever been distinctly defined; the southern boundaries of the latter infringing upon the western boundaries of the former territory. In 1800, when Spain retroceded Louisiana to France, it was described in the treaty as being the "same in extent that it now is in the hands of Spain, and that it had been

when France possessed it,"—that is, embracing the whole territory drained by the Mississippi and its tributaries, "directly or indirectly."

In 1803, April 30, this vast extent of country was ceded to the United States by France, "with all its rights and appurtenances, as fully, and in the same manner, as they had been acquired by the French republic," by the retrocession of Spain. By this transfer on the part of France the Spanish government seemed at first disposed to be offended, and to offer obstacles to the settlement of the Americans in their newly-acquired territory. Doubtless, this feeling arose from the unsettled condition of the boundary questions, and a fear that the United States would, as they did, demand the surrender of the whole of the original territory of Louisiana, called for by the treaty. Spain then undertook to prove that the pretensions of France to any territories west of the Mississippi could not be supported, and that the French settlements were only tolerated by Spain for the sake of peace. Such a discrepancy between the views of the two nations forbade negotiation at that time, and the matter rested, not to be revived until 1817. In the mean time, however, the United States, in 1811, feeling the necessity of holding the principal posts in the disputed territory against all other powers, took possession of the country west of the Perdido River, which was understood to be the western limit of Florida. But a British expedition having fitted out from Pensacola during the second war with Great Britain, the United States sent General Jackson to capture it, which he did in 1814, and again in 1818, as also the Fort of St. Mark. These repeated demonstrations of the spirit of the United States led to further and more successful negotiations with Spain, which power finally ceded to the American government the whole of the territory claimed to belong to Florida, February 22, 1819, the boundaries being settled as follows:

"ARTICLE 3. The boundary-line between the two countries west of the Mississippi shall begin on the Gulf of Mexico, at the mouth of the River Sabine, in the sea, continuing north, along the western bank of that river, to the 23d degree of latitude; thence, by a line due north, to the degree of latitude where it strikes the Rio Roxo of Natchitoches, or Red River;

then, following the course of the Rio Roxo westward, to the degree of longitude 100 west from London and 23 from Washington; then, crossing said Red River, and running thence, by a line due north, to the River Arkansas; thence, following the course of the southern bank of the Arkansas, to its source in latitude 42 north; and thence, by that parallel of latitude, to the South Sea."

Other particulars are added in the article quoted, the meaning of which is the same as the foregoing: intended to fix the western boundary of the United States, as regarded the Spanish possessions, and the eastern and northern boundaries of the Spanish possessions, as regarded the United States.

Spain had never withdrawn her pretensions to the northwest coast; but, being unable to colonize this distant territory, and still less able to hold it by garrisons in forts, she tacitly relinquished her claim to the United States, by making the forty-second parallel the northern limit of her possessions on the Pacific. The United States were then at liberty to take possession of that which Spain relinquished in their favor; in fact, had the same right to this remote territory that they had to the Florida and Louisiana territories, which were obtained by treaty from nations claiming them by the right of discovery.

But the claims of the United States to the so-called Oregon territory had even better foundations than this, if it be considered that Spain had actually abandoned her possessions in the northwest; for, in that case, the Oregon territory was theirs by the right of discovery and actual occupation, as well as by contiguity, by treaty, etc. At the time that Gray discovered and named Columbia's River, important as the discovery was, it awakened but little thought in the American mind; because, as yet, we had not acquired Louisiana, stretching to the Rocky Mountains, nor even secured the coast of the Gulf of Mexico, which was much more of an object, at that time, than the coast of the Pacific. However, when Louisiana became ours, the national mind awoke to the splendid possibilities of the nation's future. It was not for naught that a company of Boston merchants had opened a trade between China and the northwest coast; albeit, their captains gathered up trinkets of all sorts to add to their stock in trade, should furs fall short of the

market. Not in vain had the prying Boston traders peered into all inlets, bays, and rivers on the northwest coast. When it came to discovery-rights, they had more claims than any people, the original discoverers excepted; and when Captain Vancouver's journal was published, it only convinced them that they should be fools not to profit by what it was so evidently fair they should profit by, though they did not quite see the way clear to the occupancy of the country which Columbia's River was believed to drain, nor of the islands and bays which their trading ships had explored. If Spain chose to hold possession of these coasts, they would not interfere; but if Great Britain attempted to override both Spain and America, in laying claim to the Pacific side of the continent, something might be done by way of preventing this attempt.

Such must have been the thought, half indulged, half repressed, in the American mind previous to the acquisition of the great Louisiana territory. After that acquisition it became more decided. The fact that Gray had discovered the great river of the west, which for a century had been sought after, the increasing evidences of the incapacity of Spain to hold this far-off coast against intruders, the feeling that Great Britain had no right to the countries she had so pompously taken possession of in the face of their actual discoverers,—all these reasons, joined to the probable fact that the Louisiana territory bordered upon that drained by the great western river, which an American was first to enter and explore, at length shaped the policy of a few leading minds among American statesmen.

It was even contended by some that, as the western boundary of Louisiana had never been fixed, and, indeed, was entirely unknown,—since the Missouri and its tributaries had never been explored,—the limits of the newly-acquired territory might be considered as extending to the Pacific; and if one were to consult the old French maps for confirmation of such an opinion, he would find *New France*, to which Louisiana belonged, extending from ocean to ocean. Yet, a perfectly candid mind would ignore the authority of maps drawn from rumor and imagination, and wish to found an opinion upon facts. It was to secure such facts and to carry out, as far as possible, the lately-formed policy of leading statesmen, that President Jeffer-

son, even before the transfer of Louisiana was completed, addressed a confidential message to Congress, urging that means should be immediately taken to explore the sources of the Missouri and the Platte, and to ascertain whether the Columbia, the Oregon, the Colorado, or any other river, offered a direct and practicable water-communication across the continent, for purposes of commerce. The suggestions of the President being approved, commissions were issued to Captains Merriwether Lewis and William Clarke to perform this service. Captain Lewis made immediate preparations, and, by the time that the news of the ratification of the treaty had been received, was ready to commence his journey to the unknown West.

It was already summer when this news was received, and, although the party were ready to advance into the Indian country, it was too late to accomplish much of their journey before winter; besides which, some delay occurring in the surrender of the country west of the Mississippi, the party were not able to cross that river until December, in consequence of which detention, the ascent of the Missouri could not be undertaken before the middle of May of the following year. The exploring party consisted of but forty-four men,—an insignificant force to send into an Indian country,—yet, perhaps, all the safer for its insignificance. They had to make the ascent against the current of the Mad River in boats, three of which sufficed to accommodate this adventurous expedition. By the end of October they had arrived in the Mandan country, near the forty-eighth degree of latitude, or sixteen hundred miles from the Mississippi, where they made their winter camp. As every school-library is furnished with the printed journal of Lewis and Clarke, it is unnecessary to dwell upon the incidents of their memorable journey across the continent. It is only with its results that we have to deal in this sketch.

One of its results was developed at this early period, or during their stay at the Mandan village: which was, to alarm the Northwest Fur Company, and, through them, the English government, as to the designs of the Americans concerning the northern coast of the Pacific. It has been before stated that the Northwest Company had been compelled reluctantly to resign the posts along the Great Lakes, belonging to the United

States, after the Revolutionary War. They still continued to hunt and trap, and had established their trading-posts in all that country lying about the head-waters of the Mississippi; and their employees were scattered throughout the region east of the Missouri, and west of the Lakes, even having penetrated, on one occasion, to the foot of the Rocky Mountains.

It happened that, while Lewis and Clarke were at the Mandan villages, the fact of their visit, and the object of it, which had been explained to the Indians, were communicated to some members of the Northwest Company, who had a post about three days' journey from there. So much alarmed was Mr. Chabaille, who resided at this post, that he wrote immediately to another partner, Mr. D. W. Harmon, a native of New England, and, upon receiving a visit from him, urged Mr. Harmon to set out in the following spring upon the same route pursued by Lewis and Clarke, accompanied by Indian guides, doubtless with the intention of arriving at the head-waters of the Missouri, in advance of the American expedition; but in this praiseworthy strife for precedence they were in this instance defeated,—Mr. Harmon proceeding no further than the Mandan villages, while Lewis and Clarke prosecuted their undertaking with diligence, leaving the Mandan country on the 7th of April, 1805, and arriving at the Great Falls of the Missouri on the 13th of June. The reader need not be reminded of the difficulties attending such a journey as the one undertaken by our exploring party, when, the course of navigation being interrupted, boats had to be abandoned, toilsome portages made, new boats constructed, and all the novel hardships of the wilderness endured. Such tests of courage have been encountered by thousands since that time, in the settlement of the Pacific Coast; but that fact does not lessen the glory which attaches to the fame of the great pioneers commissioned to discover the hidden sources of America's greatest rivers. Those faithful services secured to us inestimable blessings, in extended territories, salubrious climates, and exhaustless wealth of natural resources.

Lewis and Clarke, having re-embarked in canoes hollowed out of logs, arrived at the *Gate of the Mountains* on the 19th of July, in the very neighborhood where thousands of men are to-

day probing the earth for her concealed treasures of gold and silver. Proceeding on to the several forks of the Missouri—the Jefferson, the Madison, and the Gallatin—and finding themselves in the midst of the mountains, the two captains left a portion of their men to explore the largest of these, while they, with the remainder of the party, pushed on through the mountains until they came to streams flowing towards the west. At this intimation that their labors were about to be crowned with success, they rejoined their party at the head of the Jefferson Fork, and prepared for the rugged work of crossing that majestic range, now become so familiar. Concealing their goods and canoes in *caches*, after the fashion of all knowing mountaineers, and being furnished with horses and guides by the Shoshones, or Snake Indians, whose later hostility to the whites makes us wonder at their early friendship for Lewis and Clarke, the party commenced the passage of the Rocky Mountains on the 30th of August. Severe was their toil, and great were the sufferings they endured from hunger and cold; but, at length, their trials passed, they arrived at a stream on which their Indian guides allowed them to embark. This was the Clearwater River, the banks of which have since become historic ground.

The party were glad again to be able to resume water navigation, and hastened to build their canoes, and place their horses in charge of the Chopunish, or Nez Perce tribe of Indians, whose extraordinary fidelity to the treaty formed at that time with Lewis and Clarke is one of the wonders of history. On the 7th of October they began to descend the Clearwater, and three days later entered upon that great branch of the Columbia whose springs they had, indeed, tasted in the mountains, but upon whose bosom no party of civilized men had ever before embarked.

Men are apt to dwell with enthusiasm upon the pride of a conqueror; but, certainly, there must be that in the exultation of a discoverer, which is far more pure, elevated, and happyfying. To have succeeded, by patient research and energetic toil, in securing that which others secure by blood and devastation only, is justly a subject of self-congratulation, as it is also deserving of praise. The choicest wine, from the costliest chalice,

could hardly have been so sweet to the taste of our hardy exploring party as the ice-cold draught of living water dipped from the mountain reservoirs whose streams "flowed towards the west." With equal pride must they have launched their frail canoes on that river which now bears the name of the chief of the expedition. As they descended to the junction with the northern branch, and found themselves at last fairly embarked on the main Columbia, when they beheld the beauty and magnitude of this King of Rivers, and remembered that their errand, so successfully carried out, was to find a "highway for commerce," their toils and privations must have appeared to them rather in the light of pleasures than of griefs. As the first party of white men to pass through the magnificent mountain-gap where the great river breaks through the Cascade Range, and to meet the tides of the Pacific just on the westward side, the party of Lewis and Clarke have won, and ever must retain, an honorable renown.

The voyage from this point to the mouth of the Columbia was soon accomplished. On the 15th of November the expedition landed at Cape Hancock, commonly called "Disappointment," on the north side of the river, having travelled a distance of more than four thousand miles from the Mississippi River. The rainy season, which usually sets in about the 18th of November, had already commenced, so that our explorers had some difficulty in finding a suitable winter camping-ground. At first they tried the peninsula north of Cape Hancock, but were driven from their ground by the floods. Then they resorted to the south side of the river, somewhat farther back from the ocean, building a log fort on a small stream which is still called "Lewis and Clarke River." There they contrived to pass the winter without actual starvation, though they were often threatened with it, from the difficulty of obtaining food at this season of the year. Game was scarce, except in the coast mountains, which are very rugged and thickly wooded; while fishing could not be carried on successfully except with other boats than their slight canoes, which were entirely unfit for the winter winds and waves of the lower Columbia. The Indians among whom they wintered called themselves "Clatsops," and were sufficiently friendly, but had no food to spare, save at the

very highest prices. The Chinooks, on the north side of the Columbia, the same people Captain Gray had traded with thirteen years before, were equally exorbitant in their prices, and exercised a monopoly of the necessities of life quite equal to that of the most practised extortionists.

Nothing could be effected in the way of explorations of the country during the winter of 1805-6, on account of the rains, which were constant and excessive; and the party, however unwillingly, remained at Fort Clatsop until the middle of March, going no farther away than to Cape Lookout, about fifty miles down the coast. As soon as the rainy season had closed, Lewis and Clarke re-embarked their men, and returned up the river, surveying the shores on their voyage. On this passage they discovered the Cowlitz River, the principal tributary emptying into the Columbia from the north side anywhere west of the Cascades. The Wallamet River was also discovered, but remained unexplored, from the anxiety of the expedition to return to the United States.

By the middle of April the party had abandoned their canoes at the gap in the Cascade Mountains, where the river forms dangerous rapids; and, purchasing Indian horses, continued the journey on horseback to the Nez Perces country, where these faithful allies met them on their return, not with friendship only, but with the animals confided to their care the preceding autumn,—an example of Indian integrity worthy of mention, and, as it proved, indicative of a character shown in the events of succeeding years.

After crossing the Rocky Mountains to Clarke's River, the two leaders of the expedition separated,—Captain Lewis going northward, down the Clarke River, and Captain Clarke proceeding towards its source. On the 12th of August the two captains met at the mouth of the Yellowstone, having explored that river, as well as the Clarke, and traversed a great extent of country then unknown to white men, but where white men to-day are suffering the flushes and the rigors of that most infectious and fatal complaint—the gold-fever—in the territory of Montana.

At about the mouth of the Maria River, Captain Lewis had an encounter with the Blackfeet, the most savage and dreaded

of the mountain tribes. In this conflict one of the Indians was killed, which caused the others to desist at that time; yet, no doubt, many a white man's scalp has been taken in revenge, according to savage custom, and the wonder still remains that the party escaped alive out of the country.

After re-uniting their forces—their mission being accomplished—the expedition once more embarked on the Missouri River, and arrived at St. Louis September 23d, having travelled in less than three years, by canoe and saddle, carrying their own supplies, more than nine thousand miles.

Of the results of the expedition of Lewis and Clarke, it may be said that it was the first great act, wisely conceived and well executed, which secured the Oregon territory to the United States. It was the beginning, too, of a struggle for possession between this country and Great Britain, dating from the meeting of the Northwest Company's men with the men of the American expedition at the Mandan villages. Happily all these struggles for precedence are matters of past history now; and to-day both English and American citizens seek and find homes on Oregon soil, where, according to a wise act of Congress, one may be had for the taking.

The first attempt that was made to form a settlement on the Columbia River was by the Winship brothers, in 1810. On the 7th of July, 1809, there sailed from Boston two ships,—the "O'Cain," Captain Jonathan Winship, and the "Albatross," Captain Nathan Winship. The "O'Cain" proceeded direct to California, to trade out a cargo of goods with the *padres* of the Missions and their converts; and the "Albatross" sailed for the Sandwich Islands, with twenty-five persons on board. At the Islands she provisioned, and took on board twenty-five more men, leaving port for the Columbia March 25, 1810.

Arriving in the river early in the spring, Captain Winship cruised along up, for ten days, finally selecting a site on the south side, about forty miles from its mouth and opposite the place now known as "Oak Point," though its name is borrowed from Captain Winship's place. Here he commenced founding an establishment, and for a time everything progressed satisfactorily. A tract of ground, being cleared, was planted with vegetables; a building was erected; and, while the river banks

were gay with the blossoming shrubbery of early summer, our captain and his fifty workmen rejoiced in the promise of a speedy consummation of their plans of colonization. Their hopes, however, were soon overthrown by an unlooked-for occurrence; and the daring pioneers, who feared the face of neither man nor beast in all that wilderness, found themselves confronted with an adversary against which it was useless to contend. The snows had melted in the mountains a thousand miles eastward, and the summer flood came down upon their new plantation, washing the seeds out of the earth and covering the floors of their houses two feet deep with water, demonstrating conclusively the unfitness of the site selected for their settlement.

Without doubt, this company of adventurers were by turns wroth and sorrowful. Their seeds were lost; their residences made uninhabitable, even had they desired to remain, which they did not. Captain Winship, at once re-embarked his men, and sailed for California to consult with his brother. Here he was met by the intelligence of the formation of the Pacific Fur Company, with John Jacob Astor at its head, and the intention of this company to occupy the Columbia River. Competition with so powerful an association was not to be thought of, and the brothers Winship abandoned their enterprise. As men of large ideas and fearless action, they should be remembered in connection with the history of the Columbia River.

In March of the following year, that portion of Mr. Astor's expedition which was to come by sea did arrive on the Columbia—not, however, without the loss of eight men on the bar, through the impatience and overbearing temper of the commander of the "Tonquin," Captain Thorne. Subsequently, the Indians of the Straits of Fuca destroyed the "Tonquin," massacring all her officers and crew, twenty-three in number. The land expedition suffered incredible hardships: supply vessels failed to arrive; war with Great Britain broke out, preventing Mr. Astor from carrying out his plans; the Canadian partners took advantage of the situation to betray Mr. Astor's interests; and, after two years of hope deferred, the establishment at Astoria was sold out to a British company, and the enterprise abandoned, the place having been "captured" by the British.

After the close of the war of 1812, Astoria was restored to the United States, and Mr. Astor would have renewed his enterprise, notwithstanding his heavy losses, had Congress guaranteed him protection and lent its aid; but the government pursued a cautious policy at this time, and the Oregon territory remained in the hands of the British fur-traders exclusively for the twenty years following, notwithstanding a treaty of joint occupation.

To follow the chain of events, and record the incidents of a long struggle between Great Britain and the United States to substantiate a claim to Oregon, is the work of the historian. Enough for us that we know which claim prevailed; and let us proceed to the more congenial contemplation of the physical features which the country presents, touching lightly now and then upon its history, as our story may.

CHAPTER III.

ABOUT THE MOUTH OF THE COLUMBIA.

WHERE the Columbia meets the sea, in an almost continuous line of surf, is some distance outside the capes; but from the one to the other of these—that is, from Cape Hancock to Point Adams—is seven miles. Should the sea be calm on making the entrance, nothing more than a long, white line will indicate the bar. If the wind be fresh, the surf will dash up handsomely; and if it be stormy, great walls of foam will rear themselves threateningly on either side, and your breath will be abated while the quivering ship, with a most “uneasy motion,” plunges into the thick of it, dashes through the white-crested tumult, and emerges triumphantly upon the smooth bosom of the river.

The north channel, which is now little used, comes in pretty close under a handsome promontory. This promontory is the Cape Hancock of Captain Gray and the United States government, and the Cape Disappointment of the English navigators and of common usage, since the long residence in the country of the Hudson's Bay Company.

Inside the base of the cape, we find ourselves in a pretty little harbor, called Baker's Bay from its discoverer, with an island or two in it, and surrounded by sloping shores, originally densely covered with a growth of spruce, fir, and hemlock, with many varieties of lesser trees and shrubs. Along the strip of low land, crescent-shaped and edged with a sandy beach, are the recently abandoned quarters of the garrison of Fort Canby, for the cape was fortified during the civil war—when our government had some distrust of the friendliness of the English and French powers, and some fears of Confederate cruisers—with several powerful batteries.

There is also a light-house at the point of the cape, in which a first-class Fresnel light is kept, tended by the resident of a modest mansion under the shelter of the hill, and we are tempted to take the path winding around and about up to the top of the promontory. What fine trees! What a luxuriant undergrowth!

Sauntering, pulling ferns and wild vines, exclaiming at the shadows, the coolness, the magnificence of the forests, we come at last to the summit, and emerge into open ground. Here all is military precision and neatness: gravelled walks, grassy slopes and terraces, whitened walls. When we have done with the contemplation of guns and earthworks, we turn eagerly to gaze at the sea; to watch the restless surf dashing itself against the bar; to catch that wonderful monotone—"ever, forever."

The fascination of looking and listening would keep me long spellbound; but our escort, who understands the symptoms, politely compels us "to move on," and directly—very opportunely—we are confronted with the light-house keeper, who offers to show us his tower and light. Clambering up and up, at last we stand within the great lantern, with its intense reflections, and hear all about the life of its keeper,—how he scours and polishes by day, and tends the burning oil by night. When we ask him if the storm-winds do not threaten his tower, he shakes his head and smiles, and says it is an eerie place up there when the sou'westers are blowing. But, somehow, he likes it; he would not like to leave his place for another.

Then we climb a little higher, going out upon the iron balcony, where the keeper stands to do his outside polishing of the

glass. The view is grand; but what charms us most is a miniature landscape reflected in one of the facets of the lantern. It is a complete copy of the northwestern shore of the cape, a hundred times more perfect and beautiful than a painter could make it, with the features of a score of rods concentrated into a picture of a dozen inches in diameter, with the real life, and motion, and atmosphere of nature in it. While you gaze enchanted, the surf creeps up the sandy beach, the sea-birds circle about the rocks, the giant firs move gently in the breeze, shadows flit over the sea, a cloud moves in the sky; in short, it is the loveliest picture your eyes ever rested on.

When we ask the light-keeper, "What do you do when the thick fogs hung over the coast?" he shows us a great bell, which, when the machinery is wound up, tolls, tolls, tolls, solemnly in the darkness, to warn vessels off the coast. "But," he says, "it is not large enough, and cannot be heard any great distance. Vessels usually keep out to sea in a fog, and ring their own bells to warn off other vessels."

Then he shows us, at our request, Peacock Spit, where the United States vessel of that name was wrecked, in 1841; and the South Spit, nearly two miles outside the cape, where the "Shark," another United States vessel, was lost in 1846. The bones of many a gallant sailor and many a noble ship are laid on the sands, not half a dozen miles from the spot where we now stand and look at a tranquil ocean. Nor was it in storms that these shipping disasters happened. It was the treacherous *calm* that met them on the bar, when the current or the tide carried them upon the sands, where they lay helpless until the flood-tide met the current, and the ship was broken up in the breakers. Pilotage and steam have done away with shipwrecks on the bar.

We are glad to think that it is so. Having exhausted local topics for conversation, we descend the winding stairs, which remind us of those in the "Spider and the Fly," so hard are they to "come down again." How still and warm it is down under the shelter of the earth-works! Descending by the military road, we come out near the life-boat house,—for there is a life-saving station here,—and, being invited, go in to look at it. We find it well furnished for its duties, which evidently

have been well performed, for here are the names of half a dozen vessels of different sorts which have been rendered service in their hour of peril.

There is annually great loss of life among the fishermen at the mouth of the Columbia, and it is here principally that the life-saving station is most useful. The number of men rescued during some seasons has reached half a hundred. The fishermen have recognized this service by presenting the captain of the crew with a powerful glass, and the men wear medals of which they are very proud. Having inspected the well-kept boats, ropes, and buoys, we take a look at the fishing-tackle, with which the light-house keeper goes out to troll for salmon. Glorious sport! The great, delicious fellows, to be caught by a fly! But we, humans, need not sermonize about being taken by small bait.

Baker's Bay is not without its little history; albeit, it is nothing romantic. In 1850 a company conceived the plan of building up a city, under shelter of the cape, and expended a hundred thousand dollars, more or less, before they became aware of the fruitlessness of their undertaking. By mistake, portions of their improvements were placed on the Government Reserve, to which, of course, they could have no title. Yet this error, although a hinderance, was not the real cause of the company's failure, which was founded in the ineligibility of the situation for a town of importance. The buildings went to decay, and the site was finally overgrown with a young forest of alders, spruce, and hemlock. But after many years the title to the land was confirmed to the early speculator, and the town of Ilwaco, a summer resort, has grown up on the site of obsolete "Pacific City."

There is a fine beach-drive of twenty miles from the cape up to the entrance of Shoalwater Bay, and several seaside resorts are scattered along it. From Ilwaco to Sea-Land is sixteen miles, this distance being traversed by the Ilwaco and Shoalwater Bay Railroad, which has several stations, namely, Stout's, Centerville, Tinker's, Loomis, Ocean Park, and Sea-Land, the present terminus. The cottages of summer residents are scattered along for two miles from Ilwaco, after which the road runs past waving fields of grass and grain, and thrifty vegetable gardens. For a part of the distance the ocean is in full view, its long

rollers seeming to attack the beach with a purpose to demolish it, receding and renewing the onslaught perpetually. The scene is rendered more wild by the dense growth of dwarf timber covering the low land stretching back to an arm of Shoalwater Bay lying to the east. Many fresh-water lakes or lagoons dot this long peninsula, which, with its black, rich soil, would make profitable cranberry fields.

At Ocean Park there is a grove of gnarled spruce-trees through which streets have been cleared from the railroad to the beach, making beautiful vistas through which one may catch glimpses of the sparkling sea. The trees which brave the heavy northwest wind of summer, and the terrible strength of the winter's southwest storms, lean inland, and have a stunted appearance very different from the straight, tall timber of the river bottoms and mountains.

Sea-Land is situated in a spruce forest, on the inner shore of the peninsula, fronting Shoalwater Bay, the clearing being of very recent date. It has a wharf and warehouse extending half a mile into the bay. Several small steamers ply on these waters, carrying passengers to and from towns on the mainland side, whence railroads in the near future will convey them to Gray's Harbor, or into the interior of Washington.

To a sportsman with sufficient hardihood to invade the rugged and heavily-timbered mountains on the east side of Shoalwater Bay, bear, elk, and deer offer temptations. Bear are numerous, and keep fat on the wild fruit of this region, —whortleberries, sallal, and salmonberries. They also invade the apple-orchards of the settlers, and have to be trapped for their presumption.

Returning as we came, we take the "General Canby" at Ilwaco to cross the Columbia. Such is its expanse that, although its course brings us off Chinook Point, we have but an indistinct view of it. Not as it was eighty years ago, as Franchere and Irving and Cox wrote about it,—a populous Indian village,—the dwellings of the white invader overshadow the ancient wigwams. Even its burial-ground, *memelose illihee*, which freely translated means "spirit country," is profaned. Alas! nothing of one race is sacred to another; least of all is there anything in common between the white and the red man.

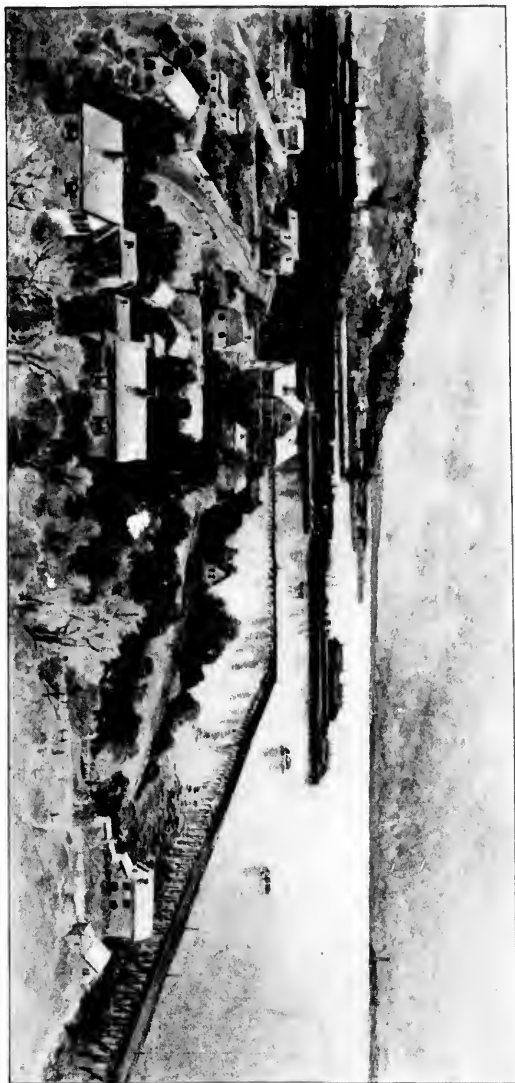
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VIEW OF ASTORIA, LOOKING SEAWARD.



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CHAPTER IV.

A TALK ABOUT ASTORIA AND VICINITY.

THE situation of Astoria, in point of beauty, is certainly a very fine one. The neck of land occupied by the town is made a peninsula by Young's Bay on one side and the Columbia River on the other, and points to the northwest. A small cove makes in at the east side of the neck, just back of which the ground rises much more gently and smoothly than it does a little farther towards the sea. The whole point was originally covered with heavy timber, which came quite down to high-water mark; and whatever there is unlively in the present aspect of Astoria arises from the roughness always attendant upon the clearing up of timbered lands.

Standing facing the sea or the river, the view is one of unsurpassed beauty. Towards the sea, the low, green point on which Fort Stevens stands—the Cape Frondosa (leafy cape) of the Spanish navigators—and the high one of Cape Hancock, topped by the light-house tower, mark the entrance to the river. Above them is a blue sky; between them a blue river celebrating eternally its union with the sea by the roar of its breakers, whose white crests are often distinctly visible. There is a sail or two in the offing, and a pilot-boat going out to bring them over the bar; perhaps the vessel is from "far Cathay," with the silks and spices of the Ind. While we gaze, there is seen against the horizon the black smoke of a steamer. On she comes over the bar, breathing asthmatically and beating the waters with her great wheels in a steady rhythm, until at last the boom of her gun gives notice to the custom-house officials of her arrival, and all the town hastens to the wharf to learn of her cargo and her passengers, and to question what sort of a voyage she has had.

Towards night, when the sun is setting behind the light-house cape, and gilding sky and sea beyond the bar, there suddenly appear upon the river hundreds of fishing-boats, whose white

sails dot its blue surface as summer clouds a June sky. They are going out to their night's fishing with drag-nets.

Opposite us, and distant four miles, is the northern shore,—a line of rounded highlands, covered with trees, with a narrow, low, and level strip of land between them and the beach. The village of Chinook is a little to the northwest; another village, Knappton, a little to the northeast. Following the opposite shore-line with the eye, as far to the east as the view extends, a considerable indentation in the shore marks Gray's Bay, where the discoverer of the river went ashore with his mate, to "view the country."

On the Astoria side the shore curves beautifully in a north-east direction, quite to Tongue Point, four miles up the river. This point is one of the handsomest projections on the Columbia. Connected with the mainland by a low, narrow isthmus, it rises gradually to the height of fifty or sixty feet, and is crowned with a splendid growth of trees. Between Tongue Point and Astoria was erected the first custom-house in Oregon; the building and wharf have gone to decay, and "Upper Astoria" has become united to the main town by a line of fish-canning establishments.

Following down the curving shore, I inquire for the site of the Astor establishment of 1811 and the cove where the "Dolly" was launched. A few years ago, I am told, the foundations of Fort George, as the place was named by the English successors to Astor, could have been traced, but they are now built over, and the cove in front is also concealed from view by a wilderness of wharves.

In 1849, a company or two of United States soldiers being temporarily quartered in the old "Shark" house, a squared-log mansion built to shelter the crew of the United States schooner wrecked on the bar in 1846, the canoes of eight hundred native warriors of the Chinooks covered the water in Astor Bay, curious, as savages always are, to watch the acts and note the customs of civilized men. Not a canoe is now in sight. The white race are to the red as sun to snow: as silently and surely the red men disappear, dissipated by the beams of civilization. Among those who came to gaze at the overpowering white race on that occasion was an old Chinook chief, named Waluska, the

number of whose years was one hundred. His picture, which some one gave me, shows a shrewd character. So, no doubt, looked Com-com-ly, the chief whom Washington Irving describes in his "Astoria," and whose contemporary this venerable savage must have been. His then sightless eyes, in his early manhood beheld the entrance into the river of that vessel whose name it bears. Between that time and the day of his death he saw the Columbia River tribes, which once numbered thirty thousand souls, decimated again and again, until they scarcely counted up one-tenth of that number. Only a few years ago, I am told, there might have been found, on a pretty, level piece of land around Smith's Point west of Astoria, away from the shingly beach, and where on the edge of the forest thickets of wild roses, white spirea, woodbine, and mock-orange made a charming solitude, an Indian lodge, the residence of the native Clatsop. Exteriorly, the Clatsop residence could not be praised for its beauty, being made of cedar planks, set upright and fastened to a square or oblong frame of poles, and roofed with cedar bark. Outside were numberless dogs, and some pretty girls of ten and twelve years of age, with glorious great, black, smiling eyes. Inside might be seen three squaws of various ages, braiding baskets and tending a baby of tender age, with two "warriors" sitting on their haunches and doing nothing; and salmon everywhere,—on the fire, on the walls, overhead, dripping grease, and smelling villanously, salmon,—nothing but salmon. A conversation with the mother of the little stranger, in jargon, related to the fair complexion of the *tillicum*. One of the warriors, presumed to be its papa, laughed and declared it all was as it should be. Such are the benefits of civilization to the savage!

I went in search of this aboriginal family and fell in with a different sort of savage,—an Irishman, on a little patch of ground which he cultivates after a fashion of his own, at the same time doing his housekeeping in preference to being "bothered with a woman." He is cooking his afternoon meal, which consists of soup made from boiling a ham-bone, with thistles for greens, and a eup of spruce tea. Think of this, unlucky men, bothered with women, who, but for them, might yourselves be subsisting on thistles and spruce tea!

Young's Bay, which forms the southwest boundary of Smith's

Point, is a deep inlet of the Columbia, and receives the waters of Young's River, Lewis and Clarke's River, and the Skipanon, all which flow from the south; Young's River, however, having two considerable branches coming in from the east. The peninsula formed by Young's Bay and the ocean is a sandy plain, roughened with many hummocks, cut up by tide-sloughs, lakes, and marshy hollows, and timbered near the sea with scrubby pines. It has two rivers rising in the Coast Range,—one, Lewis and Clarke's, emptying into Young's Bay, and one, the Neah-canacum, flowing into the ocean. It was upon the spot beside the former where the brave explorers Lewis and Clarke wintered in 1805-6, subsisting themselves and their company on elk-meat obtained on this peninsula. There they listened to Indian tales of the Yankee traders who had been in the river in past times, and even learned their names and the names of their vessels, so well had they been remembered by the natives. The Neah-canacum is a beautiful mountain stream, overhung with trees, rapid and cold enough for trout-fishing, and deep enough for boating. Very singularly, it runs parallel to the ocean and very near it, and is one of the most charming features of the summer resort known as Clatsop Beach. There is good hunting in the coast mountains bordering on Clatsop Plains to the south, and this sea-bathing place has for many years been the recreation-ground of Portlanders in the dry months of July, August, and September, a distinction now shared by similar resorts on the beach north of the Columbia. Steamers leave Portland late in the evening, arriving at Astoria in the morning, throughout the week; and on Saturdays leave the city early enough to reach their destination the same evening and give business men a Sunday with their families at the sea-side, to which they are conveyed by boat and train from Astoria.

From Young's Bay there is a view of Saddle Mountain, the highest of its twin peaks, Neah-carry, being the subject of a tradition preserved among the Indians of a vessel once cast ashore near the mouth of their river, the crew of which were saved, together with their private property, and a box which they carried ashore and buried on Mount Neah-carry, with much care, leaving two swords placed on it in the form of a cross.

Another version is that one of their own number was slain, and his bones laid on top of the box when it was buried. This, were it true, would more effectually keep away the Indians than all the swords in Spain.

The story sounds very well, and is firmly believed by the Indians, who cannot be induced to go near the spot, because their ancestors were told by those who buried the box, that, should they ever go near it, they would provoke the wrath of the Great Spirit. The tale corresponds with that told by the Indians of the upper Columbia, who say that some shipwrecked men, one of whom was called Soto, lived two or three years with their tribe, and then left them to try to reach the Spanish countries overland. It is probable enough that a Spanish galleon may have gone ashore near the mouth of the Columbia, and it agrees with the character of the early explorers of that nation that they should undertake to reach Mexico by land. That they never did, we feel sure, and give a sigh to their memory.

If the tourist is so fortunate as to secure an old Astorian for a guide, he may, if he chooses, call up manifold "spirits from the vasty deep." One of the stories of wreck a century or so ago relates to our almond-eyed neighbors at the antipodes. The story-teller will most likely take from his pocket, where he must have placed it for this purpose, a thin cake of beeswax, well sanded over, which he avers was a portion of the cargo of a Japanese junk, cast ashore near the Columbia in some time out of mind. When we have wondered over this, to us, singular evidence of wrecking, he produces another, in the form of a waxen tube. At this we are more stultified than before, and then are told that this was a large wax candle, such as the Japanese priest, as well as the Roman, uses to burn before altars. The wick is entirely rotted out, leaving the candle a hollow cylinder of wax.

By this self-evident explanation we are convinced. Certain it is that for years, whenever there has been an unusually violent storm, portions of this waxen cargo are washed ashore, ground full of sand. As beeswax is a common commodity in Japan, we see no reason to doubt that this, which the sea gives up from time to time, originally came from there. The suppo-

sition is the more natural, as the mouth of the Columbia is exactly opposite the northern extremity of that Island Empire, and a junk, once disabled, would naturally drift this way. The thing has been known to occur in later years; and that other wrecks, probably Spanish, have happened on this coast, is evidenced by the light-haired and freckle-faced natives of some portions of it farther north, discovered by the earliest traders.

Fort Stevens, on the north shore of the Clatsop Peninsula, is a military post occupying a low, sandy plain, just inside the projection of Point Adams. It is one of the strongest and best-armed on the Pacific coast. Its shape is a nonagon, surrounded by a ditch, thirty feet wide. This ditch is again surrounded by earthworks, intended to protect the wall of the fort, from which rise the earthworks supporting the ordnance. Viewed from the outside, nothing is seen but the gently-inclined banks of earth, smoothly sodded. The officers' quarters, outside the fort, are very pleasant; and, although there is nothing attractive in the location of the fort, or in its surroundings, it is an interesting place in which to spend an hour. The view from the embankment is extensive, commanding the entrance to the river, the fortifications of Cape Hancock, opposite, and the handsome highlands of the north side, as well as of a portion of Young's Bay. The troops quartered here have been temporarily withdrawn to accommodate the officers and men connected with the engineer department of the United States Army, who are at work upon a jetty built by the government to improve the south channel of the Columbia, which extends from Fort Stevens four miles out towards deep water, and will probably be still further extended, the improvement in the channel being manifest. This work was commenced in 1885, before which the channels over the bar were capricious in location and variable in depth, the water on the bar being from nineteen to twenty-one feet, and the channels from one to three in number. The effect of the jetty has been to build up Clatsop spit, and concentrate the waters on the middle sands, which have been removed, leaving from eighteen to twenty-five feet of water in their place. Between three and four square miles of ground in front of Fort Stevens have been built up, where

formerly it was being eaten away by the impingement of the current upon the shore-line.

Tansy Point, on the northeast corner of the Clatsop Peninsula, and adjoining the military reservation, has recently been laid off in town lots, and named New Astoria. This brings to mind the project of some adventurers of 1839, one of whom was J. T. Farnham, author of the "History of Oregon Territory," and another, Medorum Crawford, of Salem, in this State, to build a city to be a second New York, on this identical point. We build cities with wonderful rapidity in these days, with every force made available. But what courage and what imagination must these young fellows have had, who crossed the continent "by hook and by crook" to found a New York at the mouth of the Columbia! Few of them ever saw their destination.

Another recent town enterprise is East Astoria, laid out above Tongue Point, at the mouth of John Day River, an affluent of the Columbia. As a suburb of Astoria it will in time be settled up, but as an independent site it has no apparent advantages. A local railway line has been projected which is to connect New Astoria with old Astoria by following around the shore of Young's Bay to Smith's Point, which is also now laid off in city lots. A similar connection will probably be made with the eastern addition. Astoria, although the oldest American settlement on the Pacific coast, has been very slow of development. The situation for a commercial *entrepôt*, although in some respects a fine one, had its drawbacks, being cut off from the interior by the densely-timbered mountains of the Coast Range, and having apparently few resources outside of salmon canning, which business is of comparatively recent date. If you had asked an Astorian in 1870 what constituted the importance of his town, present or future, he would have told you that it had a commodious harbor, with depth of water enough to accommodate vessels of the deepest draft, with good anchorage, and shelter from southwest (winter) storms. He would have pointed to the forts at the mouth of the river, which made business; to the custom-house, which brought business; to the pilotage of all incoming and outgoing vessels; to a certain amount of lumber manufactured here, and cement manufactured

at Knappton, by workmen who spent their wages in Astoria, and so on.

If you had inquired what back country it had to support it, he would have pointed to Clatsop, and the valley of the Nehalem, south of it; and have told you that it is but seventy miles into the great valley of Western Oregon, and that a railroad is to be built into it from Astoria, through the coast mountains. He would mention, besides, that there are numerous small valleys of streams running into the Columbia within twenty miles, which are of the best of rich bottom-lands, and only need opening up. This was the Astorian's view of his town, and nothing to the contrary could be seen. That there were in the neighborhood of Astoria many elements of wealth, both mineral and agricultural, which only required time and capital to develop, could not be doubted, even then. The same conditions remain, but the resources then modestly claimed have been considerably developed.

To fishing, more than to any other, or all other, business, Astoria owes its prosperity from 1870 to the present time. The first fishery established on the Lower Columbia since 1834, when Wyeth failed, was in 1862, by Captain John West, of Westport, some distance above Astoria; the first cannery in 1867, by Hapgood and Hume, on the north side of the river, also above Astoria. A *fishery* proper is understood to mean a barrelling establishment, while a *cannery* is one where fish are preserved in cans, either fresh or spiced, and pickled. Often they are combined.

The fishing season begins in May, and ends in August. The manner of taking salmon in the Columbia is usually by drift-nets, from twenty to a hundred fathoms long. The boats used by the fishermen are similar to the Whitehall boat. According to laws of their own, the men engaged in taking the fish, where the drift is large, allow each boat a stated time to go back and forth along the drift to hook up the salmon. The meshes of the nets are just of a size to catch the fish by the gills, when attempting to pass through; and their misfortune is betrayed to the watchful eye of the fisherman by the bobbing of the corks on the surface of the river.

When brought to the fishery, they are piled up on long tables

which project out over the water. Here stand Chinamen, two at each table, armed with long, sharp knives, who, with great celerity and skill, disembowel and behead the fresh arrivals, pushing the offal over the brink into the river at the same time. After cleaning, the fish are thrown into brine vats, where they remain from one to two days to undergo the necessary shrinkage, which is nearly one-half. They are then taken out, washed thoroughly, and packed down in barrels, with the proper quantity of salt. That they may keep perfectly well, it is necessary to heap them up in the barrels, and force them down with a screw-press.

The canning process, which was kept secret for one or two seasons, is a much more elaborate one, requiring a large outlay, many hands, and much skill and precision, for its success. Such was the profit derived from this business that canneries multiplied rapidly until 1880, when it reached its height, since which time there has been a decrease in the output, owing to over-fishing. The legislature has come to the protection of salmon with a law confining fishing to a period from the first of April to the first of August. A hatchery is also in operation on the Clackamas River, a branch of the Wallamet, where spawn is cared for and developed, the young fish being placed in the river at a proper stage of growth. With these precautions, it is hoped to save this industry from further loss, and even to excel its former yield.

There are nineteen canneries at Astoria, in which are invested two million dollars, and almost as many more which are tributary to it, the capital operating them being furnished by Astoria. Shipments are made direct to foreign countries, as well as to domestic ports. In 1889 one cargo of salmon which was cleared for Liverpool was valued at three hundred and fourteen thousand three hundred and three dollars, the largest cargo, with one exception, ever cleared direct, by sail, for a foreign port from the Pacific coast. Astoria is the greatest salmon-fishing station in the world, the canneries using between four hundred thousand and five hundred thousand salmon annually, and Astoria sends out larger cargoes by sailing-vessels than San Francisco of fish and wheat.

There is no part of the Pacific coast so well adapted to fish-

curing as Oregon and Washington. The climate, either north or south of their latitude, is either too moist or too dry. Wood for barrels is close at hand; and, not yet utilized, close at hand, too, is the best salt in the world for curing meats of any kind. Seeing to what an immense business salmon-fishing is growing, one cannot help wishing that Nathaniel Wyeth, who tried so hard, in 1832, to establish a fishery on the Columbia, and failed through a combination of causes, could see his dream fulfilled, of making the Columbia famous for its fisheries and its lumber trade. But he, like most enthusiasts, was born too soon to behold the realization of the truths he felt convinced of.

There are several species of salmon and salmon-trout which are found in the Columbia. Of these, three species of the silvery spring salmon, known to naturalists as *Salmo quinnat*, *S. gairdneri*, and *S. paucidens*, are those used for commercial purposes, and known as the "square-tailed" and "white salmon,"—the third species being considered as smaller individuals of the same kinds, though really distinct in kind.

When they enter the river, near its mouth, they may be caught by hook and bait. The Indians use small herring for bait, sinking it with a stone, and trolling, by paddling silently and occasionally jerking the line. Near the mouth of the Columbia they can be taken with the fly; but, as salmon do not feed, on their annual journey up the river to spawn, it is useless to offer them bait. They can only be caught at a distance from the ocean by nets and seines, or by spearing. The natives usually take them by using scoop-nets, which they dip into the water, at random, near the falls and rapids, where large numbers of salmon collect to jump the falls. As these falls are all at a considerable distance from the sea, by the time they arrive at them the fish are more or less emaciated, from fasting and the exertion of stemming currents and climbing rapids, and, consequently, not in so good a condition as when caught near the sea. Hence the superior quality of Chinook salmon.

The numbers of all kinds of salmon which ascend the Columbia annually is something wonderful. They seem to be seeking quiet and safe places in which to deposit their spawn, and thousands of them never stop until they reach the great falls of the Snake River, more than six hundred miles from the

sea, or those of Clarke's Fork, a still greater distance. All the small tributaries of the Snake, Boise, Powder, Burnt, and Payette Rivers swarm with them in the months of September and October.

Great numbers of salmon die on having discharged their instinctive duty; some of them, evidently, because exhausted by their long journey, and others, apparently, because their term of life ends with arrival and spawning. Their six hundred miles of travel against the current, and exertion in overcoming rapids, or jumping falls, often deprives them of sight, and wears off their noses. Of course, all these mutilated individuals perish, besides very many others; so that the shores of the small lakes and tributaries of both branches of the Columbia are lined, in autumn, with dead and dying fish. But they leave their roe in the beds of these interior rivers, to replace them in their return to the sea by still greater numbers.

The fishery business has developed vastly improved methods of taking the salmon, including "salmon wheels," which, placed in the narrower portions of the Columbia, as at the Cascades, scoop them up by the hundreds every minute. The fishermen who supply the Astoria canneries, however, do so by means of boats and nets, which are thrown out at night, and drawn in at an early hour in the morning. It is a perilous occupation about the mouth of the Columbia, where currents, tides, and winds must be encountered. Formerly the men were employed and furnished with boats and nets, an outfit costing several hundred dollars. But in 1880 the fishermen, chiefly Scandinavians, combined to sell their fish by the piece, at fifty cents each; and this year they have asked a dollar, and a dollar and a quarter. At the same time, owing to the great amount of fish unconsumed in the market, from last year's catch, a low price for canned salmon is prevailing, and this year's business will not prove as remunerative as in former seasons. About four thousand men are employed every season in the salmon fishing and canning.

Besides the salmon of commerce, the Columbia furnishes a great many other species of edible fish, including salmon-trout, sturgeon, tom-cod, flounder, and smelt,—all of which are excellent table-fish, in their proper seasons.

There are three large lumber-mills located at Astoria, manu-

facturing daily one hundred and fifty thousand feet of rough and dressed lumber; a planing-mill, and a box-factory turning out annually one million boxes; besides half a dozen other mills in the vicinity. The timber to feed these mills is in the immediate neighborhood, and consists of fir, spruce, hemlock, and cedar. Spruce is used for boxes, owing to its being odorless and free from warping. Ship and bridge timber is also obtained from the adjacent forests. The material for manufacturing furniture is abundant,—namely, oak, maple, ash, cedar, larch, and alder, which is still unappropriated.

Astoria has a large iron and brass foundry, three machine-, two boiler-, and several blacksmith-shops; but the iron, coal, and limestone in its vicinity are unworked; a tannery utilizes the helmlock bark found conveniently near; these few manufacturing enterprises being all that are represented in this city by the sea. It has a national and a private bank; good schools and handsome school buildings; eight church edifices, and all the usual orders and societies; two morning newspapers and one evening journal; a chamber of commerce; water-works, street-car lines, and most of the other accessories of modern urban comfort.

The imports of Astoria for eleven months in 1889 amounted to one hundred and twenty-one thousand seven hundred and forty-nine dollars, on which the duties were forty-two thousand one hundred and thirty-seven dollars and forty-five cents, the heaviest bill being for tin plates used in manufacturing fish-cans. The value of cargoes of wheat, lumber, fish, flour, and miscellaneous exports shipped direct from Astoria was nine hundred and thirty-three thousand six hundred and ninety-eight dollars. The arrivals of vessels from January 1 to December 1 numbered ninety, with a total tonnage of ninety-three thousand seven hundred and fifty-eight. The steamers, sloops, schooners, barks, and ships owned in this city number seventy-five.

Within half a dozen years about one thousand acres of tideland have been reclaimed by diking at Tansy Point on the Clatsop peninsula, the land proving immensely productive, and demonstrating that farming is not a lost art on the sea-coast. Other similar improvements will undoubtedly follow, giving, in

time, the Astoria of Oregon as beautiful environments as surround the Astoria of New York.

Only last year the first railroad from Astoria into the Wal-lamet Valley was commenced. This is the Astoria and South Coast Railway, which begins at the west end of the town, crosses Young's Bay by a bridge a mile and a half in length, and, running west to Skipanon, turns south along the coast to the seaside resort at Clatsop Beach, a distance of eighteen miles, whence it takes a course southeast and east to a junction with the Southern Pacific's west-side line at Hillsborough, in Washington County, which gives it connection with trains for Portland or for the southern counties and San Francisco; or by the Oregon Pacific for Eastern Oregon. This line will be completed in 1891, being already opened to Clatsop Beach. Another road under survey is the Albany and Astoria Railroad, which is to run south along the coast to Tillamook, and thence southeast through the west-side grain-fields to Albany. Another projected line is the Salem, Astoria and Eastern, whose pet name will be the "Salem to the Sea road;" while the Union Pacific has indicated its intention of building from Portland to Astoria along the Columbia. These are enterprises pointing to the accession of great shipping advantages by the city at the mouth of this great river which must affect it very advantageously.

CHAPTER V.

NOTES ON THE COLUMBIA RIVER.

THE river is the soul of the land to which it belongs. Fringing its banks, floating upon its waters, are the interests, the history, and the romance of the people. Our ideas of every nation are intimately associated with our ideas of its rivers. To mention the name of one is to suggest the characteristics of the other.

How the word Euphrates recalls the earliest ages of man's history on this globe! The Nile reminds us of a civilization on which the whole of Europe depended for whatever was

enlightened or refined anterior to the Christian era. The Tiber is rich in historic associations of the proudest empire the world ever knew. What romances of Moorish power and splendor are conjured up by the mention of the Guadalquivir! The Rhine is so enwreathed with flowers of song, that the actual history of its battlemented towers is lost from view; and yet the mention of its name gives us a satisfying conception of the ideal Germany, past and present.

So the Thames, the Rhone, the Danube, are so many words for the English, the French, and the Austrian peoples. In our own country, what different ideas attach to Connecticut, Hudson, Savannah, and Mississippi! How quickly the pictures are shifted in the stereoscope of imagination by changing Orinoco for San Joaquin, Amazon for Sacramento, or Rio de la Plata for Columbia, upon our tongues. It is not that one is longer or shorter, or wider or deeper, than another: it is that each conveys a thought of the country, the people, the history, and the commerce of its own peculiar region.

In comparison with other rivers of equal size and geographical importance, the Columbia is little known. That generation has not yet passed away which was taught that the whole of the Northwest Territory was Oregon, that it had one river, the Columbia, and one town, Portland, *situated on the Columbia*.

Above Astoria, for some distance, there are no important settlements on the river. But the grandeur of the wooded highlands, the frequently projecting cliffs covered with forest to their very edges, and embroidered and festooned with mosses, ferns, and vines, together with the far-stretching views of the broad Columbia, suffice to engage the admiring attention of the tourist. In consequence of fires, which every year spread through and destroy large tracts of timber, the mountains in many places present a desolated appearance, the naked trunks alone of the towering firs being left standing to decay. This remark applies to the north bank, on the lower portion of the river, for an archipelago of islands on the south rises not far above the surface of the river, covered with a luxuriant growth of trees, and in high water the river covers many miles of low land.

Opposite Puget Island, the largest of the group, is Cathlamet,

in Washington, the seat of government of Wabkiakum County, and the seat also of a fish-canning establishment. It is perched on a high bluff, and has a small population.

The mountains approach the river again on both sides at the Narrows, and opposite to the Oak Point of Captain Winship is the modern Oak Point, which seems to have borrowed the name, and shifted it to the Washington side. The name is pretty and distinctive, and ought never to be changed, as it marks the western boundary of the oak-tree in Oregon and Washington. Between this and the sea not an oak-tree grows. The only business at or about Oak Point is that of the fisheries already mentioned, and a lumbering establishment erected in 1848-49. It is run by water-power, and capable of manufacturing four million feet annually.

About ten miles above Oak Point we come to the mouth of the Cowlitz River. Just below it is a high, conical hill, known as Mount Coffin. This eminence, together with Coffin Rock, seven miles above, on the Oregon side, formed the burial-places of the Indians of this vicinity before the settlement of the country by whites. Here the dead were deposited in canoes, well wrapped up in mats or blankets, with their most valuable property beside them, and their domestic utensils hung upon the posts which supported their unique coffins. Wilkes relates in his journal how his men accidentally set fire to the underbrush on Mount Coffin, causing a number of the canoes to be consumed, to the grief and horror of the Indians, who would have avenged the insult had they not been convinced of its accidental occurrence.

The Cowlitz is a small river, though navigable for twenty miles when the water is high enough, and about half that distance at all times. It rises in Mount St. Helen, and runs westwardly for some distance, when it turns abruptly to the south. The valley of the Cowlitz is small, being not more than twenty miles long and four or five wide. It is heavily timbered, except for a few miles above its mouth, where the rich alluvial bottomlands are cleared and cultivated. No finer soil could possibly exist than this in the Cowlitz Valley. In 1868 the town of Monticello, four miles from the Columbia, was all swept away in a flood. It has been replaced by a fresher edition of its

former self, however, and looks as cheerful and ambitious as if it knew there could be no second deluge.

This portion of the Cowlitz Valley does not depend alone upon its fertility for its future importance. There are extensive deposits of coal in the mountains which border the river, besides other mineral deposits which an increase of population will eventually bring into notice. There is, too, an almost inexhaustible supply of the finest fir and cedar upon the mountains which hem it in. The river, as might be conjectured, is a rapid stream, and cold from the snows of St. Helen. Its waters in summer, when the snows are melting rapidly, are white, from being mixed with volcanic ashes, or some disintegrated infusorial marl or chalk.

So disguised in a luxuriance of trees and shrubbery is the mouth of the Cowlitz that, when we are in the open Columbia, we can scarcely detect the place of our exit from it. Crossing over to the Oregon side, we find ourselves at Rainier, where lumber is manufactured, chiefly for export. The location of Rainier is, in many respects, fine; but, at present, there seems to be little besides the lumber trade to give it business, though there are a few excellent farms in the vicinity. Along here, on the Oregon side, is a tract of level land, extending back from the Columbia for some distance. It answers to the depression of the Cowlitz Valley; and it is remarkable that, wherever a stream comes into the Columbia large enough to be said to have a valley, there is on the opposite side a break in, or a curvature of, the highlands, making more or less level country facing the valley perpendicular to it, so that the valleys of the streams may be said to cross the Columbia, and, even, to be widest on the opposite side. Somewhere in here on the Oregon side is the Klaskanie, a stream with a fertile and cultivated valley on its head-waters, the mouth of the stream being far down the river, opposite Cathlamet.

Advancing several miles, we find ourselves abreast of Kalama, on the Washington side, the initial point of the Portland branch of the Northern Pacific Railroad. Here it was that first the silent grandeur of the Columbia was made vocal with the shriek of "resonant steam eagles" that speed from ocean to ocean, bearing the good-will of the nations of the world in bales of

merchandise. It is the dream of Jefferson and Benton realized—only could the latter have had his wish fulfilled to live until this day!

"In conclusion I have to assure you, that the same spirit which has made me the friend of Oregon for thirty years—which led me to denounce the Joint Occupation Treaty the day it was made, and to oppose its renewal in 1828, and to labor for its abrogation until it was terminated; the same spirit which led me to reveal the grand destiny of Oregon in articles written in 1818, and to support every measure for her benefit since—this same spirit still animates me, and will continue to do so while I live—WHICH I HOPE WILL BE LONG ENOUGH TO SEE AN EMPORIUM OF ASIATIC COMMERCE AT THE MOUTH OF YOUR RIVER, AND A STREAM OF ASIATIC TRADE POURING INTO THE VALLEY OF THE MISSISSIPPI THROUGH THE CHANNEL OF OREGON."—*Letter of Benton to the People of Oregon, in 1847.*

But, Benton did not understand the geography of the coast; neither did he know much of the practical working of railroads in recognizing or ignoring any points but their own. He did not foresee the Central Pacific going to San Francisco, and the Northern Pacific to Puget Sound, and an emporium of Asiatic commerce at either of these termini, while a third great city distributed commerce along the Columbia and its tributaries, from its mouth to its sources.

Twelve miles above Kalama the Cathlapootle or Lewis River enters the Columbia. Like the Cowlitz, it rises in Mount St. Helen, and is a cold and rapid stream. Opening within a few hundred feet from the mouth of Lewis is Lake River, not born of mountain glaciers, but coming from a lake in the vicinity of Vancouver. It is fed also by a creek from a high source which runs parallel with the South Fork of Lewis River. Between the latter and the Columbia, to which it runs nearly parallel for a few miles, is a stretch of bottom-land, and, according to the rule I have laid down, the highlands recede on the Oregon side, giving room for two towns, Columbia City and St. Helen, both occupying excellent sites, but never having made the progress which might justly be expected of them. At this latter point, it is said, Wyeth had his fort and trading house in 1834, from which it was called "Wyeth's Rock" until it was settled upon, a

dozen years later, by H. M. Knighton, to whom it was patented by the United States. In the early years of the Pacific Mail Steamship Company, this great corporation owned a wharf at St. Helen, and stopped its steamers there; but the exigencies of commerce at that period compelled them to go to Portland.

Just above this place lies Sauvé Island, about eighteen miles long by six broad in the widest part; having on one side of it the Columbia, and on the other one lower Wallamet River, which is known as the "Columbia Slough." At the junction of these two rivers is an inlet called Scappoose Bay, extending back towards the high hills a distance of seven miles, and navigable by small boats for that distance, but for sailing vessels only two or three miles. In 1851-52 a town named Milton was laid out on the low land adjacent to Scappoose Bay by a company of sea-captains. The first summer flood in the Columbia showed them their mistake, driving the inhabitants to the high bluff behind Wyeth's Rock. Not a vestige of Milton remains at this day, and most of its projectors are gone the way of all the earth.

It should have been mentioned that the Columbia, at about the mouth of the Cowlitz, sixty miles from the sea, makes a decided bend, running from the upper end of Sauvé Island to this point in a northerly course. The Wallamet has its upper mouth at the head of this island, entering the Columbia, where it makes another bend, the course of the river being in a general east and west direction for one hundred and eighty miles above this point.

Passing the entrance to the Wallamet, we observe that the before-mentioned rule holds good here, and that the wide and fertile valley of this river seems to cross over to the Washington side, the flat country on both sides of the Columbia continuing from the lower mouth of the Wallamet to the foot-hills of the Cascades which border the great valley on the east. Though this level country is now covered with timber, it must, from its alluvial nature, when cleared, prove very excellent farming land. That portion of it nearest the river is subject to the annual overflow; but there is no difficulty in determining the limits of submersion, for, wherever fir-trees are found, there the high-water never comes.

At a distance of about six miles above the Wallamet we come to the town of Vancouver, on the Washington side. This place is beautifully situated on a sloping plain, with a strip of velvety-looking meadow land on its river-front. It is the old head-quarters of the Hudson's Bay Company in Oregon, where resided, for more than twenty-five years, the governor and chief factors of that company, nominally holding "joint possession," with the United States, of the whole Oregon Territory, but really, for the greater portion of that time, holding it alone.

Here lived in bachelorhood, or with wives of Indian descent, a little colony of educated and refined men, who, by the conditions of their servitude to the London Company, were forced to lead a life of almost monastic seclusion. True, it happened sometimes that naturalists, adventurous travellers, and others drifted to this comfortable haven in the wilderness, and by their talk made a little variety for the recluses; and very hospitable they found them—ready to provide every civilized luxury their fort contained, without money and without price, so long as it pleased their guests to abide with them.

There are few traces remaining of the old stockaded fort. When the British company abandoned it the United States government took possession of Vancouver for a military post; and now the tourist beholds, scattered over the plain, a thriving town of two thousand inhabitants, and bordering on it the well-kept garrison grounds of the troops, with neat officers' quarters encircling the parade. Vancouver is the seat of government of Clarke County, and possesses many advantages, which are to be brought more prominently to light by railroad communication with the Puget Sound region and Eastern Washington in the near future. The Union Pacific Company will soon unite Washington and Oregon, at this point, by a steel bridge whose estimated cost reaches into the millions.

Above Vancouver, for a distance of twenty miles, there are many beautiful situations all along on the Washington side, though the country is timbered heavily. The southern shore is lower: the Sandy—a stream coming down from Mount Hood—having its entrance into the Columbia above and opposite Vancouver, through alluvial, sandy bottoms. Beyond this the whole surface of the country becomes elevated, and we are

among the foot-hills of the Cascade Mountains. Not a mile of the passage has appeared monotonous from Astoria to this point. We have enjoyed river, forest, mountains, and snow-peaks, with little intervals of human interest, all along; and enjoyed these in absolute comfort, for the steamboat service on the Columbia is excellent, thanks to the original Oregon Steam Navigation Company, and its successors.

✓ We arrive now at what the tourist must ever regard as the most interesting portion of the river—the gorge of the Columbia. Here wonder, curiosity, and admiration combine to arouse sentiments of awe and delight in the beholder. Entering by the lower end of the gorge, we commence the passage, of fifty miles or more, directly through the solid mountain range of the Cascades. The snow-peaks, which looked so lofty at the distance of eighty miles, as we approach them gradually sink into the mountain mass, until we lose sight of them entirely. The river narrows, and the scenery grows more and more wild and magnificent.

Fantastic forms of rock—some with names by which they can be recognized—begin to attract our attention. Crow's Roost is a single, detached rock on the right, which time and weather are slowly wearing down to the "needle" shape, so common among the trappean formations. It stands with its feet in the river, at the extremity of a heavily-wooded point; and in the crevices about its base, and half-way up, good-sized firs are growing. Above the Crow's Roost the mountains tower higher and higher. Frequently from lofty ledges and terraces of rock silvery water-falls are seen descending, hundreds of feet, to some basin hidden by intervening curtains of wooded ridges. From the steamer's deck they look like mere ribbons; some of them, indeed, are dashed into invisible spray before they reach the bottom.

One of the handsomest of these is Multnomah Fall, which has a straight descent of several hundred feet to a pool surrounded by mosses, ferns, and drooping foliage, after which the stream hastens impetuously to a second plunge over a ledge of rock, and speeds on to the Columbia. A rustic bridge spans the torrent just above the lower fall. Somebody more given to ponies than to poetry, has named one of the highest of these

Cascade falls Horse-tail; and another has the rather hackneyed name of Bridal Veil, which, of course, it does not in the least resemble.

Above Multnomah Fall, on the Washington side, is a high, precipitous wall of needle-pointed, reddish rock, coming quite down to the river, and curving in a rounded face, so as to form a little bay above. This is the Cape Horn of the lower Columbia—a point where the Wind Spirit lies in wait for canoes and other small craft, keeping them weather-bound for days together. Fine as it is steaming up the Columbia in July weather, there are times when storms of wind and sand make the voyage impossible to any but a steam-propelled vessel. It is at our peril that we invade the grand sanctuaries of Nature in her winter moods. The narrow channel of the river among the mountains, the height of the overhanging cliffs,—which confine the wind as in a funnel,—and the changes of temperature to which, even in summer, mountain localities are subject, make this a stormy passage at some periods of the year.

Sitting out upon the steamer's deck, of a summer morning, we are not much troubled with visions of storms: the scene is as peaceful as it is magnificent. Steaming ahead, straight into the heart of the mountains, where they rise to a height of four thousand feet, each moment affords a fresh delight to the wondering senses. The panorama of grandeur and beauty seems endless. As we approach the lower end of the rapids, we find that at the left the heights recede and enclose a strip of level, sandy land, in the midst of which stands a solitary shaft of basalt called Castle Rock; about six hundred feet in altitude. How it came there, is the question which the beholder first asks himself, but which, so far, has never been satisfactorily answered.

A mile or two beyond Castle Rock, situated on this bit of warm, sandy bottom-land, on the Washington side, is the little mountain hamlet known as the Lower Cascades. Why it is that one name is made to serve for so many objects, in the same locality, must ever puzzle the tourist in Oregon. At the Cascades the tautology threatens to overwhelm us in perplexity. Not only is it the Cascade Range, which the cascades of the river cut in twain, but there are no less than three points on

the north side, within a distance of six miles, known as the Lower, Middle, and Upper Cascades. Pretty as the name is, we weary of it when it is continually in our mouths.

It is a pretty spot, too, this Lower Cascades, surrounded by majestic mountains, and bordered by a foaming river; charmingly nestled in thickets of blossoming shrubbery, and can regale its guests on strawberries and mountain-trout. Here the Oregon Railway and Navigation Company has a wharf and warehouse, and here we take our seats in the cars which transfer us to the Upper Cascades, and another steamer. We find the change agreeable, *as a change*, and enjoy intensely the glimpses of the rapids we are passing, and the wonderful luxuriance of vegetation on every side, coupled with the grandeur of the towering mountains.

At the Upper Cascades is a block-house, reminding us of the Indian war of 1855-56, and another one about the middle rapids. The scene looks peaceful enough now to make the history of these forts seem very legendary.

Aside from scenic features, there is a great deal to interest one at this place. One object of curiosity and surprise is the immense wheels for taking salmon. A wheel is generally forty feet in diameter, and eight feet from disk to disk. In place of paddles, there are three buckets or pouches of strong wire screening. The wheel, attached to a shaft, may be raised or lowered at the will of the operator; and the buckets are so constructed that whatever enters them is thrown to the centre of the wheel, where an opening above water-line delivers them into a large tank. Each bucket, when fish are running well, will turn into the tank seventy-five fish per minute, or two hundred and twenty five for one wheel every sixty seconds. As a wheel is kept going quite constantly through the season, and as there are about two dozen of them in motion on the river, we have an opportunity to exercise our arithmetical skill in estimating the quantity of salmon taken by this method every season.

The rapids at the Cascades are five miles in length, and the fall of the river is about sixty feet, the bed of the stream being formerly choked up with rock in such a manner as to suggest recent volcanic agency. The government has expended some

money in removing the obstructions below the Middle Cascades, and a very large amount is being annually laid out in constructing a ship canal three thousand feet long around the upper rapids. This artificial channel, which is "making haste slowly," is a fine specimen of engineering skill, and a solid piece of work. When completed it will remove the now existing monopoly of this mountain pass, allowing boats to ascend and descend without reshipment of cargoes.

One of the natural wonders of the gorge of the Columbia on the Oregon side is a *moving mountain*. This is a mass of basalt, with three peaks, extending six or more miles along the river, and rising two thousand feet above it. Its motion is not perceptible but it is certain. It slides both forward into the river, and downward towards the sea. In its forward movement it has carried below the surface of the Columbia a tract of timbered shore, the trees on which long ago were killed by submergence, and stand dark and naked under the water, or when the river is low, projecting above it. The Oregon Railway and Navigation Railroad, which is carried along the side of this mountain, is unable to keep its track *in situ* owing to this movement, the road-bed and rails having in some places been pushed, in a few years, eight or ten feet out of line. The explanation of this phenomenon is supposed to be that the great bulk of basalt which constitutes the mountain was poured out upon a substratum of conglomerate, or softer subrock, which is being slowly disintegrated by the action of the current of the Columbia, or is yielding to the mighty pressure upon it from above, or possibly both. The lateral movement is explained in a similar manner, by the concave shape of the rock foundation of the country to the west, and the yielding of the overlying softer strata.

From the deck of the steamer waiting for us at the end of the railroad portage, a beautiful picture is spread out on every side. The river seems a lake dotted with islands, with low shores, surrounded by mountain walls. Almost the first thing which strikes the eye is an immensely high and bold, perpendicular cliff of red rock, pointed at top with the regularity of a pyramid, and looking as if freshly split off from some other half which has totally disappeared. The freshly-broken ap-

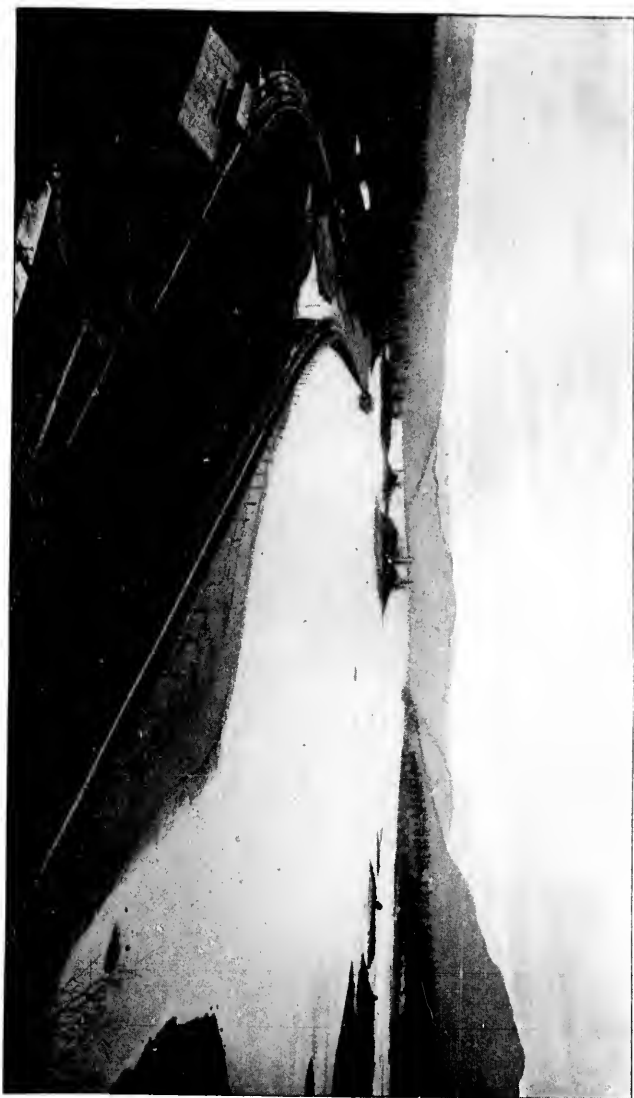
pearance of this cliff, so different from the worn and mossy faces of most of the rocks that border the river, suggested to the savage one of his legends concerning the formation of the Cascades: which is, that Mount Hood and Mount Adams had a quarrel, and took to throwing fire-stones at each other; and, with their rage and struggling, so shook the earth for many miles around that a bridge of rock which spanned the river at this place was torn from its mountain abutments, and cast in fragments into the river. So closely does legend sometimes border on scientific fact!

While I am making this grave reflection upon the scientific truth of legends, some one presents me with a story, in rhyme, which he assures me is the true, original Indian legend of the formation of those other notable points on the river,—the Dalles, Horse-tail Falls, Crow's Roost, as also the Falls of the Wallamet and Mount Hood. Making all due allowance for poetic license in some of the details, the story and the manner of its telling are worthy of notice; and I give it as a pleasing chapter of the early, romantic history of this romantic country!

THE SONG OF KAMIAKIN.

Should you ask me where I caught it—
Caught this flame and inspiration—
Should you ask me where I got it—
Got this old and true tradition—
I would answer, I would tell you:
Where the virgins of the forest
Sit with quills thrust through their noses,
Eating calmly cricket hashes;
Where the tar-head maid reposes;
Where the proud Columbia dashes,
Hearing nothing but his dashing.
Hias skookum* Kamiakin,
Of the vale of Klikatata—
Which I know each nook and track in
As well as Johnny knew his daddy—
Was the chief of all the Siwash,
And the great high-cockalorem—
As his fathers were before him—

* Great, strong.



RAILROAD INCLINE AT THE CASCADES.

See page 53.

Of the winding Wallametta,
Which I sing—and say it surely
As the jingling Juniata
Sounds as well ; but 'tis unpretty,
Poets of the sunset sea-rim
Flying off to Acropolis—
Very absurd it is, and silly—
While the glassy Umatilla,
And the classic Longus Thomas,
And the grassy Tuda-Willa,
All do flash and flow before us.

Well, my hero Kamiakin
Was in love ; you know such folly
Must go in, or something's lacking
In all great, good rhymes emetic.
Now, she dwelt in Walla Walla ;
But her ma was awful stuck up ;
And her pious dad, ascetic,
'Gainst our hero got his back up ;
And he swore on stacks of Bibles,
Higher than the hay you stack up,
He would sue for breaches, libels ;
He would sue him, shoot him, boot him—
That, in fact, he didn't suit him—
Didn't vote the proper ticket.

Now, it cost him like the nation
Going from the land of cider
(You know how these Navigation
Fellows charge a horse and rider) ;
And, though he was law-abiding,
To be treated thus about her
He declared was rather binding,
And that he wouldn't go without her.
So he strode a cayuse charger
With white eyes, also white as
Foam of creamy, dreamy lager
From her nostrils to her caudle ;
With a woolly sheepskin folding
Back behind his jockey saddle,
Where the girl could ride by holding.

"Come back, come back, O Pickaninny--
Back across the stormy water,"
Cried the old man, like a ninny.
One hand skewed her water-fall up,
While the other held her garter,
As they set off at a gallop.
Oh! she looked majestic, very,
As she answered, "Nary, nary!"
And the river so is flowing,
Though wider washed a foot or so,
For this was in the gleaming, glowing,
Gilded, golden long-ago.

Then they fled far down the river,
But the old man came upon them,
And she cried, "O Lord, deliver!"
And she blew a silver trumpet,
And she cried, "O hiac—jump it,"
Till the cayuse jumped the river—
Jumped the awful yawning chasms—
With the lovers both astride her.
Ah, enough to throw in spasms
Belles of this sweet land of cider!
But the daddy, hot and snarling
At the chief and chieftain's darling,
Hip and thigh smote with his sabre,
While the cuitan was crossing,
And her silver tail was tossing;
And her long tail, white and shaggy,
Cleft where Tam O'Shanter's carlin
Caught the tail of faithful Maggie.

And that horse-tail still is flowing
From the dark rim of the river,
Drifting, shifting, flowing, going,
Like a veil or vision flurried,
But is never combed or curried,
As a body can diskiver.
Then while dad on the piazza
Read the latest act of Andy,
And the maid on her piano
Trilled a ditty for some dandy,

"Chaco, chaco, cumtux mika?"*

From afar in tones coyote.

"Ah, you bet you, cumtux nika,"†

Sang the maiden sotto voce.

With this sign the chieftain sought her,

For the old man's bull-dog Towzer

Would have made it rather hot for

Kamiakin, Thane of Chowder.

Night and day they flew like arrows,

Till they passed by sweet Celilo:

"Bully," cried the chief; "tomollo's

Sun will see us hias lolo."‡

But the old man missed his daughter;

Vowing he would catch and score them,

Took the steamer, and by water

Reached the Dalles the day before them.

"Stop, you bummer," yelled the daddy

While the chief fled to the river;

And the dad pursued, and had a

Henry-rifle, bow and quiver.

Then the chief wished him a beaver—

Big or little, didn't mind him—

But the gal, would you believe her,

Stuck like wax, tight on behind him.

Then she waved a wand of willow,

And behold the mighty river

(For the maiden was a fairy)

All did surge and shake and shiver,

Till the banks did kiss, or nearly,

And confine the foaming billow;

So they crossed without a ferry.

"Verbum sat," now yelled the daughter,

As she with her lover vamosed;

And the dad sat in the water

'Till he chilled and died, and so was

Turned to stone forever after.

Now this dad a noble Crow was,

And a chief of fame and power,

* Come, come, do you understand me?

† I understand you.

‡ Far away.

And is known unto this hour
As the "Crow-Rock" or the "Crow-Roost."

Well, they travelled in a canter
'Till they reached the sweet Wallamet,
And cried, "Boatman, do not tarry;
We will give three pound of salmon
If you'll row us o'er the ferry."
But he answered, "Nary, nary."
Then the maiden cried ou, "Dam it,"
And the stream was dammed instanter.

So the chieftain reached his nation,
And his mother gave a party—
Gave a July celebration—
And they dined very hearty,
All on kouse and salmon smoky,
And then danced the hoky-poky.
But her troubles grew the thicker,
As in truth so did the maiden,
For the chief began to lick her,
And distract her with upbraiding;
But she had to grin and bear it,
For the gods had got so mad, they
Said she never should repass the
Place she left her dear old daddy.
So she went up in the hill-tops
At the head of the Molalla,
For to look at Walla Walla;
And by magic spells and hoo-doo—
For, you know, she was a fairy—
She did manage soon to rear a
Mountain like the pile of Cheops.
And Giwash, who saw her mamuk,*
Called the peak "Old Mountain Hoo-doo."
But there came a Jewish peddler,
Packing head-gear, hoods, and small t'ings
(Says the Almanac McCormick),
And who didn't care three fardings
For this dear and true tradition—
As the learned like me and you do—
And made the gross abbreviation
Of Mount Hood from Mountain Hoo-doo.

* Working, or conjuring.

Turning from this bit of pleasantry with a smile, I am again absorbed in the beauty and majesty of the Columbia. The Hudson, which has so long been the pride of America, is but the younger brother of the Columbia. Place a hundred *Dunderbergs* side by side, and you have some idea of these stupendous bluffs; double the height of the Palisades, and you can form an idea of these precipitous cliffs. Elevate the dwarfed evergreens of the Hudson highlands into firs and pines like these, and then you may compare. There is no other river in United States territory which gives such impressions of grandeur.

Down this noble stream, eighty-five years ago, floated those adventurous explorers Lewis and Clarke. Seven years later the overland party of the Astor expedition struggled along these wild mountain shores, among inhospitable tribes, trying to reach the sea party at the mouth of the river. A few years later still the annual "brigades" of the Hudson's Bay Company descended the river with their fleet of mackinaw barges to the rhythm of their Canadian boating-songs, as they approached Fort Vancouver with the year's peltry, these noble cliffs echoing their noisy gayety. Fifty-six years ago missionaries and men of science, filtering through the crust of semi-civilization in the West, found their way down the Columbia; and a dozen years later immigration set in. A hard time these "men of destiny" had of it, too, drowning at The Dalles, starving at the Cascades, entering upon their Canaan destitute of everything but indomitable American pluck.

The farther we depart from the heart of the mountains the more marked is the change in the character and quantity of the timber. Firs have entirely disappeared, while spruce and pine have taken their places. The form, too, of the highlands is changed, being arranged in long ridges, either parallel with the river or at right angles to it, but all very extensive, and forming benches, dotted only with trees, instead of being heavily wooded, as on the western side of the range. The climate, also, is changed, and a dryness and warmth quite different from the Western climate are observable.

On nearing The Dalles the country opens out more and more, the terraced appearance continuing quite to that city, and the

basalt here presenting a columnar formation. We come now to the last, and by far the most singular, portion of the gorge of the Columbia. The river here flows for eight miles through a narrow channel, cut in solid trap-rock, and more or less tortuous. It is, of course, not navigable, and travellers by the river make a portage by rail to Celilo, at the upper end of the gorge. The word *dalles* comes from the French word *dale*, a trough or conduit, and was first applied by the French voyageurs, being corrupted into its present form of spelling by Americans.

What a strange scene it is! Sand, rock, and water,—not uncommon elements in a pleasing picture; but here it is not pleasing—it is uncanny to a degree. I find myself wondering how *deep* here must be a stream only forty yards wide, which in other places is two thousand yards wide, and deep enough to float any kind of a ship; for I cannot help fancying that what the river here lacks in breadth it makes up in depth. I am not aware what soundings have ever been taken in this part of the river.

Boats have gone through this passage. In low water the barges of the Hudson's Bay Company used to run the dalles. One or two steamers have been brought through at a low stage of water; but it is a very perilous undertaking,—much more perilous than going over the Cascades at high water. I take observations, and decide that I should not willingly embark on this particular portion of the Columbia.

How it swirls, how it twirls, how its eddies and boils!
 How it races and chases, how it leaps, how it toils!
 How one mile it rushes, and another it flows
 As soft as a love-song sung "under the rose;"
 How in one place it seethes, in another is still
 And as smooth as the flume of some sleepy old mill.
 A rock-entroughed torrent like none else, I pledge;
 And, in truth, is a river *set up on its edge*.

DALLES CITY—or "The Dalles," as it is officially named, is a town of about twelve hundred inhabitants, situated on the Oregon side of the Columbia, at the lower end of the dalles of the river. In the early history of the country it was fixed upon by the Methodists as a mission station; but failing in their efforts to instruct the Indians, or intimidated by their warlike

character, or both, they relinquished the station to the Presbyterians, who held it at the breaking out of the Cayuse War in 1847. On this occurrence the whole country east of the Cascades was abandoned by all missionaries of Protestant denominations, and Dalles was converted into a military station, the mission buildings having been burnt down.

When the Donation Act was passed, giving missions the ground previously occupied by them, the Methodists laid claim to a portion of The Dalles. The government, however, had appropriated a portion of the claim for a military post, paying for the part thus taken. The Presbyterians then disputed the claim, on the ground that they were in possession at the breaking out of the war, which compelled them to quit the place, and had never *abandoned* it, but had a right to return at the cessation of hostilities. The question of ownership has, however, been satisfactorily settled by the claim of the town being recognized by the government as superior to any of these.

The mining rush to Idaho in 1862-63 gave The Dalles its first start. It has now a good trade, and ought with its fine situation to become a place of importance. There are many attractive homes here, but not the appearance of thrift which might be expected. The Dalles is hoping to have a boat railway from the foot to the head of the Dalles Rapids, the government engineers having made a favorable report upon the project, which is to be accomplished by means of hydraulic lifts at each terminus, the lower to raise the boats sixty-eight feet, and the upper one forty feet, at low water. The lifted boat will be lowered upon a car, and transported by rail to Celilo, the track being of very heavy iron, but of ordinary gauge and double track. Thirty-four wheeled trucks, placed in two lines of seventeen each, are expected to have sufficient flexibility to pass over the curves in the road; and nine hundred tons is the maximum weight to be carried, including the car. Two fifty-ton locomotives will do the hauling. The estimated cost of the whole system, with equipment of two cars and four engines, capable of passing eight loads of six hundred tons both ways in twelve hours, and including the necessary buildings, with ten per cent. for contingencies, is two million six hundred and ninety thousand three hundred and fifty-six dollars. It is also in contemplation to

improve some rapids above The Dalles, all of which, when completed, will add a notable feature to Columbia River travel.

There is comparatively little river travel on the Columbia above the Wallamet, all through passengers being carried on the Oregon Railway and Navigation Company's line to its connection with the Oregon Short Line through Idaho, or to a junction with the Northern Pacific on the north side of the Columbia. But sight-seeing is more satisfactory from the deck of a steamboat than from the window of a rapidly-moving and crowded car, and the tourist will do well to bear this in mind.

Aside from the river there is little to interest one about The Dalles. Just above the old garrison grounds is a fine view of Mount Adams and another of Mount Hood. It seems to the uneducated vision as if an hour's ride would take one up among the highest firs on Hood, quite to the glistening snow-fields; but it is a good forty miles, over a rough road, to the foot of the mountain where the climbing begins.

Opposite The Dalles is the unfinished village of Rockland, in the county of Klickitat, Washington. The name of Wasco, the county in which The Dalles is situated, was given to this locality—so runs the legend—in the following manner: The Indians being collected at the fishery Winquat, a favorite spot for taking salmon, about three miles from The Dalles, one of them was so unlucky as to lose his squaw, the mother of his children, one of whom was yet only a babe. This babe would not be comforted, and the other children, being young, were clamorous for their mother. In this trying position, with these wailing little ones on his awkward masculine hands, the father was compelled to give up fishing and betake himself to amusing his babies. Many expedients having failed, he at length found that they were diverted by seeing him pick cavities in the rocks in the form of basins, which they could fill with water or pebbles, and accordingly, as many a patient mother does every day, adapted himself to the taste and capacities of his children, and made any number of basins they required. Wasco being the name of a kind of horn basin which is in use among the Des Chutes, his associates gave the name to this devoted father in ridicule of his domestic qualities; and afterward, when he had resolved to found a village at Winquat, and drew many of his people after

him, they continued to call them all Wascos, or basins. To-day the tribe is little known, but the county of which Dalles is the metropolis bears the name once given in derision to a poor, perplexed father for descending to the office of basin-maker for his children.

The original Indian name of the place where Dalles stands was *Winquat*, signifying "surrounded by rocky cliffs." There are many Indian names attached to points in this neighborhood of poetical signification. "Alone in its beauty" is the translation of *Gai-galt-whe-la-leth*, the name of a fine spring near town. "The mountain denoting the sun's travel" is the meaning of *Shim-na-klath*, a high hill south of town, etc.

About three miles above Dalles is a noted fishery of the Indians, as mentioned above, and opposite to it is the site of the Indian village of *Wishram*, spoken of by the earliest writers on Oregon. No village exists there now—at least not anything which could well be recognized as such.

From The Dalles to Celilo there are rocks all about in every direction, a little grass, a great deal of sand, and some very brilliant flowers growing out of it. There are also a few Indian lodges, with salmon drying inside, whose rich orange color shows through the open door-way like a flame; and a few Indians fishing with a net, their long black hair falling over their shoulders, and blowing into their eyes in a most inconvenient fashion. But everything about an Indian's dress is inconvenient, except the ease with which it is put on! Some of these younger savages have ignored dressing altogether as a fatigue not to be undertaken, until with increasing years an increase of strength shall be arrived at.

The railroad takes us along under overhanging cliffs of plutonic rock, one of which is called Cape Horn, like its brother of the lower Columbia. As we near Celilo we discover that we have by no means left behind high banks and noble outlines. Just here, where we re-embark for the continuance of the up-river voyage, is a wide expanse of tumbling rapids, between lofty bluffs, rising precipitously from a narrow, sandy beach.

Of Celilo there is not much more than the immense warehouse of the Oregon Steam Navigation Company—nine hundred feet in length—built in the flush times of gold-mining

in the upper country, and the other buildings required by the business of the present owners. This company, formerly the most important factor in the development of the interior, has been succeeded by the Oregon Railway and Navigation Company, whose property is leased to the Union Pacific.

Lying along the shores, in little coves, are numerous sailing craft of small size, which carry freight from point to point on the river above. The sun of an unclouded morning gilds their white sails, and sparkles in the dancing rapids. The meadow-lark's voice—loud, clear, and sweet—reaches us from the overhanging banks. It is at once a wild and a peaceful scene.

A short distance above Celilo, Des Chutes River empties into the Columbia, through a deep canyon. A remarkable feature of the rivers of East Oregon is the depth of their beds below the surface of the country which borders them. Des Chutes flows through a canyon in places more than a thousand feet deep. Where it enters the Columbia its banks are not so high, because the great river itself has its course through the lowest portions of the elevated plains; and its bed is nowhere at any very great elevation above the sea-level. At The Dalles, two hundred miles from the sea, the level of the river is one hundred and nineteen feet above it; and the Walla Walla Valley, at a distance of three hundred and fifty miles, has an elevation of a few feet over four hundred. Away from the Columbia, the elevation of the plains varies from five hundred to twenty-five hundred feet. Hence the great depth of the canyons of streams flowing on the same level with the great river.

Along this portion of the Columbia the traveller has plenty of time to conjecture the future of so remarkable a country—not being startled by constantly-recurring wonders, as he might have been on the lower portion of the river. There certainly is great majesty and grace expressed in the lofty forms and noble outlines of the overhanging bluffs which border the river for great distances; and that is all. There is neither the smoothness of art, nor the wildness which rocks and trees impart to natural scenes; and the simple beauty of long, curving lines becomes monotonous. If it be summer, there are patches of color on the sere-looking, grassy, heights; rosy *clarkia*, blue *lupine*, and golden sunflower. We hear the voices of multitudes

of meadow-larks; and see a few prairie-hens stooping their long necks shyly among the bunch-grass; or see a herd of cattle fattening on the dry but nutritious bunch-grass.

Thirty-one miles above The Dalles we pass the mouth of John Day River, named after luckless John Day of the Astor expedition,—a stream in all respects similar to Des Chutes, with the same narrow valley, and the same depth below the general level of the country. On the head-waters of John Day River placer-mining was successfully carried on from 1862 for several years, and has since been followed by quartz-mining.

The high bluffs intervening between the Columbia and the interior country quite conceal any appearances of settlement, and leave upon the mind the impression of an altogether uninhabited country,—an impression quite erroneous in fact, though there are thousands of square miles still vacant.

Willow Creek is a small stream, coming into the Columbia thirty-three miles above John Day River, with a small, fertile valley well settled up. After an interval of another thirty-three miles, we find ourselves at Umatilla, a small town set in the sands at the mouth of the river of that name. It served formerly as a port to the mines of Powder River and the Boisé country. Here the steamers of the Oregon Steam Navigation Company disembarked passengers and freight; and stages, "prairie schooners," and pack-trains took up their burdens.

The Umatilla River, on account of its valley, is one of the most important streams of East Oregon. The Umatilla Valley, together with the bottom-lands of several tributary creeks, furnishes a fine tract of rich, alluvial land, having a high reputation for its agricultural capacity. About seven thousand acres, nearly all bottom-land, are under cultivation in Umatilla County, the whole area of which is over forty-seven thousand square miles.

All the way from the Cascade Mountains to Umatilla—a hundred miles, more or less—we have found the rivers all coming into the Columbia from the south side. Rising in the Blue Mountains, which traverse the eastern half of Oregon from northeast to southwest, they flow in nearly direct courses to the Columbia, showing thereby the greater elevation of the central portion of East Oregon over the valley of the Columbia. Not

far above the junction of the Umatilla and Columbia the great river makes a long bend, receiving, after it takes the north and south direction, the rivers flowing east from the Cascade Range in East Washington, as well as the tumultuous Lewis or Snake River, which divides Oregon from Idaho.

It is nearly sunset when the steamer quits Umatilla to finish the voyage we have entered upon, at Wallula,—a distance of twenty-five miles farther up stream, in a direction a little east of north. We steam along in the rosy sunset and purple twilight, by which the hills are clothed in royal dyes. About eight in the evening we arrive at Wallula, too late to be aware of the waste of sand and gravel in which it is situated. Wallula has been the port for the Walla Walla Valley ever since the occupation of the country by white people. It was formerly a post of the Hudson's Bay Company, some of the old adobe buildings being still standing.

The bluffs bordering the Columbia at this place repeat those harmonies of grandeur with grace, which won remark from us on other portions of the river. The Walla Walla River, which comes in just here, is a very pretty stream, with, however, very little bottom-land near the Columbia.

The sand of Wallula is something to be dreaded. It insinuates itself everywhere. You find it scattered over the plate on which you are to dine; piled up in little hillocks in the corner of your wash-stand; dredged over the pillows on which you thoughtlessly sink your weary head, without stopping to shake them; setting your teeth on edge with grit, everywhere. And this ocean of sand extends several miles back from the river. In sight of the Columbia and Snake Rivers, it seems to cry out, like the Ancient Mariner,—

“Water, water everywhere,
And never a drop to drink.”

Bathed in a rosy sunset, with a royal purple twilight stealing over the hills, it has a simple and chaste grandeur about it that appertains to desert scenes, making one think of the Nile; the more so, as the rising moon touches with a soft gilding the summit of a great rock that might be the pyramid of Cheops. And so good-night to it.

When I wake in the morning I think to inquire into the navigability in general of this upper part of the Columbia and its southern branch, and am handed the report of Captain T. W. Symons, recently made to the department at Washington. Of this he says that the Upper Columbia and Snake form a continuous line of navigable rivers from Celilo at the head of The Dalles to Lewiston in Idaho, but broken by many rapids, rendering navigation difficult and dangerous, the rapids in nearly every instance being caused by rocky bars and occasional boulders, while the channels were crooked and narrow, and the water, before improvement, ruling from two to three feet on the bars, which were practically impassable at low water.

This statement, from including the Columbia River, is misleading. The Columbia below the Snake junction, although having some rapids, especially near Celilo, has been constantly navigated by steamboats of considerable size ever since 1859, when the "Colonel Wright,"—named in honor of Colonel, afterwards General, Wright,—a small steamer, was put on the river experimentally. The frequent rocky bars are encountered in the Snake River between its mouth and Riparia, although the Columbia River steamers used to run, during high water, to Lewiston. After July 1, they were usually drawn off. Some plans for improving the rivers were adopted in 1877.

According to the report cited, the Snake River has a general breadth of one thousand feet, a slope of 2.48 feet per mile, and a discharge of twenty thousand cubic feet per second. All the bars have been improved to an extent which removes all danger to competent navigators acquainted with them, with the single exception of Long Crossing Bar, all the others having three feet of water on them at low water. Navigation below Riparia has been suspended, but quite as much, I imagine, on account of railroad competition as by reason of bars. Above there, where a rich agricultural region still depends on navigation, boats are running. Even far up the Snake a steamer runs between the crossing of the O. R. and N. Railway, and Seven Devils in Idaho, a distance of sixty-five miles north. Still farther up, a steamer plies between the same crossing and a point beyond, but the Union Pacific bridges interfere with navigation, not being provided with draws.

In this merely superficial sketch of the most magnificent of American rivers its scenic features chiefly have been spoken of. But no thoughtful traveller can make this voyage without picturing to his imagination the splendid possibilities here afforded for a display of the wealth and taste of the nation. The delightful variety of arrangement in a panorama of two hundred miles of grandeur, the cunning with which nature has interspersed imposing ruggedness with enticing beauty, is a strong feature of Columbia scenery, and suggests the still more charming effect of the whole when is added the attraction of refined human habitations perched every here and there, especially along the highlands from Astoria to The Dalles, and from Cape Disappointment to Wallula. With railways on both sides of the Columbia, and with the opening of the river to continuous travel by the improvements in progress and projected, the volume of commerce destined to roll between these noble shores is simply incalculable. Very little effort has been made toward settlement along the great stream, the pioneers of the country first taking up the open lands in the interior; but there is a large amount of excellent grass, vegetable, and fruit land near the river, and a little distance away from it land which, when cleared, will make the best of farms.

CHAPTER VI.

SOME GENERAL TALK ABOUT CLIMATE.

HAVING introduced my reader to the two great States of Oregon and Washington by the magnificent river which divides and unites them, let me first describe, as best I can, the one which by age has the right of precedence,—Oregon.

In those early times, between 1820 and 1840, when Congress was discussing the title of the United States to this region, and doubting often whether the game of contending for our right was worth the candle, the whole of this country on both sides of the Columbia was referred to as "the Oregon,"

and "the Oregon River" was more frequently on their lips than the Columbia. It is interesting to know that the word was invented by one New Englander and immortalized by another. When Jonathan Carver, doughty captain that he was in the French and Indian wars of the last century, turned explorer, he led an expedition to the head-waters of the Mississippi, that region then being the "Far West" of the continent, and, finding little that he really understood, made some audacious guesses, as was the custom of explorers before him, and drew a map on which he had the Mississippi, Missouri, and "Origan" Rivers to rise from the same or neighboring sources.* The name, he said, was given him by the Indians, but a thorough search for any such word in Indian languages leads to the conviction that, like the map, the name was purely imaginary.

The word, however, was one suited to the poet's numbers, and after the discovery of the Columbia, when Bryant wrote his immortal "Thanatopsis," he incorporated the word in his poem, with a slightly different spelling and a nobler sound. The fame of Bryant established the use of the word among educated people, and henceforth the "territory of the Oregon" was in the mouths of our national legislators until it became fixed. It is possible that but for the controversy with Great Britain, which kept alive the name under which the great river in dispute was known to her statesmen, ours might have ignored it altogether. Let us be thankful we have both names preserved.

The physical geography of Oregon is unique, and gives a great variety of climates. Approaching from the Pacific, we find, first, a narrow skirting of coast, from one to six miles in width. Back of this rises the Coast Range of mountains, from three to five thousand feet high. Beyond this range are fine, level prairies, extending from forty to sixty miles eastward. Beyond these prairies rises again the Cascade Range, from five to eight thousand feet in height, and having to the east of them

* Carver knew that navigators familiar with the west coast of the continent expected to find a river from the centre of the continent falling into the Pacific somewhere in this latitude, and had vaguely named it, before seeing it, the "River of the West." He therefore pretended to give the location of its sources, missing it by only about ten hundred and fifty miles.

high, rolling prairies, extending to the base of the Blue Mountains, which trend southwestwardly, leaving plains and small valleys, to the east, between themselves and the Snake River, which forms the eastern boundary of Oregon and a portion of Washington.

These differences in altitude would of themselves produce differences in temperature. But the great reason why the change is so great from the coast to the Snake River lies in the arrangement of the mountain ranges, and in the fact that the northwest shore of the American continent is washed by a warm current from the Japan Sea. The effect of this current is such that places in the same latitude on the Atlantic and Pacific coasts are several degrees—sometimes twenty degrees—warmer on the latter coast than on the former. This gives a temperature at which great evaporation is carried on. The moisture thus charged upon the atmosphere by day is precipitated during the cooler hours of night in fog, mist, or rain.

In summer, the prevailing wind of the coast is from the northwest, thus following the general direction of the shoreline. It naturally carries the sea-vapor inland; but the first obstacle encountered by these masses of vapor is a range of mountains high enough to cause, by their altitude and consequent lower temperature, the precipitation of a large amount of moisture upon this seaward slope. Still, a considerable portion of moisture is carried over this first range and through the gaps in the mountains, and falls in rain or mist upon the level prairie country beyond. Not so, however, with the second, or Cascade Range. These mountains, by their height, intercept the sea-fog completely; and while great masses of vapor overhang their western slopes, on their eastern foot-hills and the rolling prairies beyond not a drop of dew has fallen. This is the explanation of the difference in climate, as regards dryness and moisture, between East and West Oregon. All other differences depend on altitude and local circumstances.

Notwithstanding the great amount of moisture precipitated upon the country west of the Cascades, the general climate may be said to be drier than on the Atlantic coast. The atmosphere does not seem to hold moisture, and even in rainy weather its drying qualities are remarkable. Taken altogether, the stormy

days in this part of Oregon are not more numerous than in the Atlantic States; but the *rainy* days are, because all the storms here are rain, with rare exceptions. The autumn rains commence, usually, in November,—sometimes not till December,—and the wet season continues until April, or possibly till May; not without interruptions, however, oftentimes of a month, in midwinter, of bright weather. About the middle of June the Columbia River is high, and during the flood there are generally frequent flying showers. After the flood is abated, there is seldom any rain until September, when showers commence again, and prove very welcome, after the long, warm, but wholly delightful summer. The annual rain-fall of the Wallamet Valley ranges from thirty-five to fifty inches. In the Umpqua and Rogue River Valleys it is less; and at the mouth of the Columbia, and along the coast, both north and south, it is more. The mean annual temperature of Western Oregon is 52.4°, although in certain localities the average is higher by one or two degrees.

East of the Cascades the arrangement of the seasons is somewhat different. There is much less rain, which comes in showers rather than in a steady fall, and is confined to the months between September and June. Occasionally snow falls to the depth of a few inches, and in some winters to a considerable depth, and has remained on the ground a number of weeks. The heat of summer and the cold of winter are each more extreme, but not at their highest or lowest degrees so trying as the same amount of heat or cold would be in a moister atmosphere. The autumn months in this portion of the country are most delightful, with the thermometer ranging from fifty-five degrees to seventy. The phenomenon of the plains is the periodical warm wind which comes over the Cascades from the Japan current, known as the "Chinook wind," and so named by the Indians because it came from the direction of the Chinook tribe, with whom they exchanged articles of barter in a sort of annual fair held at the mountain-pass, beyond which they never intruded on each other's territory. This warm air-current has a surprising evaporating quality, licking up several inches of snow in a single night, leaving the ground bare and the temperature mild. It is welcomed by the white stock-raiser,

as it formerly was by the aboriginal horse-owner of these plains, and is one of the features of the country.

The opposite of the Chinook is the Walla Walla, or east wind, which is fiercely cold and searching. The Indians had a tradition concerning these winds, that they in the persons of two brothers on each side met and fought a duel to determine which should prevail, one of their ancient gods to be umpire. In the battle the Chinook brothers were worsted and beheaded. But an infant son of the eldest being told of his father's fate, grew up with the desire for vengeance, and cultivated his strength by such exercise as pulling up trees by the roots, beginning with saplings and increasing the size until he could tear up the largest trees of the forest. Then he sent a challenge to the brothers of the cold wind, whom he overcame, and who were in turn beheaded. But the god who sanctioned these contests declared that it was not good there should be no wind, and decreed that thereafter the cold wind should not blow with so much violence nor be so freezing; neither should the Chinook break down trees or destroy houses. The Chinook might blow strongest at night, and the Walla Walla wind by day, which they still continue to do.

The mean temperature of East Oregon is about one degree higher than the western division; but the short winters are colder and the long summers hotter than West Oregon. A peculiarity of the climate of every part of Oregon and Washington is the comparative coolness of the nights. No matter how warm the days may have been, the nights always bring refreshing sleep, usually under a pair of blankets, even in summer. Nor does the heat, however great, have that fatal effect which it does in the Atlantic States. Not only men, but cattle and horses, can endure to labor without exhaustion in the hottest days of summer, and sun-strokes are of very rare occurrence.

There are two charges brought against the Oregon country on account of climate,—namely, that it does not rain enough in Eastern Oregon, and that it rains too much in West Oregon. Humanity does sometimes tire of an overplus of rain from the monotony of it rather than because it is disagreeable. But the earth enjoys it. If you do not believe it, come with me to the

woods, and I will prove it to you,—aye, in March. The turf in the flat or hollow places is soaked with water, like a sponge, and if you do not step carefully you will press it out over your shoe-tops; but, by dint of quick eyes and agile movement, you will escape any serious mishaps. Climbing over logs, jumping weather ditches, and crossing creeks furnishes the necessary excitement and exercise by which you keep off a chill; for if you were to sit down to summer reveries at this time of year, the doctor would be in requisition directly.

Here we are at last, at the very foot of the mountain; and what does this forest recess furnish us? What magnificent great trees! Fir, cedar, and here and there along this little creek a yew, a maple, or an alder. Hardly a ray of sunshine ever penetrates this green and purple gloom. Spring and fall, winter and summer, are much the same here,—a difference only of water. In summer the creek is within bounds, and you can lie on the mosses, if you feel disposed. "What! lie on the mosses, every one of which seems such a marvel of beauty? What a wonderful, what a charming spot! I never, in all my life——!"

No, of course you never saw anything like it. This is the only country out of the tropics where vegetation has such a remarkable growth. Here are a dozen kinds of elegant green mosses in a group, to say nothing of the tiny gray and brown and yellow varieties with which we have always been familiar, besides lichens innumerable. Observe those fallen trees. Their immense trunks are swathed in elegant blankets of emerald brightness. See here, I can tear them off by the yard,—enough on one tree to carpet a room! Look at the pendent moss,—two feet long at least,—and what a vivid yellow green!

Just step up a little higher: I will show you a wonder. Did you ever dream of anything so marvellous as that bank of moss? Six inches high, branching like a fern, yet fine and delicate as that on the calyx of a moss-rose. Here is enough, if preserved, to furnish all the French flower-makers; and glad would they be to get it. And ferns,—yes, indeed! Just look at this maidenhair. It is of every size, from the delicate plant three inches high to the mature one of fifteen or eighteen inches. And here are some that have stood all winter in their autumn

dress. See how exquisitely they are tinted,—raw-sienna for the body color, and such delicate marking in vandyke-brown on every leaf, or gold color, marked with burnt-sienna, and all relieved so beautifully by the polished black of their slender stems.

But we must not stop long in this dense and damp shade; there might be intermittent lurking in it for unaccustomed town-folk. But just note, as we retrace our steps, the great variety of plants, some of them very beautiful, that grow all winter long in these solitary places. This handsome variegated leaf comes from a bulbous root, and bears a lily-shaped flower I am told; but being new to me, I cannot yet classify it. We are still too far from open sunlight to be much among flowering plants.

But directly we come to occasional openings, or to higher benches of ground that get the light and drainage, we shall see adder-tongue, Solomon's-seal, anemone, wild violet, and spring-beauty, putting up their leaves, waiting for sunny days enough to dare to bring out their blossoms. Here, too, are two species of creeping vines, very delicate and graceful, trailing along the ground, with little fresh leaflets already growing. In April the twin-flower (*Linnaea borealis*) will blossom with dainty, pinkish-white, trumpet-shaped flowers, very lovely to behold. Yerba buena (*Micromeria Douglasii*), vulgarly called *Oregon tea*, from the spicy flavor of its leaves, which make an agreeable infusion, is also a beautiful trailing plant of this season.

Now we get down to the woods along the river-bank. Ah, here is really a blossoming shrub, the flowering currant. In haste to brighten the dull March weather with a touch of color over the green and brown and purple tints that are so melancholy under a cloudy sky, the currant does not wait to put forth its foliage first, but crimson all over with thickest flowers, in racemes of nearly a finger's length. There are two varieties of the red and one of the yellow, all beautiful and ornamental shrubs. In company with this still leafless shrub is the glossy arbutus (misnamed laurel), with its fresh suit of brilliant green reflecting every ray of light from its polished surface. The arbutus grows all winter, putting forth its delicate shoots from December to March, and flowering later in spring. Its cheerful

light green makes it a perfect complement to the red of the currant when flowering; and by not looking at all like an evergreen, which it really is, bewilders the beholder, who sees it growing luxuriantly all along the river-banks, as to the time of year.

Here is another elegant shrub that does its growing in the winter, and takes the long dry summer to ripen its fruit and be beautiful in,—the *Berberis aquifolium*, or holly-leaved barberry, commonly known as the Oregon grape. It is looking as fresh and piquant in March as though it had all of April and May behind it. All around us, on every hand, are plants and shrubs or trees growing. Behold these graceful little yew-trees, two feet high. They look as though they had come up in a day, so delicate and *new* they seem. Examine the ends of the fir-boughs, and question the crab-apple, the sallal, and the wild-cherry. Do you see that line of silver down under the river-bank? That is the glisten of the catkins on the willows (*Salix scouleriana*) that were out in February. It makes a pretty contrast to the red stems of a smaller species of willow which grows along the very margin of the river, with its roots in the water. I am not certain of the variety.

There certainly is no lack of interesting things in the woods of early spring in Oregon. To my eye, with such a variety of green and really growing trees and shrubs, it is a relief to take into the view a group of naked stems, like the straight and light boles of the aspen (*Populus tremuloides*), the gray trunks of the dogwood (*Cornus nuttalis*), or the rugged, scraggy forms of the water-loving ash (*Fraxinus Oregona*). Uniform as the climate is, and little as the dropping of the leaves of deciduous trees affects the general aspect of the landscape, there is yet to the critical observer a sufficiently marked difference in seasons to make the study of spring and summer, and autumn and winter, as shown by the vegetation of fields and forests, profitable and compensatory.

It is true that one cannot come back from a walk at this time of year laden with armfuls of flowering shrubbery, as we may in six weeks from now. You cannot, with safety, stretch yourself on the earth and indulge in building Spanish castles, as in July weather it is pleasant to do, while birds sing among the

branches overhead, the nervous little squirrel scolds at you from a safe distance, or the only half-confiding quail maintains vigilant picket duty in your vicinity,—all, as you think, for your gratification, though in truth you are regarded by these little residents as an alien and an intruder. The beauties that should invite you now pass away or lose their freshness with the approach of dry weather. The mosses and lichens will have dried up by midsummer; the ferns can then only be found in the coolest recesses of the woods. The excess of foliage then will close many beautiful vistas; there will be no more signs of daily growth, no tender tints on the leaflets. The year will be at middle age, round and perfect, but with the touching bloom of its youth forever past.

There will be a corresponding difference in the color of the skies, the shape of the clouds, the hues of the water; in every part of nature. Let the student of nature learn all her passing moods. There is a wealth of enjoyment in having well-trained eyes and a receptive observation, that no amount of gold can purchase. It depends on the individual. Certain of us never come into our kingdom, which is the kingdom wherewith the Creator endowed us "in the beginning," because we are too sordid, too indolent, or too effeminate. Certain others of us are rejoiced to think that we have not wholly missed of it through either of these faults, and that enjoyment grows with possession.

But to return to the subject of climate *per se*. No country which has not water enough can be productive,—water in some form. West Oregon gets enough, and with great regularity. East Oregon, with equal regularity, gets too little, except in the bottom-lands, where irrigation is natural, or artificial irrigation easy. The soil is good almost anywhere. What then? There must and will be developed a system by which water can be brought upon the arid lands of East Oregon and Washington. When that is done the productiveness of the elevated plains will equal that of the western valleys, *and be more certain*.

Civilization began in either hemisphere in the rainless countries of Egypt, Peru, and Mexico. The reason is evident. Civilization depends on the ease and security with which man harvests the fruits of his fields. The crop in the Nile Valley

was unailing, from the certainty and uniform duration of the Nile overflow. In Peru, from the constant presence of moisture eliminated from the atmosphere in the form of heavy dews, the cultivation of the earth repaid man's labor surely. On the high table-lands of Mexico irrigation was necessary, but once accomplished, there, too, agriculture flourished unailingly; and men, instead of roaming from place to place, settled and remained, until civilization arose and declined, by the natural processes of the growth and decay of nations.

In these countries, superior intelligence also resulted from the dryness of the climate; as it is well known that a pure, dry air is stimulating to the mental faculties, while a moist, dull, or cloudy atmosphere is depressing. It is evident that men in a savage state, having the obstacles of want and ignorance to overcome, have been aided by these circumstances. Nor are they to be overlooked in considering the future of countries in the infancy of their development. The Columbia River Plains, owing to their elevation above the level of the draining streams, will probably require a system of irrigation by artesian wells, except those parts bordering on mountains, whence water can be conducted with comparative ease. With this addition to the amount of moisture furnished by the light rains and occasional snows of winter, this great extent of country, now given up to pasturage, might be made to support a dense population, producing for them every grain and fruit of the temperate zone in the highest perfection.

We are told that when the missionaries went, in 1836, to look for a suitable place for a mission farm and station in the Walla Walla Valley, they estimated that there were about *ten acres* of cultivable ground within thirty miles of the Columbia River; and that was a piece of creek-bottom at the junction of a small stream with the Walla Walla River. These same explorers decided that there were small patches of six or ten acres, in places, at the foot of the Blue Mountains which might be farmed. As for the remainder of the country, it was a desert waste, whose alkaline properties made it unfit for any use. A few years' experience changed the estimate put upon the soil of the Walla Walla Valley; and now it is known to be one of the most fruitful portions of the Pacific Coast, and the quality

of the soil really inexhaustible,—its alkaline properties supplying the place of many expensive manures. And yet the capacity of the plains for cultivation has only just begun to be comprehended. East Washington has a greater area of lands which can be rendered productive by irrigation than East Oregon, but the area is large in both of the States.

The hill-tops in transmontane Oregon may be sown to grain and safely left to the encouragement of the soil and the elements, the former having more clay in it than the lower bench lands, and the atmosphere, perhaps, at night a little more moisture. At all events, good crops are harvested on this higher ground without irrigation. Although in imagination we behold this country as it will appear in the happy future, in the very present hour the tourist is bound to prefer the western division, which is already brought to perfection in so many particulars by the deft hand of nature.

All that has been said of Oregon climate, soil, and seasons applies equally to Washington, except where some local cause exists for a difference. For instance, there is a greater rain-fall at the mouth of the Columbia than at Gray's Harbor, or other points along the coast, until you come to Neah Bay, at the entrance to the Strait of Juan de Fuca, the cause of the excess of moisture being the same in both instances,—namely, a wide opening in the coast-line, through which the storm-winds are drawn as through a funnel. There is much less rain among the islands in the archipelago at the foot of Puget Sound and along the northern coast of the mainland of Washington than in the southern counties, which are affected by the climate of the Lower Columbia. The mean annual precipitation at Olympia is 56.27 inches, and at Portland 50.89 inches. The temperature of the Puget Sound country is very slightly affected by latitude. The mean temperature of Portland in Oregon for the month of December varies from 48° to 43° , although, in an exceptional year, it has been as low as 31° , and in January, 1888, the mercury fell to 2° below zero. There is a difference of about two degrees, mean temperature, lower, between Portland and Olympia, at the head of Puget Sound, and two or three degrees more at Tacoma and points farther north.

The lowest temperature for the last five years at Portland

was 9° above zero; at Tacoma, 5° above. The highest temperature in the same time was 97° at Portland and 80° at Tacoma. The mean temperature of the two places is, Portland 52° to 55°, and Tacoma 55° to 58°, the difference being slightly in favor of the latter place, taking the year together, owing to the influence of the Sound upon the climate, and to its sheltered position, away from the air-currents before spoken of. It is common to find roses and pansies in blossom until December in either place, although the stranger may find a chill in the moist atmosphere which he declares to be "cold," even though the mercury does not recognize it. A season usually braces him up to endure this, and he soon has only eulogies for an even climate, whose only fault is that it is not cold enough to be dry in the winter months.

CHAPTER VII.

A TALK ABOUT THE WALLAMET AND ITS CHIEF TOWN.

THE Wallamet—it is spelled *Willamette* on the maps, though the common usage is still to pronounce the word as it was originally spelled—is the river of West Oregon.

Before proceeding to my observations upon this portion of the country, I am impelled to enter my protest against the violation of truth and good taste in giving to so sonorous and musical a word as Wallamet the French termination of *ette*, and, furthermore, substituting an *i* for the nobler-sounding *a*. The word is Indian in origin, and although the early writers differed somewhat in their spelling, they gave it the native pronunciation of Wal-la-met, the *a* in both syllables being very broad. Spoken properly it is a beautiful name, but as corrupted it is a senseless jingle.

The river has two mouths, one coming into the Columbia where Scappoose Bay sets in, just above St. Helen, the other about twenty miles above. That portion of the river below the upper mouth is separated from the Columbia by an island from one mile to several miles in breadth, being a fertile and beauti-

ful outlying district of the great valley to which it belongs. The original name of this island was Wappatoo, from the abundance of a tuberous root of that name (*Sagittaria sagittifolia*) which was used by the natives for food. The first settler here was one Sauv , a French-Canadian, after whom the island was thenceforth called, but with the difference in spelling which makes it Sauv e's Island.

To this lovely insular tract the Columbia maintains a claim, and asserts its right annually during its rise to submerge a goodly portion of it, driving the inhabitants to vacate their houses for a period of two or three weeks. But the farmers are willing to be thus inconvenienced for the sake of the crops obtained from the quick soil after the flood has subsided. On the mainland opposite the island a high range of heavily-wooded hills from the Columbia highlands follows along the Wallamet to and beyond Portland, but receding to a sufficient distance to leave large tracts of rich land, some of which is subject to overflow, but much of which is valuable for farming.

The upper mouth of the Wallamet comes out between the head of the Sauv  Island and a low point opposite a part of the peninsula which is formed by the junction of the two rivers. Lying between the peninsula and the Columbia is a group of small islands, all densely wooded with cotton-wood and willow, extending also along the Oregon shore of the Columbia for several miles, being separated by bayous only less luxuriantly fringed with trees than those of Florida or Louisiana, and without the alligators and moccasin snakes. These places, like those water-ways about Astoria and Scappoose Bay, furnish extensive hunting-grounds in the duck-shooting season.

Just at the junction of the Wallamet and Columbia Rivers I found one of the most charming views to be had in Oregon. From the deck of a steamer passing in between these islands one sees the vast stretch of the great river behind us, and the reach of the one before us, with their verdant and wooded shores, the Cascade Range drawn in blue on the eastern horizon, with the white peaks of St. Helen, Hood, Adams, and Jefferson rising sharply above it, and over the whole the rosy glow of sunset tingeling the mountains, making the blue violet, the white pink, the scene being reflected from the river's surface as from

a mirror, snow-peaks, islands, and all! One might travel far to see anything finer.

The Wallamet, unlike the more majestic Columbia, divides nearly in half a level valley, but the prairies do not come to the river-banks for a considerable distance. This valley is enclosed on the east side by the Cascade Range, on the west side by the Coast Range, and on the south by a cross-range of spurs from either side, being left open only on the north, where it is cut off by the Columbia River, but from which it is hidden by a forest extending for nearly twenty miles from the river southward. This forest covers not only the highlands as far as the Falls of the Wallamet, but also the low sandy plains which form the lower section of the valley. From this description of the north end of the Wallamet Valley, coupled with the account already given of the Columbia, it is easy to appreciate the correctness of the poet's—

“Continuous woods,
Where rolls the Oregon,”

as well as some of the difficulties which beset the Oregon pioneers; and to understand why the early settlers travelled in canoes from the mouth of the Columbia, or from The Dalles, to the heart of the valley before even betaking themselves to a horse,—a wagon being unthought of for travel.

When we have passed the head of Sauvé Island we find these river-banks more populous than those of the Columbia. On the right hand, going up, is the town of Linnton, located forty-seven years ago by Hon. Peter H. Burnett, author of “Recollections of a Pioneer,” and first governor of California, a pleasant writer and an irreproachable man. Nearly opposite Linnton, which, by the by, was named in honor of that Missouri senator who fought so long and persistently for the Oregon donation law, is the town of St. John, occupying probably about the site selected for a city by that eccentric, if not demented, Hall J. Kelley, who organized in New England an immigration society to bring settlers to Oregon in 1832. Think of that, you whose knowledge of this region leads you to fancy it a *terra incognita*! Poor Kelley had a lugubrious experience, being taken for a horse-thief by the Hudson's Bay Company and harshly treated. Yet he was very near the truth in his views and prognostica-

tions concerning this country. It was not the company's horses he was after, but the earth under the feet of that powerful corporation, whose officers had reason to wish him away.

At Linnton there is a smelter for reducing ores from the mines of Eastern Oregon and other districts. The Northern Pacific Railroad (Portland branch) runs along the river here, and passes through Linnton, on its way north to the crossing of the Columbia at Kalama, on the Washington side. I took a ride over it early in May, when the tall cherry orchards of the farms and the dogwoods of the forest vied in the snowy whiteness of their abundant flowering, and the rounder-topped plum-trees filled in the spaces, while golden dandelions spangled the road-side, and away across the reaches of river and wood symmetrical St. Helen rose grandly from the horizon, half veiled in the mists of early morning.

Along the margin of the Wallamet are groups of handsome oak-trees, which grow and thrive on the bottom-lands where a fir-tree cannot live. In fact, a fir is built to shed even the rains from about its roots, while its foliage is so full of pitch that water cannot penetrate it. Thus cunningly has nature provided for the safety of its creations.

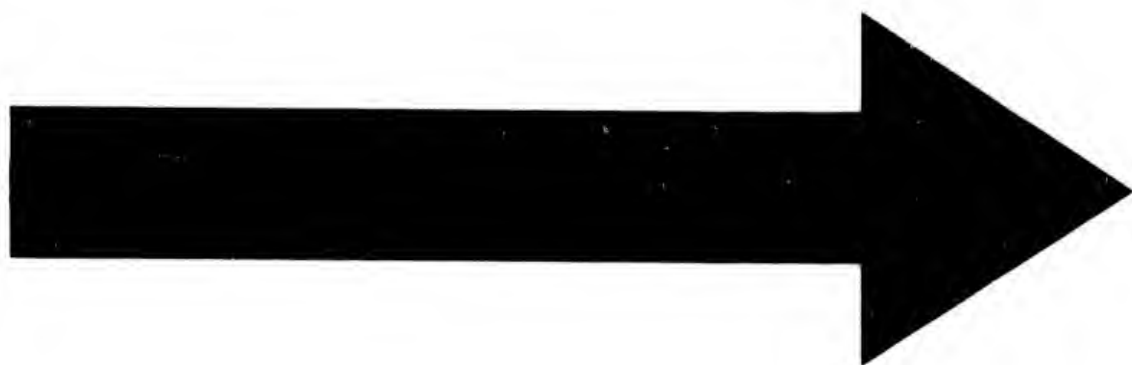
It is about six miles from St. John to Portland, but does not seem so far, the shores being inhabited, and the evidences of business increasing with every revolution of the steamer's stern-wheel.

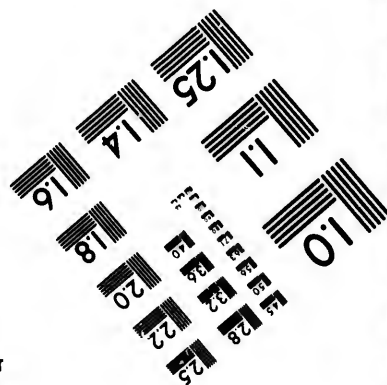
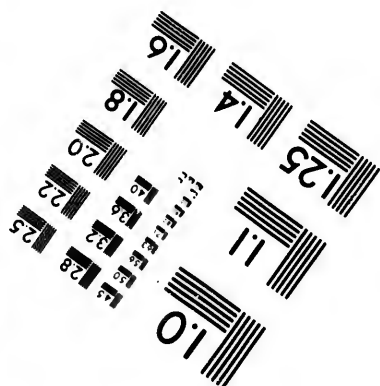
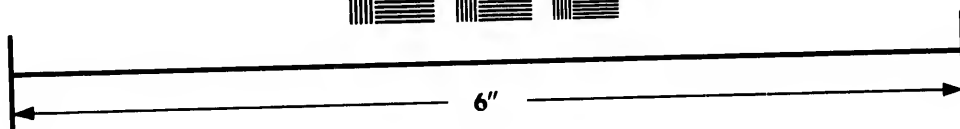
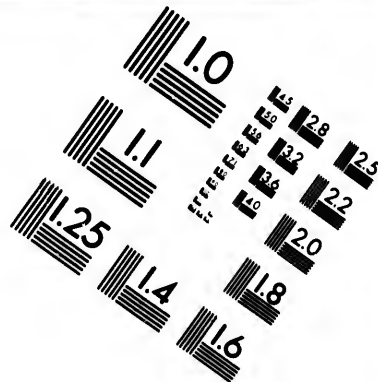
PORTLAND.

The chief city of Oregon is set in an amphitheatre of hills, which rise abruptly at a distance of little more than a mile from the river at its widest part. But for the low nature of the ground it might be extended down as far as Linnton and its manufactories; probably will be when the necessity for more room forces business down river. The town will also grow up river, where there are choice sites for residences, and back over the heights, which are already being quite thickly built up. But the overflow of population will go to the east side of the river, where East Portland and Albina, with their numerous additions, are even now spreading over a wide area, the land on this side being level across to the Columbia, a distance of six miles.



PORTLAND.





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The mistake of the builders of Portland was in not reserving the river front for a levee. The approach to the city is rendered unsightly by the ugly rears of stores and warehouses, and by the peculiar appearance of the two-storied wharves, constructed for convenience of landing during extreme high and low water. Without these unpleasant features, Portland would present from the river a very attractive picture.

The site of Portland was first taken up in 1843 by a man named Overton,—a Tennessean,—who sold his claim the following year to Messrs. Lovejoy and Pettygrove, who erected a log-house at the foot of what is now Washington Street, and began to clear the land, which was surveyed into lots and blocks in 1845. A second building for a store was erected that winter, near the first one. It was not, like the dwelling, of logs, but a frame covered with shingles, and went by the name of the "Shingle Store" long after more ambitious competitors had arisen.

The growth of the embryo town was by no means rapid, as the year of its "taking up" witnessed the first considerable immigration to Oregon. Of these one thousand immigrants, a few stopped in Oregon City, the recognized capital of the Territory, and the remainder scattered over the fertile plains, in quest of the mile square of land for which they had come to this far-off country. The same continued to be true of the steadily-increasing immigration of the following years; so that it was not until 1848 that Portland attained to the dignity of a name.

Of the two owners, one, Mr. Pettygrove, was from Maine, and desired the bantling to be called after the chief town of his native State. With the same laudable State love, Mr. Lovejoy, who was from Massachusetts, insisted on calling the town *Boston*. To end the dispute a penny was tossed up, and, Mr. Pettygrove winning, the future city was christened Portland. When it is taken into consideration that Portland, Maine, is nearly two degrees farther south than Portland, Oregon, and that roses are blossoming in the gardens of the latter, while snow lies white and winter winds whistle over the leafless gardens of the former, the older city has no occasion to feel concerned for the comfort of its godchild.

After being named, Portland changed owners again. Mr. Pettygrove bought out his partner, and afterwards sold the whole property to Mr. Daniel H. Lownsdale, receiving for it five thousand dollars in leather, tanned by Mr. Lownsdale in a tannery adjoining the town site. In 1848, or before the gold discoveries, *money* was almost unknown in Oregon; orders on the Hudson's Bay Company, the Methodist Mission, and wheat, being the currency of the country. Mr. Lownsdale, it seems, had the honor of introducing a new circulating medium, which was Oregon-tanned leather.

Still another change in the proprietorship occurred in 1849, Lownsdale selling an interest in the town to W. W. Chapman and Stephen Coffin. During this year—there being now about one hundred inhabitants—the Portlanders organized an association and elected trustees for the purpose of erecting a building to be used as a meeting-house for religious services, and for a school-house. It was used also as a court-room, and continued to serve the public in its triple capacity for several years.

The gold excitement of 1848-49 for a time had a tendency to check improvements in Oregon; but finally the wandering gold-seekers began to return and cultivate their neglected farms. California demanded grain and lumber; and these things Oregon could furnish in abundance. Vessels now came frequently to Portland from San Francisco and the Sandwich Islands; and in 1850 Couch & Co., of Portland, despatched a vessel—the brig “Emma Preston”—to China, thus fulfilling in part the dream of Jefferson and Benton. Couch's Addition was also laid out this year, and the pioneer steamboat of Oregon, the *Lot Whitcomb* was launched on Christmas day, at Milwaukee, to run between Portland and Oregon City. The *Weekly Oregonian* was started at Portland the same year by Thomas J. Dryer.

In January, 1851, the city was incorporated, with 1000 inhabitants, Hugh D. O'Bryant being chosen mayor. In March began the regular monthly mail service between Portland and San Francisco, per the steamship *Columbia*, Captain Dall. Two years later the taxable property of the town was valued at \$1,195,034, or about half the value of its real and personal property. From this time the growth of Portland was healthy and uniform. During the mining excitement of 1864, '5, '6,

there was a more hurried growth and more inflated condition of trade, which, however, subsided with the cause. In 1870 the population of Portland was under ten thousand, but the proportion of wealth to population was greater than any town in the United States, paying taxes on six million dollars of property assessed at one-third of its value. From that time forward the growth of the city has been steady rather than forced. According to the census of 1890 the population of Portland proper is 47,294, and its suburbs on the east side of the river contain—East Portland, 10,481; Albina, 5,104.

A noticeable feature of Portland is the snug and homelike appearance of the city. The streets are narrow—too narrow, indeed, for the display of the fine structures already erected and in progress; the squares are small, affording frequent streets and corner lots—so small that many of Portland's capitalists have appropriated a whole one to themselves, giving a perspective to their tasteful mansions which their business houses lack. The absence of long blocks of uniform structures must ever deprive the city of a certain metropolitan solidity of appearance, but the airiness and individuality of short blocks constitute one of its chief attractions.

Portland follows the rule of the Pacific Northwest, and builds its residences of wood, which is cheaper, more rapidly built, and more conformable to the climate than brick and stone. The sun is a necessity everywhere along the coast, and a wooden house is quickly warmed through by it, while brick houses exclude the heat, and the winters are seldom cold enough to make thick walls desirable for protection from frost. There is not in Portland yet any great leaning toward the half mediæval style adopted in some of the trans-montane cities, which indeed is out of place in wooden structures and not consonant either with the material of the houses, the climate, or the spirit of the age, which eschews "Mariannes in a moated grange," Julietts in hooded balconies, and every appearance of constraint. Even the colonial style, which is much affected, seems out of place in close neighborhood with Portland's elegant High School building, Medical College, or the City Hall now building. The most that can be claimed is that it gives variety and individuality to indulge in these architectural vagaries.

In the matter of churches, schools, public business buildings, both wealth and good taste are manifest. Among the former, which are numerous, the First Presbyterian, Grace Methodist, Trinity (Episcopal), and the Jewish Synagogue, Beth Israel, are handsome as they are diverse. Of private schools, St. Mary's Academy (Catholic), for girls; St. Michael's College, for boys; Bishop Scott Military Academy, for boys, and St. Helen's Hall, for girls, both Episcopal, are the chief. Besides these, there are two business colleges, two medical colleges, and the law department of the State University. The public schools of Portland, of which there are thirteen, are large and pleasantly located, and the work done in them leaves little to be desired in the way of public instruction. The High-School work, particularly the drawing, which I chanced to see at a Teachers' National Association a few years ago, was equal to the best exhibited by any of the States.

The Portland Chamber of Commerce, now in course of erection, is a handsome six-story edifice, surmounted by a square tower over the entrance. The new *Daily Oregonian* building is seven stories high, with a tall, square clock-tower and flag-staff, which will be visible above its less pretentious neighbors from the outlying parts of the city. I might go on, citing evidences of the taste and the means to gratify it which one meets at every hand in this very charming city, but resist the inclination upon the reflection that I may lay myself open to the suspicion of being *claqueur* for Portland, whereas I am aware that other cities in this Pacific Northwest share in the desire and the means to be beautiful.

I cannot refrain, however, from mentioning that pride of Portlanders, the Hotel Portland, which completely fills one of the city squares, and then has not room enough. It faces the Custom-House and Post-Office, and has on one side of it that fine temple to Thespis known as the Marquam Grand, having been built by one of Portland's pioneers of that name. There is something of a history to the Hotel Portland, which was projected by Henry Villard just before the crash in his affairs which followed the opening of the Northern Pacific to Portland *via* the Columbia River. At that time the Central School occupied this block, and when Villard purchased it the building

was removed across the street to the present site of the theatre. Work was then begun upon the foundations of the hotel, but was soon suspended, and the premises remained an unsightly spectacle in the heart of the town for several years, during which the *Oregonian* labored faithfully to spur on its completion by the citizens, but stock in the enterprise was slowly taken until the magnates of the Southern Pacific, on the completion of the Oregon and California road, bluntly declared that neither they nor any other persons of distinction would ever care to visit Portland unless modern hotels were erected and maintained according to modern taste in such matters. And what was the result? Whereas, before, every man of means was a householder, as he should be, straightway the Hotel Portland was completed it became the fashion to live at this hostelry instead of one's own house, until tourists were in danger of being crowded out by the home patronage, and the manager, one of the world-renowned Lelands, was forced to discourage permanent boarding. A secondary result was the erection of more hotels and improved hotel service generally.

Another object of which the city is justly proud is its Industrial Fair building, where is held an annual exhibit of the natural and cultivated productions of the State, its manufactures, and works of art. It is the largest on the coast, and the exhibition is surprisingly interesting as well as remarkable for bulk. Many of the exhibits are permanently preserved at the Board of Immigration, which at present occupies rented rooms, but is to be provided with more convenient quarters in the near future.

This Board of Immigration is doing a good work, if only to remind the present inhabitants of the State of their possible achievements. For strangers it furnishes many attractions and answers many questions. For instance, in the centre of the floor is a "kiosk" constructed of the best specimens of native grains in the stalk,—quite an elegant work of art. In the centre is placed a table laden with specimens of the choicest varieties of fruit and vegetables contributed by the orchardists and gardeners of all parts of Oregon. There are several tables arranged across the room for more general displays of fruit, and shelving around the walls containing glass jars filled with seed-grains and early fruits, each labelled with the name and locality

where raised, beautifully polished slabs of cabinet woods, and wood in the rough, and collections of minerals and metals, from building-stone and coal to silver and gold. Thus the visitor is able to secure in a few hours' time a knowledge of the resources of the country which it would require months of travel and even toil to obtain.

In studying the development of a country its social traits and institutions offer the most interesting points of observation as indications of the original character of the founders; and not only the city under consideration, but all Oregon gives evidence of its missionary breeding. Portland, west and east, has sixty-three churches, twelve of which are Methodist Episcopal, eight Presbyterian, seven Baptist, six Roman Catholic, six Protestant Episcopal, five Congregational, five Lutheran, three Evangelical, two Unitarian, two Hebrew, two Adventist, the remainder being divided among the Christian, Non-Sectarian, Dutch Reformed, United Brethren, and United Presbyterian. Portland is the see of a Roman Catholic bishopric embracing the State of Oregon. The city has the usual number of secret orders to be found in any city, half a hundred miscellaneous societies and clubs, and numerous places of amusement.

I have found in this far northwestern city the most discriminating charities. It has two excellent hospitals, one Catholic and one Protestant, well equipped for relieving suffering. Its Children's Home, under the patronage of the Ladies' Relief Society, is indeed a *home*, where no hint of pauperism is permitted to intrude; where unsightly uniforms are not required or allowed; where infants are furnished with toys, play-rooms, and kindergarten teaching, and older children with books and instruction at the public schools. This is said to be one of the best-managed institutions in the United States.

Portland ladies have also established a Women's Union, or boarding-house for underpaid or unemployed women, where board, lodging, and laundrying costs from three to seven dollars per week, and where the needy are entertained while looking for employment. The table is good, the rooms comfortable, some even large and well furnished; there is a piano in the parlor, and lectures or other social entertainments are furnished frequently. As the patrons of these benefactions take a pride

in their work, it is likely to continue and serve as an example to younger communities.

It is greatly to the credit of a city hewn out of a wilderness, as Portland was, that it early established a public library which has grown until it contains sixteen thousand volumes, besides regularly receiving two hundred periodicals. For many years one of the city's pioneers has given the rent of a comfortable suite of rooms over his bank for use by the Library Association, and the United States district judge a large measure of his time to the selection of books; and recently a Portland lady, dying, left a bequest to be applied to the erection of a suitable building for library purposes, which is now in course of construction.

Banks are surprisingly frequent on the streets of this city. There are already sixteen, many of them in handsome structures, and the seventeenth is being erected. This brings us to the consideration of capital and trade, and of Portland as a commercial emporium. According to the published statements of the boards of trade and immigration, the capital at disposal in the banking-houses is \$20,478,750, while the capital employed in the wholesale and jobbing trade is about \$65,000,000, divided among a large number of houses, one hundred of which employ from \$200,000 to \$1,000,000 or more. The trade of Portland has increased from \$50,000,000 in 1886 to \$115,000,000 in 1889.

These figures are remarkable as compared with the era of recent growth. But it must be taken into account that a long period of incubation of this wealth was enjoyed while the resources of the large area of which Portland was the trade-centre were being gradually developed. Thus trade was conservative and safe, and failures in wholesale houses or banks were unknown. The leading grocery house in this city, which does business to the extent of many millions annually, never employs travelling salesmen, although competition by Eastern houses has recently compelled other merchants to do so.

For conservatism, which is annoying to the newer men, who gird against it, the non-conservatives have a new word,—namely, "mossbackism." But the "mossbacks" have the best of it, undoubtedly, in their day and generation. What the ultimate outcome of their policy may be remains to the historian to relate. Whether or not Portland is to be forever the metropolis

of Oregon, or of the Northwest, will be determined in the next ten years. Already it has dangerously active rivals on the north, which will struggle for the supremacy; but even if that were lost, this city must be to the Willamet Valley what St. Louis is to the Mississippi or Cincinnati to the Ohio valleys.

The future magnitude of Portland depends upon its transportation facilities, which at present are good, and seemingly destined to be greatly increased. But within the memory of this generation it depended entirely upon boats of all sizes, from the canoe to the sailing ship and ocean steamer.

The history of transportation in Oregon is interesting. The Willamet Valley being the first and for many years the only part settled, and being, as previously described, surrounded by mountains except at its north end, where it opened on the Columbia, and not accessible there except by boats, travel to the settlements was attended with much toil and difficulty. Neither the Columbia nor the Willamet was open to continuous navigation, the latter being obstructed by falls twenty feet in height. At the falls, it is true, there grew up a little town; but as all the open or agricultural land was some distance above this place, a portage had to be made here of a mile or two, and always at a risk of accident. As early as 1846-47 there were two or three freight-boats rigged with oars and sails on the Willamet above the falls. In 1850 the first steamboat was launched and run below the falls, which was very soon followed by others, making trips to Astoria and Vancouver, and during the autumn immigration to the Cascades to assist the newcomers in reaching the valley. Then the Indian troubles made necessary transportation above the Cascades, and above The Dalles, inducing first the building of sail and next of small steamboats on those sections of the river. Finally a number of the individual owners combined, and an organization resulted in the incorporation in 1862 of the Oregon Steam Navigation Company, Captain J. C. Ainsworth, president. To this company belonged in its early years most of the now solid men of Portland. It was well officered, conservative, but not unenterprising, and for many years held Oregon in the palm of its hand. It had a monopoly of the Columbia, having yielded the Willamet to the People's Transportation Company, and, in order to

make business for itself, used a goodly share of its earnings in developing mining and wheat-growing east of the Cascade Mountains.

By the Oregon Steam Navigation Company were built the first railroads in the country,—namely, the portages of five miles at the Cascades and fifteen miles at The Dalles. It also put some money into the Oregon Central on the west side of the Wallamet, which was turned over to Holladay, of the Oregon and California, on the east side, and both are now a part of the Southern Pacific system.

The stock of the Oregon Steam Navigation Company was principally in the hands of three men, J. C. Ainsworth, R. R. Thompson, and S. G. Reed, when the Northern Pacific Railroad Company made overtures for its purchase and did purchase, the former owners retaining a fourth of the stock, Captain Ainsworth being made manager and a director in the Northern Pacific Railroad Company, very fortunately, as it happened, for when the failure of Jay Cooke & Co. suspended construction and endangered the land grant, the old officers of the Oregon Steam Navigation Company came to the rescue and completed the road from the Columbia to Puget Sound in time to save the grant. The failure of the Northern Pacific Railroad having thrown on the Eastern market, where its value was not known, three-fourths of the Oregon Steam Navigation stock, the gentlemen above named employed agents to buy it up, and once more obtained control. They then built new and handsome boats for the Columbia trade, and also obtained the trade of the Wallamet River by purchasing the property of the Willamette Transportation Company, successors to the People's Company, and became very powerful.

In 1879 Henry Villard, who had secured control of the Oregon and California, and who had conceived the plan of a road along the Columbia and across Idaho, finding the Oregon Steam Navigation Company in his way, made a proposition to purchase their steamers and portages, and with these, his steamships and railways, to form a company to be called the Oregon Railway and Navigation Company. This he was able to do, and the road he projected is now leased to the Union Pacific, and is part of the Oregon Short Line through Idaho, connecting with

the Union Pacific's main line. Meanwhile the Oregon Steam Navigation Company has retired to enjoy the results of good management in other lines of investment.

The railroads that centre at Portland are those of the Southern Pacific system, formerly known as the Oregon and California and the Oregon Central, which form a junction one hundred and ten miles south. The Southern Pacific gives connection with all the California lines and trans-continental roads. The Union Pacific, as above stated, has direct through connection with the East. The Northern Pacific's Columbia River branch starts at Portland and follows the river to a point opposite the Cowlitz Valley, where it crosses by means of a ferry and runs north to Tacoma, whence its main line crosses the Cascade Range, and makes a long *détour* southeast *via* Pasco and northeast *via* the Panhandle of Idaho before reaching Montana, where it makes another long angle southeast and northwest before it reaches the parallel on which it stretches out for St. Paul. These routes involve sight-seeing over a vast scope of country, embracing all the great mountain ranges on the Pacific Slope, and their commercial advantages may easily be apprehended.

The Canadian Pacific also furnishes eastern connection with Portland by the outside steamer route to Victoria, or by the Northern Pacific and Puget Sound steamers to the western terminus of the road in British Columbia. The Great Northern also reaches Portland by using the Union Pacific's lines in East Washington, thus giving the tourist his choice of five trans-continental routes. Besides these great lines there are two narrow-gauge roads which run through the farming districts in the Wallamet Valley and contribute to the business of the metropolis,—the Portland and Willamette Valley Railroad, on the east side of the river, and the Oregonian Railway, on the west side. These roads have recently been added to the Southern Pacific system and are being made standard gauge. The Oregon Pacific is an uncompleted road extending at present from Yaquina Bay, on the coast of Oregon, across the middle of the Wallamet Valley to the Cascade Mountains. Its route is surveyed across East Oregon to a connection with the Union Pacific at Ontario, near the Idaho line.

A narrow-gauge passenger line connects Portland with Vancouver by a ferry across the Columbia, and a steam-motor line runs from East Portland to St. Johns down the Wallamet. Cable and electric lines make urban and suburban transit easy and rapid. And all this development has taken place within a period which reminds one of Jack and his bean-stalk.

East Portland and Albina are practically one town, although forming two distinct municipalities, which are soon to be merged in West Portland corporation for greater convenience and mutual benefit. They are connected with the west side by ferries and by two bridges spanning the Wallamet. The wheat warehouses and elevator of the railroad companies are on the east side, there being insufficient room on the west for the accommodation of their freight business. The greater extent of level ground on the peninsula is sure in time to bring a large portion of the population to this side, as the rapid growth of these suburbs as well as the city proper plainly indicates.

As a seaport Portland has advantages and disadvantages. It is one hundred and ten miles from the ocean, but there is a good depth of water on the bar of the Columbia, and, by using a dredger at certain points on this river and on the Wallamet in low water, navigation is kept unobstructed. The expense of pilotage to and from Portland is high. Vessels not exceeding eight hundred tons register are charged four hundred and fifty dollars from Astoria to this city; over eight hundred tons, five hundred dollars; over twelve hundred tons, five hundred and fifty dollars; over sixteen hundred tons, six hundred dollars; and over two thousand one hundred tons, special rates. Lighterage upon grain and flour is fifty cents per ton to Astoria; upon other freight one dollar. The pilotage from Astoria to sea is a special charge.

The wheat market of Portland, except in seasons of low water, when lighterage is required, is the same in point of no reshipment as that of Chicago, the grain placed on board here remaining unhandled until it reaches Liverpool, four months after clearing here, and at a cost less than export rates from the Great Lakes. The bulk of the grain grown in Oregon and Washington is shipped directly from Portland and Astoria, or Puget Sound ports, to England, Japan, and China. The clear-

ances of the year ending July 15, 1890, amounted to eighty-nine million dollars for Portland.

The foreign trade of Portland is carried on in sailing vessels and by irregular steamship service. The trade with Europe employs between one and two hundred vessels annually, each vessel under a special charter.

Trade with Australia, South America, and the islands of the Pacific is carried on in a similar manner. Only two regular lines exist, one to New York and one to China. Of steamship lines there is one to San Francisco, one to Alaska, one to Puget Sound and British Columbia ports, one to the coast ports of Washington, and one projected and soon to be put in operation to Japan.

Portland is not eminent as a manufacturing city, although its domestic business is divided between eighty-eight kinds of manufactures and one hundred and fifty other lines of trade, which together employ between seven and eight thousand persons, the annual product of whose labor is estimated at twenty million one hundred and eighty-three thousand and forty-four dollars. Formerly only lumber and flour were produced for export. Mills were followed by foundries and machine-shops, whose output in 1889 was two million and fifty thousand dollars. Sash- and door-factories abound, and carriage-making is carried on to considerable extent. A cordage-manufactory had an output for 1889 valued at eight hundred thousand dollars, and a bag-, tent-, and sail-factory turned out about the same amount of goods during the year.

Many of the heavy expenditures of Portland capital have been made outside of Portland proper, as, for instance, in the construction of the smelter at Linnton and the Oregon Iron and Steel-Works at Oswego.

Iron-beds were early known to exist near the Wallamet and Columbia Rivers, but the only development has been at Oswego, six miles from Portland, where there is an extensive deposit. The ore is a brown hematite, in a vein from six to fifteen feet in thickness. It is mined at slight expense, being near the surface. In 1862 six tons were taken out and tested in San Francisco, the test showing from fifty-six to sixty-five per cent. of metal of a superior quality. Thereupon, in 1865, the

Oregon Iron Company was formed, with a capital stock of five hundred thousand dollars, two-thirds of which was owned in Portland, and the company erected the pioneer iron-smelting furnace of the Pacific Coast, with a capacity of ten tons per day.

The production of iron has been less than hoped for from an analysis of the ore, which gave sesquioxide of iron 77.16 per cent., or 54.37 per cent. of metallic iron, the other parts being water, 11.16; silica, 11.08; sulphur and phosphorus together, one-tenth of one per cent. The ore proved not to maintain throughout the richness of the sample analyzed, and the cost of production was great, on account of having to import lime and to manufacture charcoal. In 1874-75 a ton of iron cost to produce thirty-three dollars and twenty-five cents, and sold in San Francisco in limited lots for forty-six dollars per ton, being used where special strength was required. It was found to answer well for the manufacture of car-wheels, but its cost was prohibitory, Scotch and English iron being much cheaper.

The amount produced from the date of its first manufacture to 1869 was two thousand three hundred and ninety-five tons, when work was suspended until 1874, when the company was reorganized, and in little more than two years manufactured five thousand and seventy-five tons. The property was then sold for the benefit of its creditors. In 1878 the purchasers started up the furnace, making eleven hundred and seventy tons, when it was stopped to rebuild and enlarge its capacity. Again the manufacture of iron went on for more than two years, when in the autumn of 1881 other changes were introduced, and the furnace remained idle for several years. In 1888 the company entered into a contract to furnish iron pipe for the Portland water-works, and resumed operations, which continue to the present time.

The present name of the corporation is the Oregon Iron and Steel Works Company. It supplies much of the raw material for the foundry work of Portland, the value of its product being about fifty thousand dollars annually.

There are other iron-deposits in several of the counties. The most available one is in Columbia County, near the River Columbia, convenient to deep water and timber. The iron and steel trade of Portland is nearly two million dollars yearly. The cost

of the production of iron is somewhat lowered since 1869. If it could be still further lowered, there seems no reason why rails to equip the numerous railways being constructed in the Northwest should not be made in Oregon or Washington.

Portland supports nineteen newspapers and other periodicals. Four of the newspapers are dailies, among which the *Oregonian*, the pioneer journal, is still chief. It is the best-conducted journal on the coast, and costs its subscribers about five cents a copy. The *West Shore*, in another line, has done a great deal to deserve the patronage which it gets at home and abroad.

Portland is a more American city than San Francisco, although its population is becoming more mixed every year. There are many Scotchmen here in business, and a considerable amount of Scotch capital. Young Englishmen from Victoria are frequently met in society, and, like their countrymen at home, do not hesitate to criticise our social habits, and particularly the lack of chaperonage of our young ladies. I was much amused by an encounter which I witnessed between a young Englishman and a Portland young lady who had favored him with her society at the tennis court, unattended, and been rewarded for her trust in his courtesy by very uncourteous remarks upon such social freedom. Miss America defended our ideas of propriety, and Mr. Briton remained unconvinced, although he very often sought the society of the young lady.

One evening, in the course of conversation the gentleman chanced to mention the marriage of a Sir Somebody, of British Columbia, to an Oregonian lady. "Why," said Miss America, putting on a puzzled look, "I am surprised at that—unless he was in need of money." It was a telling shot, but both parties affected unconsciousness.

Portland has but one popular drive. That is from First Street for five miles up the river bank to the ferry opposite Milwaukee. It affords a truly delightful view of the Wallamet, the beautiful Riverside Cemetery, and the city water-works. There is a park, which is too small, and only partially improved, at the west side of the town, in the shadow of the hills. There are, however, some wonderfully interesting drives about Portland, which will be popular when somewhat more improved, and which rival the famous eighteen-mile drive at Monterey.



CORNELL ROAD.

In California one hears constant allusion to climate. Now, while climate is valuable, and worth all that is paid for it, in comfort and pleasure, and while Oregon has as good a climate as need be desired, taking it "by and large," I think the "card" on which West Oregon should draw tourists would be scenery. Like the climate of California, it is everywhere. If you enter the State by the Southern Pacific you have one whole day, at least, of mountain views greatly excelling in variety and interest the crossing of the Sierra Nevadas, and a lovely ride through the Wallamet Valley after it. If you come by the Union Pacific, you have the Columbia River views, whose grandeur I have but faintly indicated. By the Northern Pacific you are brought in view of an extraordinary and wonderfully extended panorama, including lakes, plains, the crossing of the Cascade Range, Puget Sound, and West Washington. Or, if the approach is made *via* the Canadian Pacific, you enjoy other similar scenes of sublimity impossible to forget.

But here, right about Portland, are views not to be surpassed in the United States, and the Cornell Road and Portland Boulevard furnish them to you, one winding among the heights north from the city, and the other taking a southerly direction. From the ridge west of Portland you may see five snow-peaks, two great rivers, the triune cities of West Portland, East Portland, and Albina, the town of Vancouver in Washington, and half a dozen other outlying towns within a radius of twenty-five miles. You may drive for eighteen miles in one direction, looking over two counties as you go, and for twelve miles in another, of scarcely less wonderful picturesqueness, but of softer features. Neither the camera nor the pen is equal to the task of delineating scenes on a scale of such magnificence as are grouped about Portland-on-Wallamet.

CHAPTER VIII.

OTHER TOWNS OF THE WALLAMET VALLEY.

PROCEEDING up the Wallamet, we come in about six miles to Oswego, the seat of the Oregon Iron- and Steel-Works, a busy little place on the west bank. Nearly opposite is Milwaukee, famous for having been the place where the first nursery of the Pacific coast was planted, on the grounds of Meek and Lluelling. The young trees were brought across the continent in a wagon-box filled with earth. The earliest export of this fruit was made in 1853 to San Francisco, where two hundred pounds brought five hundred dollars. The same firm sold the following year forty bushels of apples for sixty-two dollars and fifty cents per bushel. "The land of red apples" and "the land of cider" are still synonymes for the Wallamet Valley among Californians. Milwaukee was also noted for the flour produced there, but as a town it has no development.

About three miles above Milwaukee, on the east side, there comes in the Clackamas river, the lowest tributary of the Wallamet, and nearly opposite the Tualatin. There is a fish hatchery on the Clackamas where between five and six million eggs were taken in 1890, most of which will be fish. Above here another three miles are the Falls of the Wallamet, and Oregon City, built upon a bed of solid basalt, a ledge of which extends quite across the river, cropping out on the other side. This ledge is about twenty feet higher than the surface of the river below the fall, and is broken into a ragged crescent with rather a sharp angle in the middle, where the water deflects towards the western shore. In low or ordinary stage of water the stream divides into several parts, seeking the deepest channels in the rocks, and forming a number of different cataracts; yet the central one, at the angle spoken of, is always the principal one. Above the falls the river parts, flowing around an island of rock, on which once stood a mill belonging to the Methodist Mission, but which was carried away in the great flood of 1862, along with numerous other buildings from the mainland.

The current, always strong just above the falls, is terrific when the heavy rains of winter have swollen all the tributaries of the river, and filled its banks with a rushing torrent fifteen to twenty feet in depth. At such times the rocks are mostly hidden, and the falls extend from shore to shore, or about a quarter of a mile.

The Falls of the Wallamet constitute the great water-power of the State. The favorite term for Oregon City is, "The Lowell of the Pacific Coast;" and there is indeed every natural agency here for the making of a second Lowell. One of the largest woollen-mills of the State is located here. It is built substantially of stone and brick, four stories high, and one hundred and ninety by sixty feet in ground area, and contains twelve sets of the most improved machinery. Its manufactures are blankets, flannels, and cassimeres and light cloths. The "Imperial" flouring-mill, and another custom mill, a saw-mill, a box-factory, paper-mill, and the Portland Electric-Light Power-House are located here. An important work has been performed here, namely, the construction of locks on the west side of the falls, by which boats may pass up and down without transshipment, which for many years was necessary. However, as the government fails to keep a boat on the upper river with apparatus for removing sand-bars and snags, the benefit to the State of these locks for half the year, at least, is lost.

If one is informed of the history of this region, he may step aside from the main street of Oregon City, and in the enclosure about the Catholic church read on a modest head-stone: "Dr. John McLoughlin, died Sept. 3d, 1857, aged 73 years. The Pioneer and Friend of Oregon. Also the Founder of this City."

From Oregon City, for a distance of more than fifty miles by the river, there are no towns of any importance, though there are numerous "landings," where freight is put on or off for various places in the interior, indicating that there is a considerable population scattered through the valley. About eleven miles above Oregon City the Molalla enters the Wallamet, near the mouth of which was Champoege, the oldest settlement in the valley. The river here makes a bend to the west and receives the Yamhill River. South of this bend was where the French Canadians had their farms as early as 1829. As might be ex-

pected, it is in a fertile and desirable location, yet has never become a business centre. Here it was that the "Organic Laws" were adopted by a majority of the Oregon settlers, in May, 1843, and a provisional government erected, to last until such time as the United States government should see fit to acknowledge Oregon as one of her Territories. There is also a memorable spot twelve miles below Salem, on the east bank, where the Methodist Mission made its first location in 1834, this being the very first American settlement in the Wallamet Valley. Here, too, in 1843, after the acceptance of the Organic Laws, was held the first Legislative Assembly of nine persons, their Council Chamber being a public room in a building belonging to the mission, known as "The Granary." Subsequently the Legislature removed its sessions to Oregon City. The high-water of 1862 carried away a portion of the old mission ground, which was on the bank of the river, where the open prairie approaches quite to it.

While we are overcoming the last twelve miles of quiet voyaging between the "Old Mission" and Salem, we may as well consider their relationship. In the autumn of 1840 the Methodist Mission built a mill on a stream twelve miles south of their first establishment, at a place called by the Indians Chemeketa, and, finding the situation every way a better one than that, removed the mission to it in the following year. The first dwelling was erected at some distance back from the river, on the bank of a stream known as Mill Creek, in a very pleasant and convenient location, with an extensive plain on one hand, and a charmingly wooded, rolling landscape on the other. In 1843 the large frame building, for many years known as "The Institute," was erected, as a school for Indian children, but, the savages not taking very kindly to study, the mission was dissolved in 1844, after which time the Oregon Institute became a seminary of learning for whoever chose to patronize it, although it still remained under the control of the Methodist denomination, and was converted ultimately into a university.

Upon the sale of the mission property, the town-site of Salem was laid out by Mr. W. H. Wilson, and received its present name. It is very handsomely located upon a gravelly prairie, rising gradually back from the river, which is skirted with

groves of tall trees. Other groves of firs and oaks relieve the level monotony of the landscape for a couple of miles away to the north and east; while the hills across Mill Creek are wooded like parks, with a variety of trees. Across the Wallamet, and fronting the town, is a range of high land called the "Polk County Hills," which makes the greatest charm of the whole view of Salem. In outline and coloring, these hills are poetically beautiful. The town is placed in a setting of the Polk County Hills to the west, the "Waldo Hills" (another arable range) to the southeast, the Blue Cascade Range with its overtopping snow-peaks to the northeast, groves of fine, large oaks and firs breaking the middle distance; while immediately about us are level farms and fields of waving grain, with a substantial farm-house, here and there, in their midst.

The residence part of Salem is comfortably built, with an air of stability and propriety about it. The streets are wide, the lots large, and the dwellings neat, often handsome, with well-kept gardens attached. Shade-trees—locust and maple—line the broad avenues, and the public square is of liberal proportions, promising "lungs" to the city, should it grow large enough to need this breathing-space in its midst. The business-houses are handsome and commodious, and the public edifices are numerous and costly. The city has about twelve thousand inhabitants.

Salem is the county-seat of Marion County, as well as the capital of the State. By the constitution of Oregon the State buildings are all located at the capital. The county court-house, which occupies a square, was erected at a cost of one hundred and twenty thousand dollars. The State-house, not yet entirely finished, has cost so far seven hundred and fifty thousand dollars. The State insane asylum is a magnificent structure, with accommodations for one thousand patients. The State penitentiary, school for deaf and mute children, school for the blind, and State Reform School are all worthy of this commonwealth.

The Willamette University, the outgrowth of the Oregon Institute, is a prosperous sectarian school, with an average attendance of three hundred of both sexes. The Catholics also have a school for young ladies at this place. The public high-school is a fine building, and the thirteen churches of dif-

ferent denominations give evidence of the prosperity of these organizations.

The great flood of the winter of 1889-90 carried away a fine bridge which connected the city with the country opposite, but it is being replaced by one more costly. An excellent water-power is furnished by a canal, only about one-third of which is utilized by two large flouring-mills, a fifty-thousand-dollar woollen-mill, lumber-mills, and sash- and door-factories. The wages paid to operatives in the different industries is three hundred thousand dollars per annum. The city is furnished with water-works and street-car lines; has the navigable river on its front, and the Southern Pacific at its back; and will soon, it is believed, be connected by railroad with Astoria by the sea.

Of the two or more newspapers published in Salem, the *Statesman* is the eldest. In the early history of the State it was a power, ably conducted, and unrelentingly Democratic. Its founder is at present a banker in this city and a "bloated bondholder," but delights in reminiscences of the time when the *Statesman* ruled Oregon. Its files contain a complete history of the State for ten years,—from 1851 to 1861. Salem has no public library, even the State library being sadly deficient, and the State archives needing care.

It is needless to say, that with all the advantages named, Salem is the centre of a wealthy and important section of the Willamot Valley. There are eighteen or twenty small towns in Marion County, each the centre of a farming community.

The government has an Indian school at Chemawa, a few miles north of Salem, where the sons and daughters of Indian parents are trained for civilized life. There are a number of buildings of a modern appearance, and a farm and orchard under improvement. The superintendent reports to the government the condition of his charge, and I believe the scheme is reasonably successful, considering the antecedents of the pupils.

About twenty miles above Salem the Willamet receives the Santiam River, which separates Marion from Linn County. The county-seat of Linn is Albany, ten miles farther south, which is at the head of low-water navigation. Between Salem and Albany are several small places, chiefly on the west side of the river. Buena Vista is a thriving place, and manufactures

common pottery. Monmouth is the seat of a denominational college, and also the State normal school. Warehouses and shipping points are frequent along this portion of the river, for the Wallamet here borders some of the most famous grain-raising counties.

The Calapooia River enters the Wallamet at Albany, on the east side. This stream furnishes fine water-power up in the foot-hills, where two towns—North and South Brownsville—are located. The former is a manufacturing place, having a woollen-mill, a flouring-mill, a planing-mill, and a tannery, besides machine-shops and other similar establishments.

Albany was laid out as a town site in 1848, by two brothers, Thomas and Walter Monteith. All that has been said of Salem as a well located and well-built town applies equally to Albany, which is the third in importance in the Wallamet Valley, if not the second, this being a mooted question between the two cities. As a manufacturing place it surpasses its rival. Its water-power is obtained by a canal from the Santiam, costing sixty thousand dollars, several mills and the electric-light plant being worked by this power. Like Salem, it is on the line of the Southern Pacific, with a railroad assured to Astoria, and is on the line of the Oregon Pacific.

There are many pleasant drives and resorts about Albany, and a fine view of that beautiful group of snow-peaks, the Three Sisters. Although there is much level prairie, there are also buttes and ridges so disposed about the valley as to give a charming variety to an otherwise monotonous landscape. Sweet Home Valley is an oval shaped paradise surrounded by an amphitheatre of hills, and facing the Santiam.

Lebanon, on the south fork of the Santiam, is a delightful spot, in the midst of a fine farming country. A few miles above Lebanon, at the falls of the Santiam, is Silvertown, another small town, with flouring- and lumber-mills. Both of these places are the centres of a healthy business, dependent on agriculture and manufactures.

Gatesville, on the line of the Oregon Pacific, is the base of supplies for the Santiam mining district. King's Prairie, opposite Gatesville, is a thrifty farming settlement, and surrounded by fine timber, which several mills are doing their best to con-

sumo. Halsey, on the line of the Southern Pacific, ships annually nearly three hundred thousand bushels of grain, and is a flourishing town.

Above Albany the pine-tree begins to appear, mixed with the fir, along the river-banks. The groves of timber are more scattering, and the country more level and open. Except the ash, maple, alder, and willow of the river-bottoms, there is little forest; but the isolated trees of pine, fir, and oak which beautify the plains are of the handsomest proportions.

Corvallis, a dozen miles above Albany, on the west side of the river, is about the same age with it. It first proprietor was J. C. Avery, by whom it was incorporated in 1857. The situation of Corvallis is remarkably handsome, having the river on one side of it, and the Coast Range sufficiently near it on the other to give the landscape the look of being framed in a semicircle of hills. Its name, Corvallis, a corruption of *cœur de vallée*,—heart of the valley,—was given to it before Mr. Avery ever saw it. He called his town site Marysville, but, there being another Marysville on the California mail-route, the name was dropped, and the more significant one restored. This pretty little city is the seat of government of Benton County, which also has a seaport town, namely Newport, at Yaquina Bay, which is the initial point of the Oregon Pacific Railroad, and also a popular summer resort. A commodious hotel is all that Newport needs to bring many visitors there every season. At Seal Rock, eight miles south of Newport, about seventy persons can be accommodated in cottages.

The entrance to Yaquina Bay in its natural state was not good, there being not more than eight feet of water on the bar at low tide, and three nominal channels. The channel most used was rendered dangerous by the presence of rocks, and the shifting nature of the bar left none of them safe for navigation. In 1881 the government commenced the work of improving the middle channel by a jetty three thousand seven hundred feet in length, which in 1884 was extended to four thousand feet. Another jetty, on the north side, was constructed in 1888, two thousand three hundred feet in length, with the result that there is now nearly twelve feet of water on the bar at low tide. A line of steamers runs regularly between Newport and San Fran-

cisco, connecting with the Oregon Pacific Railroad, greatly to the relief of the central and southern portions of the Wallamet Valley on the west side, which were without means of transportation. Corvallis labored energetically for twenty years to bring about this improvement in its business facilities, the reward of which determination it is beginning to enjoy.

The Oregon Development Company, concerned in these improvements, owns one steamer, the "Willamet Valley," and charters another, the "Farallon," both drawing, loaded, about fourteen feet. Of course, they can enter only on full tide.

A steam-schooner, drawing eight feet, was employed last year in coasting between Yuquina and the river ports south, namely, Alseya and Sinslaw, carrying salmon, shingles, wool, hides, etc., to Yaquina, and taking general merchandise as return cargo. She made twenty-five trips, carrying fifty tons each way.

The total amount of imports by the company's vessels during the year ending June 10, 1890, was eight thousand and three tons; and of exports, thirty-two thousand and eight tons, or forty thousand and seventy-four tons total carriage. The San Francisco line carried seven hundred and seventy-eight incoming and four hundred and fifty-six outgoing passengers, and had but one accident on the bar, when a heavy sea boarded the "Farallon" and washed overboard five men, two of whom were lost. The steamer's fires were put out, and she suffered damages which compelled her to return for repairs. A small steamer runs upon the waters of the bay.

I have been thus particular in giving the result of an enterprise which at first seemed unpromising, only to show what opportunities remain for development in a country so rich in resources. The Alseya Valley, in Benton County, has its own little seaport at the mouth of the Alseya River. The lower portion is heavily timbered, but where cleared produces abundant crops. It has, besides, mineral resources—coal in the mountains, and gold in the back-sands. The upper part of the valley, from one to three miles wide and twelve long, is mostly settled up with thrifty and industrious people.

The pass through the Coast Range, by which the Oregon Pacific comes to Corvallis, perceptibly affects the climate of

Benton County, giving it the benefit of a modified sea-breeze in the summer season. The State Agricultural College, with an endowment and considerable legislative aid, is located at Corvallis. The town is well built, and has a handsome court-house, being the county-seat. Like all Oregon towns, it has churches and schools without stint.

The face of the country in this portion of the valley is extremely picturesque and beautiful. The narrowing towards its head brings mountains, plains, and groves within the sweep of unassisted vision, and the whole resembles a grand picture. We have not here the heavy forests of the Columbia River region, nor even the frequently-recurring fir-groves of the middle sections. The foot-hills of the mountains approach within a few miles on either side, but those nearest the valley are rounded, grassy knolls, over which are scattered groups of firs, pines, or oaks, while the river-bottom is bordered with tall cotton-woods, and studded rather closely with pines of a lofty height and noble form.

Two tributaries enter the Wallamet between Corvallis and Eugene,—the Muddy, from the east, and Long Tom from the southwest. The country on the Long Tom is celebrated for its fertility, and for the uncompromising Democracy of its people. The school-master and the Black Republican were in early times alike objects of aversion in that famous district. It is also claimed for Long Tom that it originated the term "Webfoot," which is so universally applied to Oregonians by their California neighbors. The story runs as follows: A young couple from Missouri settled upon a land-claim on the banks of this river, and in due course of time a son and heir was born to them. A California "commercial traveller," chancing to stop with the happy parents overnight, made some jesting remarks upon the subject, warning them not to let the baby get drowned in the unusually extensive mud-puddles by which the premises were disfigured; when the father replied that they had looked out for that, and, uncovering the baby's feet, astonished the joker by showing him that they were *webbed*. The *sobriquet* of Web-foot, having thus been attached to Oregon-born babies, has continued to be a favorite appellative ever since.

No inland town could have a prettier location than Eugene,

and few a more desirable one for other reasons. It has for a background Spencer's Butte, so named in honor of the Secretary of State, in 1841, by Dr. White of the Methodist mission. At the head of the valley, it combines many advantages; Lane County, of which it is the county-seat, extending from the sea-coast to the Cascade Range, and including grain- and stock-lands, timber- and mineral-lands, with abundant water-power.

Eugene, with about four thousand inhabitants, is the seat of the University of Oregon, founded in 1872, and opened for the reception of students in 1876. Its affairs are managed by a board of regents appointed by the governor of the State for a term of twelve years. It has a permanent endowment of eighty thousand dollars, realized from the sale of lands granted by the general government for university purposes, and a fund of fifty thousand dollars donated by Mr. Henry Villard. It also receives an annual appropriation of five thousand dollars from the State. But there is need of more endowments to enable this to become what it should be, a place of universal education. Two handsome brick buildings, a growing library of valuable books, astronomical, surveying, and chemical apparatus constitute the present visible features of the institution, to which I would add, as not least, though last, the collection of Professor Thomas Condon, illustrating the geology, mineralogy, and natural history of the Northwest. This collection, the result of the labor of a lifetime, is already well known, and justly noted for laying open the pre-historic record of Oregon. Professor Condon is the discoverer of the dwarf fossil horse of Oregon, which is claimed by Eastern scientists, to whom he imparted his discovery.

Eugene is on the line of the Southern Pacific Railroad, and has a good country trade. Undoubtedly railroads will be built to the mouth of the Siuslaw River, and into Southeastern Oregon, from this point. A road into the Klamath Valley leads from here by the Diamond Peak pass.

Three miles east of Eugene is the town of Springfield, a thriving place, with flouring- and saw-mills, and several manufacturing. Following up McKenzie's Fork of the Wallamet to a branch called the Mohawk, we find a region cut off from the main valley by a range of hills, which is celebrated for its

natural beauties and advantages of superior climate, excellent water, rich prairies, and fine forest. It is being rapidly taken up by dairymen, fruit-farmers, and others. Fine water-power may be obtained in numerous places, owing to the rapid fall of the streams coming out of the mountains. A glance at the map will show the three principal forks of the Wallamet converging towards Eugene, each of which has tributaries with small lateral valleys that contain very choice tracts of land.

The amphitheatre of mountains, running down into the valley in long slopes and ridges, furnishes it with superior facilities for a great variety of manufactures which depend on wood, water, stone, and like materials. When these are to be found, together with a variety of good soils adapted to all branches of farming, there can be no doubt of the future of such a country. From every side the riches of these hills will glide down into the lap of that city.

CHAPTER IX.

FURTHER REMARKS ON WEST OREGON.

THE Wallamet prairies are not an uninterrupted level like those of Illinois. In some parts they resemble the "oak openings" of Michigan; in other parts the plains are quite extensive, but nowhere are we out of sight of large bodies of timber on the mountains, or the groves that fringe the rivers. Ranges of hills and isolated buttes occur frequently enough to save the landscape from monotony, and furnish variety of soil as well.

The first thought in viewing West Oregon is that it must be a country of perennial verdure,—a country of exhaustless food resources for cattle. Such is not the fact, however, owing to the absence of rain during about four months of the year, when the grass is dried up. For this reason it cannot furnish fresh pasturage later than the first of July, until the rains begin in October or November, when the chilly weather makes cattle poor, although grass is abundant. Time was when the Wallamet Valley waved in early summer with luxuriant native grasses, red and white clover, and many beautiful flowering plants. Cattle might wallow through grass breast-high on the prairies,

and as high as their heads in the creek-bottoms. Stock-raising was a lucrative business in an early day in Oregon: in the first place, because cattle were scarce among the settlers, and next, because, after they became more numerous, they were in demand for food by the mining population, with which gold discovery suddenly peopled the southern portion of the State. The stock-owner then put his brand on his herd and turned them out to "summer and winter" themselves on the abundance of the virgin prairies; but in course of time this indiscriminate pasturing injured the grasses, reducing them to a shorter growth, though it is said that when the land is permitted to lie idle under fence they recover their old luxuriance.

The lives of the early Oregonians, while they very often lacked material comfort, were remarkably care-free. The genial climate and kindly soil rendered constant or excessive labor unnecessary. Comparative wealth was easily attained when a hundred cows represented a capital of ten thousand dollars. To mount his "spotted cayuse" and scamper over the prairie looking after his stock was a pastime; good riding, good shooting, and knowing how to throw the lasso, popular accomplishments. Clad in his buckskin suit, and booted and spurred in true *vaquero* style, it was his pleasure to scour the prairies day after day on any errand, from cattle-hunting to looking for a wife with three hundred and twenty acres to make a mile square with his own. And well it might be—unless some of wild California stock "got after him," when a sharp race sometimes ended in the *caballero* being "treed."

This free and easy life in a country so beautiful had charms not difficult to comprehend, and was more profitable than the laborious farming which made men too slowly rich "back in the States." The larger part of the Wallamet Valley was taken up under the Oregon Donation Law of 1850, which gave three hundred and twenty acres to a married man, and the same amount to his wife in her own right. This brought early marriages into fashion, the courting which preceded it being often accomplished while the would-be husband sat on his cayuse, and the not unwilling bride of thirteen or fourteen summers stood on the door-step. Large families who took up in this way adjoining square miles were able to call a whole township their own.

But that was

"In the olden, golden
Time, long ago."

Many a farmer sold his land, when remote from the settlements, for a merely nominal price, and went to reside in a town where he could send his children to school, in ante railroad days, thus losing the benefit the government intended to bestow upon the pioneers of this far-away region. That did not, however, prevent his "living by the copulation of cattle," as the broad acres of the valley were unfenced for the most part, and his herds wandered whithersoever they would. Railroads are fast stamping out this primitive form of civilization, which is replaced by scientific farming, and this means confining stock to certain boundaries and providing for their subsistence. The farmer of the Wallamet Valley could not compete in stock-raising with the herders on the cheaper lands of the East Oregon ranges, because his land was too valuable for other purposes; nor could he compete with the stock-raisers on the coast ranges where grain-farming is impracticable, and where the moisture from the sea keeps green the grass and herbage the summer through.

In the early history of the valley wheat was the only cereal raised, and was used alike for food and for currency, a wheat certificate, like a silver certificate of to-day, being a legal tender, and the only money in circulation before the discovery of gold. The principal crops still are wheat, oats, and barley, in the order named. The wheat crop for 1890 in this valley is estimated at two hundred and fifty thousand tons, most of which goes to foreign parts. This large traffic in wheat began about 1870, when the first twenty miles of the Oregon and California Railroad were completed. The same ships which brought out the rails from England took back cargoes of Oregon wheat. Previous to this time farmers had hauled their grain to Portland, or to the other river towns, where it was boated to Portland and thence shipped to San Francisco. For a long time this Oregon product was shipped abroad as California wheat, and from its large size and fine appearance was a credit to the State which exported it. But, see how time makes all things even. Millers have found out that Oregon wheat is rather too soft, and is improved by mixing with California's shrunken grain, and also that California

flour gains by mixing with Oregon wheat. So the dry and the moist climates contribute to each other.

Oregon flour, notwithstanding this prejudice, sells well in foreign markets, and has established itself in the markets of China and Japan, four hundred tons, in 1890, being shipped monthly, the failure of the rice crop opening the way for its introduction, and it is predicted that within another decade the Orient will consume the entire wheat product of the Pacific coast.

Hops are a profitable crop, especially in the coast counties and the rich bottom-lands about the head of the Willamette. Root crops and vegetables are fine and abundant. Potatoes make a good yield, and are excellent in quality. Onions are large, of a mild flavor, and as a crop very profitable. Cabbages are large, and the leaf is tender. All garden products grow thriftily, and are of good quality; and when the season of the annual exhibit arrives, which is in the latter part of September, the farmers are able to make a surprising show. But it is in the spring and early summer that you have cause to criticise the Oregon producer. All the "earlies" on your table came from California, are high in price, and lacking in freshness. Why not force the growth of certain spring edibles, and hasten those of summer by hot-house cultivation?—why, only that the farmers and gardeners are as "conservative" as the capitalists.

The dairies of Oregon do not supply the resident population, notwithstanding this was originally a cattle country. The reason has been pointed out; still the fact remains that the common red clover whose roots go down to a great depth, would endure the drouth of the rainless season, would seed itself, and become green with the first showers of autumn, furnishing an evergreen crop on which to keep milch cows in condition. Most of the hay cut in Oregon is from the natural grasses. Oats are raised for hay, which is fed to horses; but timothy, which would do so much for the dairy interest, is neglected very generally. The farmers are, however, in easy circumstances, and probably care nothing about a tourist's opinion of their methods.

The fruits raised in the Willamette Valley are apples, pears, plums, cherries, and prunes. Peaches grow well in some localities, but, like Indian corn, they prefer the more southern portion of the State. Small fruits are abundant and excellent. Grapes do not

generally do well, except the Concord, which ripens deliciously ; but all the fruits above named are of superior excellence.

The very best land for fruit-raising is that which has grown a forest upon its soil. To clear it costs on an average forty dollars per acre. An orchard near the mouth of the Clackamas is planted to one hundred and twenty-three varieties of apples, fourteen varieties of pears, twelve of plums, five of prunes, three of quinces, and three of grapes, besides the small fruits, and walnuts, butternuts, and almonds.

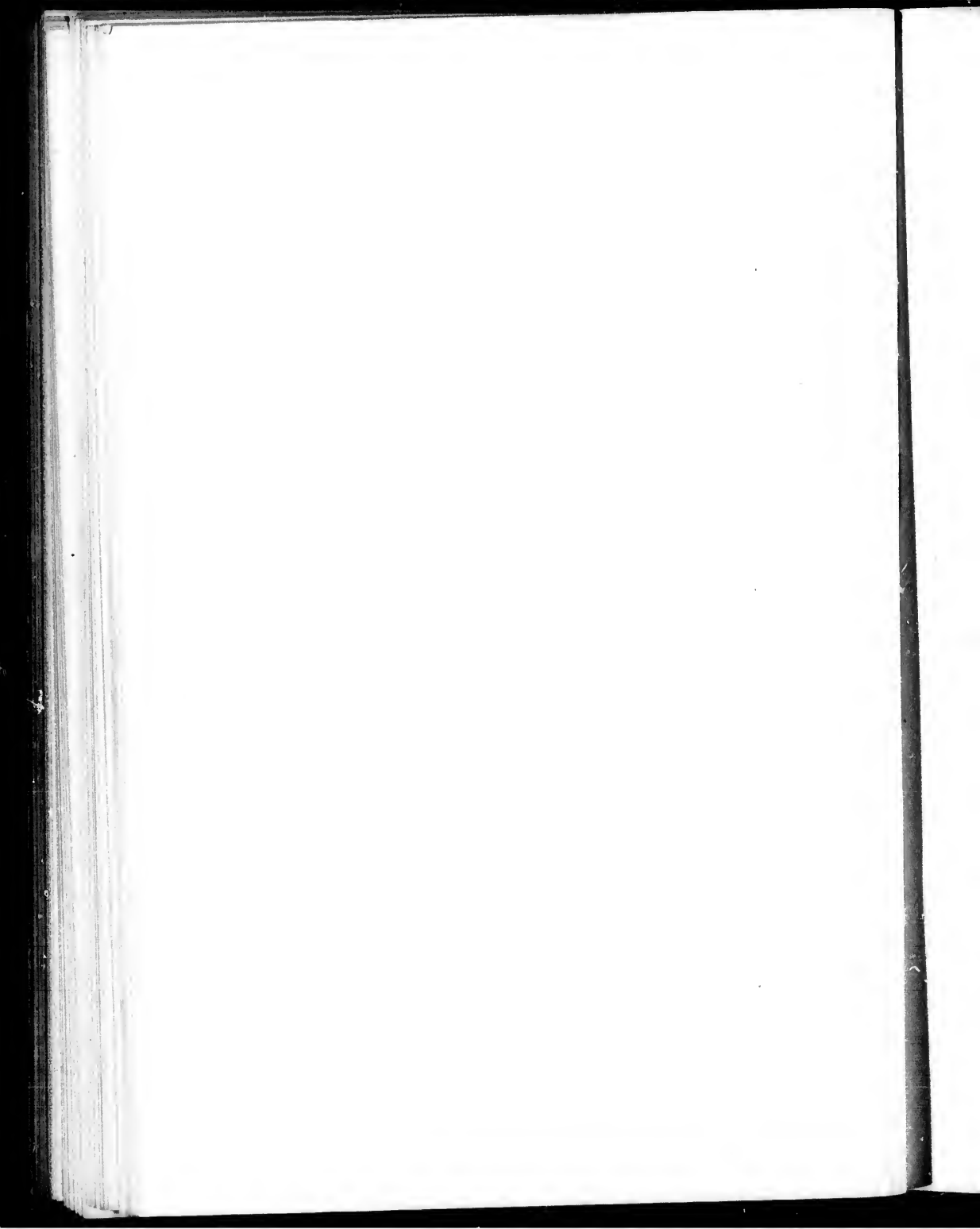
The price of grain-land varies according to location, from five to fifty or even two hundred dollars, but fair farming-lands ten miles away from towns can be purchased at from twenty-five to forty dollars. The foot-hill lands, which are covered with hazel and other brush, and which make good fruit-farms, can be purchased cheaply. There is not any large amount of unsurveyed or government land in this part of the State, and that which remains is in the mountains. The State lands in West Oregon that were immediately available are nearly all sold off, but some pieces can still be found which are either overlooked or in the hands of speculators who do not hold them high. The coming legislature, it is thought, will increase the price of school-land, which it ought to have done years ago. The amount of government land sold in West Oregon during the year just ended was four hundred and ninety-two thousand acres,—two hundred and ninety-two thousand in and bordering on the Wallamet Valley, and two hundred thousand in Southwestern Oregon.

Columbia is the most northerly county of this division of Oregon, and really belongs to the Columbia Valley, as it faces the Columbia River. It is heavily timbered and mountainous, with some rich farming-lands lying along the river and on the farther side of the hills. Its forest is underlaid with coal, iron, and other minerals, which will some day make it one of the most wealthy districts of the State.

South of Columbia is Washington County,—the Tualatin Plains of the pioneers,—which is one of the oldest settled portions of Oregon, and belongs to the wheat-growing lands. Hillsboro', the county-seat, was founded in 1850, by David Hill, one of the executive committee under the provisional government of 1843. The population is about eight hundred.



FOLK COUNTY HILLS.



Forest Grove is the seat of the Pacific University, with a population of about one thousand. The college is under the patronage of the Congregational Church, although it is non-sectarian in its teachings. It was founded in 1848 by Rev. Harvey Clark and Mrs. Tabitha Brown, both of whom gave almost all their worldly possessions and their personal efforts to the work. The names of Marsh, Lyman, Collier, and Condon are associated with its growth. Its grounds and buildings are estimated at fifty thousand dollars; cabinet and apparatus, four thousand dollars; productive funds, eighty-three thousand dollars, with a library of five thousand volumes. The town of Forest Grove is laid out, as its name implies, among the beautiful oak-groves at the base of a spur of the Coast Mountains, half a mile from the Southern Pacific (west-side) Railroad. Cornelius, Dilly, and Gaston are stations along the line of the road in this county, and Greenville is a farming settlement in a superb agricultural district.

Yamhill, or *Che-am-ill*, the Indian word for "bald hills," is next south of Washington. It is one of the earliest-settled and most beautiful parts of Oregon. In fact, the early patent of nobility in this region was to hail from Yamhill. The county-seat is McMinnville, with a population of two thousand two hundred. It is situated on the Yamhill River, and has communication by rail with all the important points on the west side of the valley and with San Francisco.

Lafayette, a pretty place a few miles away, was formerly the county-seat, but lost this distinction through too much "conservatism." Dayton, at the mouth of the Yamhill River, is another pretty town, of five hundred inhabitants and a good trade. Sheridan, the most western point on the Oregonian Railway, is nestled up at the foot of the Coast Range near old Fort Hoskins, and has a population of four hundred. There are eight other small towns in this county, which is celebrated for its yield of grain.

Crossing the beautiful *Che-am-ill* Range, we have a charming view of the country, and see again the familiar peaks of the Cascade Mountains. South of Yamhill we find ourselves among the fertile rolling hills and alluvial valleys of Polk County. Although full of resources in soil, building-stone, timber, cabinet

woods, and minerals, Polk County has few towns of any size. Dallas is the county-seat, with about seven hundred inhabitants. It is situated on the Rickreal (corruption of La Creole) River, nearly opposite Salem, in a charming region.

Concerning names and their origin, there are many absurd conjectures made, quite as ludicrous as the frequent misnomers. I read the other day that Joaquin Miller gave the origin of the name of the Walla Walla tribe to be in the French ejaculation *Voilà, voilà!* Mr. Miller cannot have read Lewis and Clarke with much attention not to know that the Walla Walla tribe existed before any French voyageur dipped paddle in the Columbia. Lewis and Clarke spell the word *Wallawollah*.

The most delightful instance that I remember to have seen of the corruption of names was given by a newspaper correspondent from Colorado. The Spanish name of a river in the southern part of that State is *El Río de los Animas*,—River of Souls. This correspondent, not being acquainted with Spanish particles, says of *Lost Souls*,—and further, that the French fur-traders, learning its meaning, called it *Purgatoire*, or Purgatory River, which the "bull-whacker of the overland trail," in his efforts to master the French, pronounced Picket-wire!

Lying west of Yamhill and Polk is Tillamook County, of which it is said "there is no district of the Northwest so full of possibilities. A magnificent soil, a heavenly climate, and scenery that would delight the hearts of poets and painters are here as they are nowhere else; but its streams and rivers, its roads and its dales, its valleys, glens, and ravines are given over to the empire of loneliness."

I am not authority for this glowing statement, which may be taken *cum salis*, but am ready to believe from collateral evidence that it is the isolation, rather than the presumed ruggedness, of this coast county which has heretofore ranked it lower than its relatives on the hither side of the mountains. It has a sea-coast of sixty miles in extent, and six rivers discharging into the sea, one of which, Tillamook, has a good harbor at its entrance. This bay was named by Lewis and Clarke, who made an excursion to it in the spring of 1806. About one-fourth of this county is occupied as an Indian reservation.

Like other coast counties, Tillamook has been cut off during

a great part of the year by the badness of the road over the mountains, and the uncertainty of the route by sea. But the Astoria and Albany Railroad Company has promised to open up this country. When the road is constructed there will be a market for the lumber, fish, game, fruit, hay, vegetables, dairy products, and coal of this region. It will traverse, so it is said, the valleys of the Miami, Nehalem, and Wilson Rivers, entering the Wallamet Valley near Forest Grove. It is estimated that there are ten million dollars' worth of "stumpage" in Tillamook County. The lumber which will be manufactured there will furnish business for a railroad.

The town of Tillamook, on the Trask River, is the county-seat, with a population of six hundred, and has a saw-mill, bank, church, school-house, court-house, and two newspapers. Bay City is located on Tillamook Bay, at the head of deep-water navigation, about five miles from the sea. Its present population is about two hundred, but its future, I am told, is considered assured. The Bay City Land Company have taken it in charge, and what land companies can do has been demonstrated. "A young man willing to work," going there now, might turn out a millionaire at forty. The experiment is worth trying, and doubtless will be tried.

The valley of the Nehalem River, which is the northern boundary of Tillamook County, is the seat of the Nehalem Co-operative Colony of Western Oregon, an association which is putting in practice Edward Bellamy's socialistic ideas. According to the report of the chief of the department of production of the colony, the experiment is resulting favorably. The colony consists of twenty-five men, six women, and thirty-five children. The society put in three thousand dollars four years ago, and now owns a plant for which they have been offered one hundred and fifty thousand dollars, their property including four thousand acres of land.

The water on the bar at the entrance to Tillamook Bay is from ten to thirteen feet at low tide, with good anchorage inside. When the jetty system has been applied, the channel deepened six or eight feet, and a light-house erected, the entrance will be safe for any vessels except those of the largest size.

A light-house was erected on a rock about a mile from the

coast at Tillamook Head, thirty miles north of the bay, in 1879. This appears to be the wildest spot on the coast. The rock rose one hundred feet above the water, and was only large enough to afford ground room for the workmen to carry on their operations. In the month of October four men were put upon the rock with tools and provisions. Only when the sea was smooth could a boat reach the rock, and when, a few days later, five men attempted to land there, the foreman was drowned. The eight remaining men suffered all the discomforts of shipwrecked sailors, their only shelter from rain and spray being a heavy canvas tied to ringbolts fastened in the rock. They quarried out a cove and built a cabin in it, which they bolted to the face of the cliff. The next move was to quarry steps from the landing to the top of the rock, having to work a part of the time on a staging hung from the summit. Often the weather would not permit them to work at all, and in January they had a hurricane which dashed the waves to the top of the rock. Their supplies were washed away, and they expected to follow, but were so fortunate as to outlive the buffeting their cabin received from the elements. It was sixteen days before their situation could be made known to persons on shore. A line, fastened to the top of the rock and cast loose, was picked up by a ship, and supplies were transferred from the ship's mast to the rock. By May the quarrymen had cut down the rock to a height of eighty feet, and made a level place for the light-house. In June the corner-stone was laid, and on every fair day a load of hewn material was taken out to the rock, and the building, fifty feet square, constructed, in which were rooms for the keeper of the light, with a room for the fog-signal machinery. The tower was raised forty-eight feet, placing the lantern one hundred and thirty-six feet above the sea-level, and in January, 1881, the light was put in operation. One month before a ship had gone ashore, and twenty lives been lost within a mile of the light-house. In some winter storms the waves have tossed boulders as large as cannon-balls over the top of the tower.

The coast of Oregon in a "sou'wester" is extremely inhospitable. In summer it is much resorted to for pleasure, and has been so from the time of the earliest settlement in the Wallamet Valley to the present. The sea-beach at Tillamook, or the

mouth of Salmon River, in Polk County, was a favorite resort for the people of the central portion of the valley. To come here in July, camp out two or three weeks, fish, ride, hunt, and eat "rock-oysters" and blackberries, was thought to be a sanitary as well as a recreative measure. The "rock-oyster," so called because it is embedded in sandstone rock, has to be released from captivity by hard blows with a hammer. When extricated, it is pear-shaped, with the impression of a scalloped shell on the broad base of the soft shell which encloses it. At the small end, where the stem of a pear would be, is a foot or feeler projecting, not only out of the shell, but reaching out through an air-hole in the stem, and probably used to secure food. They are never found above tide-water, and are common, I think, to the California coast as well, as I have seen them of all sizes at Santa Cruz.

Crossing the plains gave, I fancy, a habit of out-door life to the early Oregonians which their children have inherited. To "go camping" every summer is their delight, and they cling to the primitive custom of camp-meetings,—*"basket meetings"* they are called. That "the groves were God's first temples" seems natural enough in "the continuous woods where rolls the Oregon." The devotional spirit comes more easily and quickly, and with more power, in immediate contact with Nature, than when coaxed and stimulated into exercise by the appliances of art. In the age when architecture was really and truly an art, this truth was seized upon; and those grand cathedrals which still remain the glory of Europe, in their pointed roofs, fretted arches, and long colonnades, their deep shadows, and windows of colored glass, staining the light they transmitted to the colors of Nature's choicest hues, were intended to express that solemn and subtle sense of beauty, which, in the presence of great Nature, lifts the heart above and away from mean or trivial considerations.

The people on the east side of the valley who do not go to the sea-coast find no lack of delightful summer camps among the foot-hills of the Cascade Mountains. The eastern half of Marion County is a natural park, where green hills overtopped by snow-peaks, solemn forest depths, mountain gorges, precipitous cliffs, lakes, and cataracts, alternating with smiling vales, may

be reached in a few hours of travel. Silver Creek Falls, near Silverton, is a noted resort of the Salem people. The creek drops off a projecting shelf of rock one hundred and eighty feet in height, being dashed into a white cloud of spray. The visitor may stand behind this misty veil and look through a cloud of rainbows. On another branch of the stream, at no great distance, is a similar cataract. There are mineral springs in Marion and Linn Counties, chiefly soda, which are fitted up with conveniences for invalid visitors; but Oregon has not yet attempted a fashionable watering-place.

Benton County, next south of Polk and Tillamook, extends from the river to the sea, being prairie land in the eastern end, and having rolling, mountain, and coast lands to the west, giving it adaptability to all kinds of farming, dairying, and wool-growing, and facilities for manufactures of various kinds. The Oregon Pacific traverses it, and it has seaports of its own at Yaquina and Alseya Bays. The Alseya River rises in Mary's Peak near Corvallis, and runs west to the ocean. The Yaquina River flows into the bay of that name.

Lane County, the largest in the Wallamet Valley, extending from the Cascade Range to the sea coast, combines rare agricultural and manufacturing opportunities. It embraces within its limits the three forks of the Wallamet, besides that west branch bearing the *sobriquet* of Long Tom, and contains thousands of acres of either grain, pasture, or timbered lands, with abundance of water-power,—in fact the resources of a State more than twice as large as Rhode Island. To the eye Lane County presents a diversity of surface which is very attractive,—prairies that from level become undulating; hills that from long swells, scantily wooded, rise gradually into high mountains with crowns of evergreen forest, with pretty little valleys stretching along the numerous streams.

The climate in this portion of the Wallamet Valley is rather drier than at the north end. The elevation above the Columbia is four hundred feet. It is a beautiful sight to behold the luxuriant wheat-fields about the last of June, just before the grain begins to ripen, and when the elegant *Lilium Washingtonium*—Oregon's emblematic flower—stands head and shoulders above the nodding stalks, scenting all the air with its fragrance.

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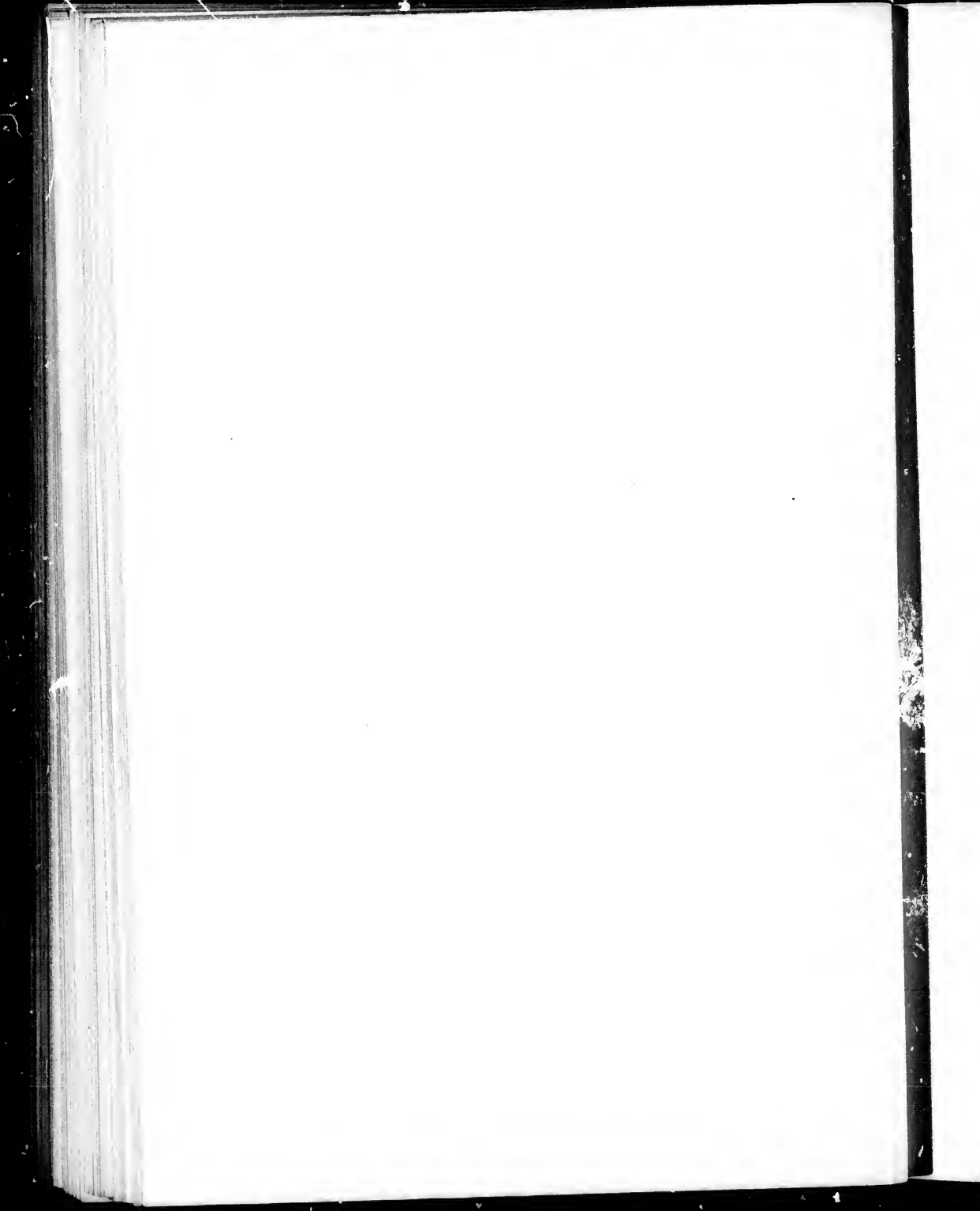
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OREGON CITY.

See page 103.





The entire area of the Wallamet Valley has almost no waste land in it, and most of it is under improvement, although not by any means all well cultivated. The old donation law, which gave so much land to actual settlers, operated to prevent close neighborhood and consequent improvement, with good farming, school privileges, and roads kept in repair. The influx of population within a few years has changed the old order of things to a considerable extent, but not yet thoroughly.

People are beginning to understand that a few acres well tilled are better than many left in neglect. Fruit-farming on from five to forty acres is coming into fashion, to the benefit of all concerned. It is said that five acres of cleared timber-land will support a family in comfort. Until recently Oregon made no attempt to raise fruit for export, except apples to California. This year choice apples were shipped to England, and pears, plums, and peaches to Chicago. Many prune orchards are being set out, this fruit being most profitable for export in a dried state.

Before closing my remarks on the western portion of Oregon I will subdue my dread of tables sufficiently to present one giving the comparative condition of the several counties at the commencement of 1890, including also Southern Oregon.

	Acres of Improved Land.	Value of Land.	Value of Town Lots.	Value of Farm Animals.	Gross Valuation of all Property.	Indebtedness.	Exemption.	Tax Equalized by County Board.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Benton . . .	322,997	2,188,749	551,492	393,097	4,894,000	377,861	231,826	3,765,290
Clackamas . .	361,556	2,241,418	506,970	309,913	4,544,258	1,375,011	354,777	2,842,469
Clatsop . . .	123,967	1,995,777	2,591,047	217,209	7,002,483	1,010,589	74,928	4,101,328
Columbia . . .	219,567	627,360	37,580	179,915	1,249,897	168,046	131,137	850,654
Coos	291,908	1,292,892	335,633	243,884	2,615,875	389,001	219,549	1,976,705
Curry	98,350	331,270	12,155	125,543	663,777	107,653	64,775	489,949
Douglas . . .	479,317	179,445	212,185	489,205	4,208,975	1,128,655	208,610	2,781,710
Jackson . . .	192,374	1,152,693	222,441	318,761	3,235,347	686,971	271,768	2,254,557
Josephine . .	76,819	393,130	139,620	112,231	1,238,665	216,840	105,574	916,251
Lane	466,266	2,783,981	926,867	606,943	6,609,577	1,292,192	515,062	4,802,323
Linn	463,056	4,736,421	908,463	600,132	7,897,211	1,791,357	465,349	5,629,813
Marion	396,637	4,413,380	1,488,948	579,038	9,209,269	2,370,529	521,311	6,317,429
Multnomah . .	158,402	6,571,840	16,638,970	178,185	40,099,000	10,170,509	213,770	29,684,670
Polk	235,275	1,874,000	50,790	321,700	3,937,689	1,017,250	253,925	2,666,514
Tillamook . .	99,011	485,094	30,845	112,153	840,351	163,167	95,501	583,593
Washington . .	259,562	2,984,615	236,955	366,595	4,890,130	1,217,025	382,585	3,290,570
Yamhill . . .	1,841,121	2,640,285	99,845	431,277	6,122,014	1,719,987	357,206	3,972,871

The amount of mortgages recorded against property in Multnomah County is \$3,626,730; Benton, \$202,438; Clackamas, \$423,076; Marion, \$939,403, and Polk, \$294,164.

CHAPTER X.

WHAT I SAW IN SOUTHERN OREGON.

THE southern division of Western Oregon is separated from the Wallamet Valley by a range of low mountains known as the Calapooyas. Crossing this divide, we enter the Umpqua Valley, or series of valleys, constituting Douglas County, named after Stephen A. Douglas, and extending from the Cascade Range, in the direction of the Umpqua River, to the ocean, containing an extent of territory greater than any county of its age in the State, notwithstanding its boundaries have several times been altered. It covers an area of four thousand square miles.

It was a clear, sharp, October morning, when I first left Eugene to go down into Southern Oregon. As the stage rattled out of town in the direction of the Umpqua, I took a last, lingering look at the fair, level valley we were leaving; at the encircling hills of russet-color, dotted with bits of green, in groups of oaks or pines; of Spencer's Butte, with its sharp, dark-tinted cone; and of the blue Cascades, now purpling under the morning sunrise. From the most distant mountains, light-gray mists were rising; in the middle distance was a purple interval; on the nearer hills, rich, yellow sunlight. The orb of day was not yet high enough to shine on the hither side of the peaks behind which he was mounting. They stood in their own shadow, and let his slant beams bridge the valleys between their royal heights, until they rested on the humbler foot-hills among which we were wending our way, and touched with a golden radiance the yellow leaves of the maples or silvered the ripples in the Wallamet water.

Such gorgeousness of color never shone, out of the tropics, as the vine-maple, ash, and white-maple display, along the streams in this part of Oregon. I had thought them bright, glowing,

radiant, on the Columbia and Lower Wallamet; but nowhere had I found them so brilliant as at the head of the Wallamet Valley. And, as we afterwards ascertained, this is nearly the southern limit of the beautiful vine-maple. It was almost in vain that we looked for its scarlet-flaming thickets fifty miles farther south, and at a hundred miles it had disappeared from the landscape altogether.

The Umpqua Valley, which I could imagine in its June freshness, was now sere with the long drought of a rainless summer. The road, however, for some distance, led through the Calapooya Mountains, and the gorge of a creek, where the thick woods, in places, quite excluded the sun,—almost the light of day. Bright as the weather was, and dry as the autumn had been, there was shadow, coolness, and moisture here, among the thick-standing, giant trees, the underwood, and the ferns and mosses. A very pleasant ride on such a morning, but one which might be exceedingly uncomfortable in the rainy season, though never an uninteresting one.

Dry as was the valley beyond, it was still beautiful, one so soon learns to admire the soft coloring of these arid countries,—the pale russet hues of the valleys, the neutral tints in rocks and fences, the quiet dark-green of the forests, and the clear, pale, unclouded blue of the heavens. The expression of these landscapes is that of soft repose. Nature herself seems resting, and it is no reproach to man that he, too, forgets to work, and only dreams. But the men of this period are not dreamers. Even in the sacredest haunts of Nature, they plot business and talk railroad! I certainly *thought* railroad, as my eyes wandered over this beautiful, but isolated valley. But that was in a time now half forgotten, so rapidly do conditions change in this Northwest empire.

No longer without connection with the outside world, the Umpqua Valley is emerging from its former condition of a grazing and wool-growing region, and commencing to develop its abundant resources. Unlike the Wallamet, it has no great extent of level prairie-land bordering the river from which it takes its name, but is a rolling country, a perfect jumble of small valleys and intervening ridges; the valleys prairies, and the hills wooded with fir on top, but generally bare, or dotted with

oak, on their long grassy slopes. It is a sort of country where a man may seem to have a little world to himself; owning mountains, hills, plains, and water-courses, or at least springs of water, and neither overlooked by nor at any great distance from a neighbor.

Douglas County, extending from the Cascade Mountains to the Pacific Ocean, with a seaport of its own, is in area more like a State than a simple division of one. Its climate differs from that of the Wallamet as much as, by reason of its more southern latitude, greater elevation, and mingling of sea-breeze with mountain air, it might be expected to. The result is salubrity and productiveness. Its prairies are adapted to wheat and all cereals; its creek-bottoms to Indian corn, melons, and vegetables; its foot-hills to fruit-raising; and its uplands to grazing.

The same general variety of timber grows here as in the Wallamet Valley, and a few kinds in addition. The evergreen myrtle is a fine cabinet wood not found in Northern Oregon; the wild plum and wild grape also grow here; and the splendid *Rhododendron maximum* is a tall shrub, bearing a wealth of deep rose-colored clusters of great beauty. The botany of the country is very rich. Game abounds in the mountains, fish in the streams. I saw, in October, apple- and pear-trees with a new set of blossoms, some of the fruit having grown as large as a gooseberry.

In considering Douglas County, it must be taken into account that the valleys are separated from the most western portion by the Coast Range, and that the mountains extend within a distance of forty or fifty miles of the sea. The passage of the river through the mountains is a turbulent one, and the scenery highly romantic and alpine in its character; therefore the previous remarks on agricultural possibilities do not apply equally to this portion of the county. But taken altogether its resources are numerous, including fruit-raising, dairying, agriculture, stock-raising, wool-growing, lumbering, gold-mining, coal, oil, limestone, marble, sandstone, salt-springs, sulphur- and soda-springs, salmon- and oyster-fishing, and the last discovery is natural-gas. In 1880 Douglas County shipped, it is said, one million pounds of wool, and sold twenty-seven thousand sheep to Nevada farmers. The population claimed is between thirteen thousand and fourteen thousand.

The first town deserving any notice from the tourist is Drain, situated just where the railroad emerges from the Pass Creek cañon through the Calapooya Mountains, joining Elk Creek, a branch of the Umpqua River. This place, founded twelve or fifteen years ago by Mr. Drain, an old resident of the county, and a whilom State legislator, was for a long time only a station where passengers for Scottsburg, on the west side of the Coast Range, took stage for the rough but enjoyable journey across the mountains.

And here I cannot refrain from saying that I think travel suffers greatly from the levelling influence of railroads. There is nothing in the traveller's rapid transit by the straightest route, through the lowest passes, across the outskirts of nature and of cities, confined to a seat which you may not have chosen, and in propinquity with (perhaps) very undesirable fellow-travelers, eating unwholesome, and sleeping uncomfortably, to compensate one for liberty to choose his route, to breathe unpolluted air, to "take his ease in his inn" when he chooses, sleeping and eating in comfort. It is all very well for the demands of commerce to be satisfied in this way, but travel—why, one does not travel: he is snatched and tossed from place to place without having enjoyed one of the foremost purposes of travel, which is to gain health, pleasure, and instruction. Railroads are great civilizers; but they also need to be civilized in some directions.

The ride from Drain to Scottsburg furnishes all the delights to be gathered from a magnificent forest, alpine heights, awful declivities, glimpses of a rapid river dashing itself over rocky obstructions, the balsamic odors of the woods, pure stimulating air, social converse, an hour for your dinner, and a friendly inn at your journey's end. We are promised that all this, or much of it, is to be changed in a year or two by a railroad from Drain to the ocean, by a new route, and with new towns along it. Glasgow and Reedville are two which are not yet to be found on the maps.

Scottsburg, situated at the head of tide-water, was named for Levi Scott, its founder, in 1850. A military road once connected it with the interior, but the great flood of 1861-62 washed away the road and a large part of Scottsburg, since which it has steadily declined. An attempt was made to render the river

navigable, and a light-draught steamer was built to run up to Roseburg, but after one trip the enterprise was abandoned. The town is situated in a narrow defile on the north bank of the river, while on the south side the mountains rise abruptly to a great height, and the whole aspect of the place is as Swiss as anything could be in America.

Eighteen miles below Scottsburg is Gardiner, named for Captain Gardiner of the "Bostonian," a vessel wrecked at the entrance of the river in 1850. It was founded by a San Francisco company in 1851. Of that company, two were afterwards governors of Oregon,—A. C. Gibbs and S. F. Chadwick. Gardiner was the seat of a customs-collection office for several years, but is now simply a milling-town. A salmon-cannery on the south bank of the river puts up the late run of fish in the Umpqua. From Gardiner to the sea, about eight miles, the country is a sandy plain. During the Indian wars in Southern Oregon, Fort Umpqua was established on the north bank, between Gardiner and the ocean, but was long ago abandoned. Here General Auger was stationed during his ante-bellum experience.

The mouth of the Umpqua has not a very good reputation as a harbor, many vessels having been wrecked in this vicinity, and only those in the lumber trade go in and out. The government in the days of General Lane's delegateship erected a light-house at the entrance of the river, but upon a sandy foundation, and, when the rains came and the floods fell and the winds beat upon it, it fell, and has never been replaced. And here it may be justly affirmed that the government has been remiss; for there are but four light-houses on the Oregon coast south of the Columbia River,—namely, at Tillamook Head; Cape Foulweather, near Yaquina Bay; Cape Arago, near Coos Bay; and at Cape Blanco, near Port Oxford.

The capacity of vessels entering the Umpqua for lumber is from six hundred and twenty-five to seventeen hundred and fifty tons, and their draught twelve to fifteen feet. The exports from Umpqua River for the year last past amounted to 28,926.8 tons, consisting chiefly of lumber and laths, the remainder being in grain, wool, leather (from a tannery at Scottsburg), hides and furs, and dairy products. The import in machinery and general merchandise was fifteen hundred tons.

The Siuslaw (pronounced Si-use-law) River, which separates Douglas from Lane County, has an entrance which might be improved, with a good harbor inside. The present channel is tortuous and shifting, with six feet at low water, but it is possible to carry a ten-foot depth nearly to the head of tide, a distance of twenty miles, and it will probably be so improved in the near future. There are large bodies of excellent timber on this bay which would then be available. A project is already on foot to build a railroad to the Wallamet Valley whenever the government makes desired improvement of the bar and channel. There is reported a fine country on the upper Siuslaw.

The river scenery from Gardiner to Scottsburg strongly resembles that of the Columbia, though on a much smaller scale. The river is in places very shallow, being almost quite interrupted by bars of rock, which engineering is busy removing.

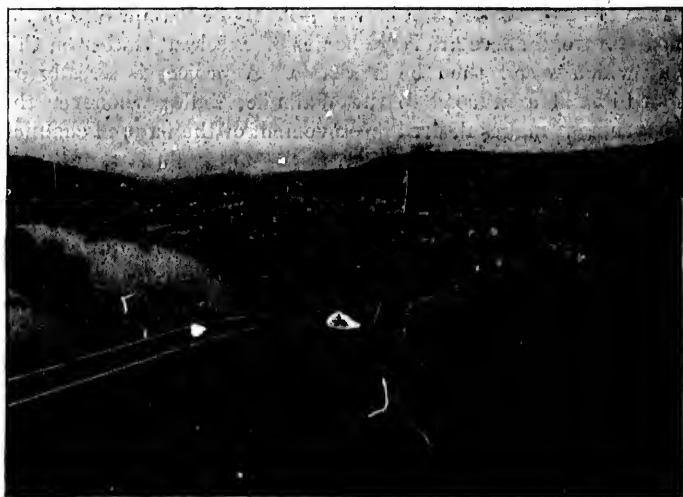
Returning to Drain's we find just beyond here Mount Yoncalla (Eagle-bird, in the Indian tongue), a point of interest. It was for nearly forty years the home of the grandest of those "men of destiny," as he himself named them, who, in 1843, opened a road for wagons from the Missouri to the Wallamet Valley,—Jesse Applegate, "the sage of Yoncalla." The mansion where he dispensed wisdom and a free hospitality is given up to strangers, and the places that knew him shall know him no more.

Douglas County has two Methodist academies, one at Oakland, on a branch of the Umpqua about fifteen miles south of Yoncalla, and another at Wilbur, ten miles farther south. Both are charming locations. Oakland is Arcadian in beauty, its groves and natural park-like scenery being ideally "academic."

The North Fork of the Umpqua is to be dammed at Winchester, a short distance from Oakland, and a large woollen-mill to be erected there, which it is expected will be followed by other manfactories.

Roseburg, originally Deer Creek, the present county-seat of Douglas, and named after its founder, Aaron Rose, has a population of two thousand five hundred. It is the gem of the Umpqua Valley, resting upon the river Umpqua, where it is a fine large stream bounded by beautiful park-like oak openings. Nothing could be finer than the sweep of the river as it comes

from the south, the railroad on one side, and teeming gardens and attractive houses on the other. A handsome bridge spans it in the centre of the town. Roseburg, like Drain, is to have a railroad to the sea.



ROSEBURG.

Proceeding south through a charming country to the Myrtle Creek Hills, the scenery at this place strongly suggests Harper's Ferry, without its costly improvements. Soon we enter the cañon of Cow Creek, a wild and wonderful pass, rendered historic in the winter of 1889-90 by the blockade of the Southern Pacific Railroad, which lasted for more than a month. This remarkable obstruction to travel was occasioned by a combination of causes, but primarily by the construction of the road itself through the cañon, and the cutting away the foundation, so to speak, of the steep hill-side where it occurred.

Cow Creek is a pure mountain stream, from fifty to a hundred feet in width, not very deep at its usual stage, but very crooked, the rugged points around which it makes its sharp turns necessitating frequent tunnels. As the cañon is narrow, the road had to be cut along the mountain-side at a height sufficient to

insure it from inundation in seasons of freshet. The pass is forty-five miles in length, with a fall of from seventy to one hundred and twenty feet to the mile. Even in the best of order, with the finest weather, one is conscious of a feeling of insecurity as one side of the train looks down on nothing nearer than the river-bed, and the other seems ever just missing the projecting rocks. Now you dash across a bridge, and anon you dart into a tunnel.

But last winter (I think it was in February) the thing happened,—not the one we were looking for,—it is always the unexpected which happens,—something which might have been the most appalling accident in railway history occurred. More than a hundred acres of earth, softened and loosened, with its lower side cut away, rushed down upon the railroad, completely burying a section of track, obliterating a tunnel, and forcing itself one hundred and fifty feet up the opposite mountain, effectually damming the river between. Rails twisted and doubled up, with ties, tools, wagons, bridges, and shops, were carried up the mountain-side. The river being dammed formed a lake above from twenty to one hundred and fifty feet in depth, which, however, soon forced a passage for itself, when the accumulated waters, in a wall seventy-five feet high, roared down the rocky chasm with race-horse speed, carrying trees, earth, and stones upon their hissing crest. A lake a mile and a half in length and sixty feet deep still remains as a memento of this startling occurrence. Not ten minutes before the slide plunged down, a freight-train passed the spot. Fancy runs on and asks, What if a passenger-train had been hurled across the river, or had been imprisoned in the tunnel? Imagine archæologists a thousand years hence, when people travel with wings, and railways are a thing of the past, exploring and coming upon such an imprisoned train, or even upon the buried tunnel,—what speculations! I used to think this when my eyes beheld, painted all along the rocky cuts of the Hudson River Railroad, the cabalistic letters I. X. L.: what would the scientists say in the year 5000, when cosmic dust had buried New York and its surroundings out of sight, about the meaning of these characters? The railroad has been rebuilt for a long distance on the opposite side of the river.

From Glendale, at the south end of Cow Creek Cañon, we travel south, past the historic localities of Wolf, Leland, and Jump-off-Joe Creeks, scenes of struggle between the aboriginal and the imported inhabitants of the country in "the fifties;" past the Lucky Queen mining-camp, between the last two streams, to Grant's Pass, so named from an opening in the Coast Range said to have been occupied at some time by Captain—afterwards General—Grant.

This town is in Josephine County, situated on Roguo River, and is a creation of the Oregon and California Railroad. In 1883 it contained a single habitation—Dimmick's—on the old road from Portland to Sacramento. In that year it was laid out in town lots by some far-seeing speculator, and proved so good a location that to-day it is the seat of government of Josephine County, with a population of three thousand, and growing industries, chiefly manufactures in wood, this being the centre of the sugar-pine district. There are twenty saw-mills within a radius of as many miles, and in the town are sash-, door-, and shingle-factories, breweries, a broom- and a paint-factory. The railroad also has its car-shops and round-house here; and among the improvements under way are an iron bridge over the river, an electric-light plant, a water-works system, and several substantial brick blocks. A railroad is already projected from here to Crescent City, California, eighty-seven miles, and thence down the coast to Eureka in that State. Such a road would make this a distributing point for Southern Oregon, and would greatly reduce the high freight rates which have heretofore prevailed in this section of Oregon. There were shipped from here over the Southern Pacific in 1889, 100 car-loads of choice watermelons, 73 of cantaloupes, 82 of sweet potatoes, 87 of peaches, 830 of apples, 11 of nectarines, 19 of grapes, 18,000 pounds of almonds, 32,000 pounds of prunes, 48 car-loads of hops, 36 of broom-corn, 113 of gold-quartz worth sixty-five dollars per ton, \$285,000 worth of gold-dust, and 1878 car-loads of sugar-pine lumber and manufactured wood-work. The shipments extended north to Seattle, and south to Los Angeles. Land is not yet held high in this county, nor indeed in any part of Southern Oregon; and there is a good deal still open to entry, and a vast amount of railroad lands, ranging from two dollars

and fifty cents to twenty dollars per acre, which is yet to be settled. This tells the story of the resources of this part of Oregon as far as developed. No wheat or cereals,—it would cost too much to ship them to the sea-board; no minerals except gold quartz,—they are not mined or manufactured for a similar reason. Nothing against the soil or climate, but everything against the transportation, or the lack of it. It is time that Southern Oregon sought shorter and cheaper routes to markets.

I was shown a potato in Rogue River Valley which weighed seven pounds! It was one of a lot of twenty whose aggregate weight was one hundred and one pounds, and the crop of which they were a part matured without either rain or irrigation, on land that had been planted to potatoes for twenty-eight consecutive years. The owner expected forty thousand pounds from one acre. This was near Grant's Pass. Another farmer near Ashland reported thirty thousand pounds of potatoes to the acre. None of my readers are likely to believe this, but it is true.

The Oregon and California, or, as it is now called, the Southern Pacific Railroad, from Glendale to Grant's Pass runs just inside the eastern boundary-line of Josephine County, a large portion of which is still unsurveyed. It is here that it strikes Rogue or Rascal River, so named by the fur-hunters of the Hudson's Bay Company, who had, as well as later travellers, many a skirmish to effect a crossing, the Indians lying in wait for them at the ford. The name, applied to the natives and the stream, became attached to the valley.

Rogue River rises in the Cascade Mountains and courses southwest and west to Grant's Pass, where it runs northwest, and again southwest, receiving the Illinois River, which drains Josephine County, about twenty miles from the sea. Rogue River Valley, embracing all the country drained by that river and its numerous tributaries, is an aggregation of smaller valleys, divided by rolling hills, the whole encircled by elevated mountain ranges. The river is not navigable for any great distance from the sea, but abounds in rapids and falls, furnishing abundant power for manufacturing purposes. It is a stream of unsurpassed beauty, with water as blue as the sky, and banks overhung in some places with shaggy cliffs, and in others with thickets of wild grape-vines and blossoming shrubs.

It is not claimed that there is as great an amount of rich alluvial soil in this section of Oregon as in the valleys north of it. It is rather more elevated, drier, and on the whole more adapted to grazing than to the growth of cereals. Still, there is enough of rich land to supply its own population, however dense; and for fruit-growing no better soil need be looked for. A sort of compromise between the dryness of California and the moisture of Northern Oregon and Washington,—warmer than the latter, from its more southern latitude, yet not too warm, by reason of its altitude,—the climate of this valley renders it most desirable. Midway between San Francisco Bay and the Columbia River, what with its own fruitfulness, and the productions of the Wallamet and Sacramento Valleys on either hand, within a few hours by railway carriage, the markets of the Rogue River Valley can be freshly supplied with both temperate and semi-tropical luxuries.

The grape, peach, apricot, and nectarine, which are cultivated with difficulty in the Wallamet Valley, thrive excellently in this more high and southern location. The creek-bottoms produce Indian corn, tobacco, and vegetables equally well; and the more elevated plateaux produce wheat of excellent quality and large quantity, where they have been cultivated: still, as before stated, this valley is commonly understood to be a stock-raising, fruit, and wool-growing country,—perhaps because that kind of farming is at once easy and lucrative, and because so good a market for fruit, beef, mutton, bacon, and dairy products has always existed in the mines of this valley and California.

Rogue River Valley during a period of about twelve years was the scene of active and profitable placer-mining, after which for an equal term the mines were abandoned to the Chinese; but in later years mining has revived, and several companies are realizing good returns from investments in mining ditches and quartz leads. The other minerals known to exist in this region are copper, cinnabar, lead, iron, coal, granite, limestone, kaolin, and marble. The latter is of very fine quality, white, exceedingly hard, and translucent.

Like every part of Oregon, this valley has its mineral springs, its trout-streams, game, and abundance of pure soft water. No local causes of disease exist here, and it is hard to conceive of a

country more naturally beautiful and agreeable than this. The forest is confined to the mountains and hill-sides, and is not so dense as towards the Columbia.

Rogue River Valley is divided into three counties,—Jackson, Josephine, and Curry. Jackson County was created January 12, 1852, and Josephine was cut off from it in January, 1856. The name of the former does not refer, as one might suppose, to the deity of good Democrats, but to Jackson the discoverer of the mines on Jackson Creek, after whom Jacksonville, the county-seat, was also named.

Jackson was the owner of a pack-train which transported provisions to the mines, who being encamped at this place made himself and the locality suddenly famous by his discovery. For many years the town enjoyed a good trade; but Jacksonville lost its opportunity when it permitted the Oregon and California Railroad to pass by on the other side. Medford, a few miles to the northeast, is on the railroad, and takes away the trade that formerly went to Jacksonville, which is now trying to recover it by building a branch road to Medford, which has about two thousand inhabitants.

Ashland, one of the prettiest towns in Oregon, has, on the contrary, profited by being upon the line of communication between two great States, and is prosperous. It was settled in 1852 by J. A. Cardwell, E. Emery, and David Hurley, who, being from Ashland, Ohio, named the place after their old home. It is located where Stuart Creek comes dancing down from the foot-hills of the Cascades, offering abundance of water-power, and where the view over the whole of Rogue River Valley is delightful. Its manufactures are lumber, flour, and woollen goods.

The population of Ashland is about three thousand, and there are over a dozen smaller towns in the county, the population of which is fifteen thousand.

Josephine County, named after Josephine Rollins, daughter of the discoverer of gold on the creek also named after her, differs somewhat from Jackson County in being at once more broken and more near the sea, which circumstances modify its climate and its resources. The latter have been chiefly confined to mining products, gold, silver, and copper being found here,

but only gold being profitably mined, on account of the inaccessibility of this portion of Oregon previous to the opening of railroad transportation. For the same reason, and owing also to the shifting nature of the population, agriculture has been neglected. Yet this is a lovely country, of grand mountains and quiet, fertile valleys lying between grassy slopes, with oak groves like old orchards dotting their sides, and open woods of the noble sugar-pine, where the balmy air is laden with the perfume of sweet violets, with abundant wild fruits, and flowers in every sheltered nook. "It is," said a lady to me, "a paradise of beauty, where, if one had one's friends, life would be wholly delightful." Yet it is one of the most sparsely-settled portions of the State, and its whole taxable property is valued at little over one million dollars. Kirbyville, founded in 1852 by one Kirby, a prospector, was formerly the county-seat, but Grant's Pass has superseded it. Besides this, there are eight or ten other mining-camps, the whole population of which is not more than three thousand.

About thirty miles south of Grant's Pass, in the Siskiyou Mountains, are the recently discovered Josephine County Caves. Elijah Davidson, of Williams Creek, was the discoverer, having followed a bear to its lair in the lower of the two caves. They are situated on the steep side of a mountain, and the last ten miles of the thirty are over a narrow trail.

The entrance to either is about eight feet wide, and high enough to admit a man standing upright. From the entrance of the upper cave the floor inclines somewhat, and it soon becomes necessary to descend by a ladder to a passage averaging eight feet in diameter either way, but having many projections and contractions in its course. The first chamber entered has a height of ten feet, and its walls and roof are brilliant with stalactites. The passage from chamber to chamber is often extremely difficult. Pools of water are met with; and many passages remain unexplored, days being required to transverse all that are seen to exist.

The lower cave has no stalactite formations, but is filled with immense rocks piled one upon another, requiring long ladders to surmount. A stream of cold, clear water flows from it, and also a stream of cold air.

The devil is always credited with an interest in remarkable places, which is a direct compliment to his royal nibs; at least so it appears to me. The Josephine Caves are no exception to the rule, but have in the upper one a Devil's Banquet Hall, seventy-five by a hundred and fifty feet, and sixty feet in height. It is decorated with huge rocks suspended from the ceiling appearing ready to fall at a breath; black cavities yawn in the distance; impish shadows haunt unexplored recesses; over the floor are spread rocks great and small; and so, perhaps, after all, it is well enough to resign the proprietorship of so unlovely a place to His Satanic Majesty; especially since there are bright and dazzling chambers, and pools and water-falls, more to our taste in other parts of this wonder-house of nature.

Curry County, named after George L. Curry, who was governor of Oregon when it was organized,—that is, in 1855,—is the coast division of the Rogue River Valley, and, having no transportation, except by pack-train or wagon, over the difficult mountain passes, has, although highly productive, made small progress in population and development. Only a small portion of the county is surveyed. Its valuation is placed at about one million dollars, and its population at not more than two thousand. Lumbering and salmon-packing are its principal industries. Ellensburg was made the county-seat in 1858.

Port Orford is the seaport of Curry County and the whole Rogue River Valley, so far as Oregon is concerned; although Crescent City in California was the actual port in use in early mining times, supplies being carried from that harbor over the mountains to Yreka, and again over the Siskiyou Range into this valley by mule-trains. This picturesque feature of mining life has disappeared, when at the head of a procession of long-eared, neat-footed burden-bearers the "bell-mare" tinkled her silvery commands to her followers as they climbed the rocky steeps or wound through devious mountain defiles. Not infrequently the cloud of dust raised by the train gave information to the dusky foe, and the ambush was prepared where the trail led down a steep grade through a narrow pass, or across a stream that must be forded. There the unlucky muleteers were put to death or to flight and the train confiscated.

When the Pacific Mail Steamship Company used to run

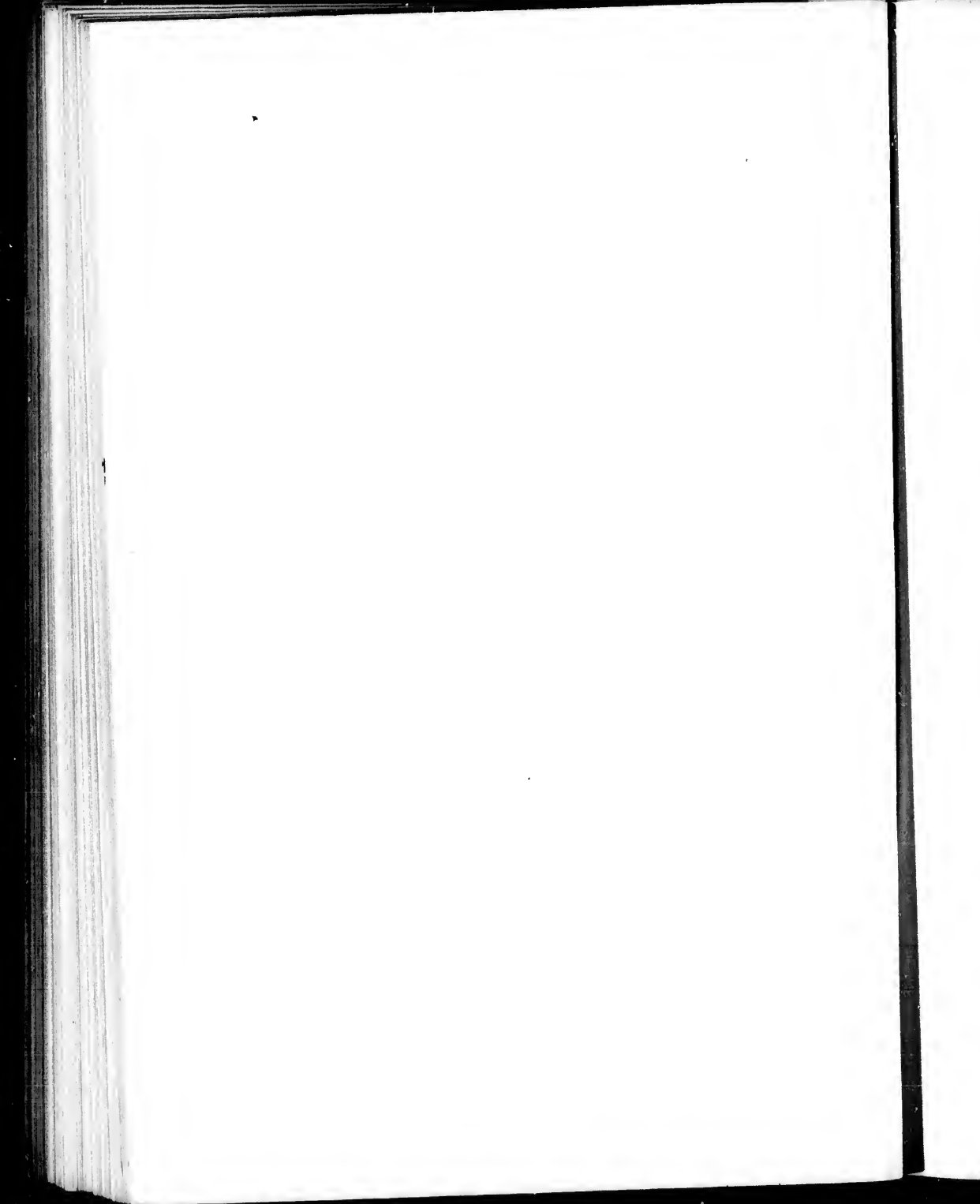
steamers to Portland under their contract with the government, they were required to carry the mail to Gardiner on the Umpqua River, but, one of their steamers being in danger of being lost on the bar, Captain Tichenor was instructed to look for another port on the coast where passengers and mail for Southern Oregon could be safely landed. In June, 1851, he put ashore at Port Orford nine pioneers under the command of J. M. Kirkpatrick, together with arms, tools, and provisions, and proceeded on his voyage, leaving the party to make such improvements as they could.

The Indians gathered near in alarming numbers, and the men fortified themselves on a high rock that sloped to the sea, having dragged up to their fort a four-pound cannon. On the second day a war-dance was held by the natives whose "hearth" was being thus invaded. After working themselves up to a proper degree of courage the warriors advanced on the works, the foremost one endeavoring to wrest a gun from the hands of Kirkpatrick, who instead of giving up his arms seized a firebrand and touched off the cannon, the charge doing execution upon six of the assailants. The Indians sent a shower of arrows among the white men, wounding four of the nine. The skirmish lasted about fifteen minutes, during which six more Indians were killed, when they retreated. The party was then unable to perform the most important part of their duty, which was to explore a road to the interior, and after five days, the enemy appearing to be preparing for another attack, which they were not in a condition to resist, they watched for an opportunity and took to flight under cover of the night and the forest. On the Coquille River, which, with Coos River, they discovered, they were near being confronted by a village of Indians, but avoided them, and were in hiding two days, with only some berries for food. Arrived at the Cowan River, the natives assisted them to cross, and on the eighth day they reached the settlements on the Umpqua.

The "Seagull" on her next trip to Portland called at Port Orford and landed forty men, who, finding the place deserted, and evidences of a struggle manifest, believed the first party to be all killed, and so reported. But the steamer on the return voyage brought thirty recruits from Portland, headed by one



ASHLAND.



T'Vault, a man famous among the pioneers of Oregon. This T'Vault headed a company to explore a road into the Rogue River settlements east of the mountains, and in August they set out; but, becoming discouraged by the hardships of the trip, all but nine of the company returned to Port Orford. The remainder kept on, but finally became lost and entangled in the tropical jungles of the Coast Range, coming at last to the Coquille, which one of the party, who had been in the first flight to the Umpqua, recognized. This showed to them that they were nearing the coast instead of the valley, and determined them to keep on to the Umpqua settlements. While crossing the Coquille they were attacked, and again four of the nine were killed. The remaining five, including T'Vault, reached Umpqua after six days of wandering, subsisting on berries in the woods and mussels on the coast. All were more or less wounded. One Hedden, who had been in the first fight, escaped with slight injury. In running from the furious attack of the Indians the party became separate. A young man named Williams, whom we met at Ashland, while being pursued was shot through by an arrow which was broken off in his abdomen, where it remained four years before it came out, without surgery. The history of Southern Oregon is a nearly endless chronicle of these personal conflicts with the native nobility of the country.

I confess in this public manner that I am not a worshipper of the Indian, and I declare that, even admitting one Alessandro to be possible (which he is not), he would be one adorable character among a thousand devils of his race. Yet there are examples of a rude courage, partaking of the nature of frantic bravery, which one must admire. One of these savage heroes was Rogue River John, a chief of that tribe. After the conquest of the Indians, and their confinement on a reservation in Northern Oregon, he was banished to Alcatraz Island, in San Francisco Bay, for stirring up rebellion among his people. On the way to San Francisco, when the steamship was off Crescent City, he, with his son, attempted to take the ship, with the intention of swimming ashore and regaining their former homes. One or two persons were wounded in the affray, but the chief's son suffered most, receiving a wound in the struggle which caused the loss of a leg. They were put in irons and were captives at Alcatraz

for some time, but finally were permitted to return to the reservation, where the chief died a few years later.

Port Orford has been selected for a harbor of refuge for this part of the coast, and an appropriation of one hundred and fifty thousand dollars has been secured to commence the work. Curry County is well supplied with game and fish. Its splendid cedar forests are worth more than gold-mines to whomsoever will convert them into lumber. Cedars from three to eight feet in diameter and with not a limb on them for a hundred feet grow here. Here sea-fogs keep vegetation forever green, and miasmatic diseases are unknown. The residents of the valleys would like to live upon the coast, were it not for the mountains which divide it from their fertile prairies. Yet it is by these mountains the climate is rendered what it is, —partially confining the fogs and winds to the coast, making this section cool and moist, and the interior warm and dry.

Ellensburg, situated at the mouth of Rogue River, is famous for stirring scenes in the Indian war of 1855-56. It was at the mouth of Rogue River that a camp of volunteers, a company of settlers, and the Indian agent, Ben. Wright, were surprised and massacred. Wright was killed, and his heart cut out and eaten by his Indian wife and her people. The reason given by this unchristianized Ramona for this repast was that her husband had a big (good and brave) heart, and that (on the accepted principle that a part helps a part, as we say when we eat calves' brains), herself and tribe would be made more courageous by it.

There are various myths extant about this same Ben. Wright. By some he is represented as an illiterate, bad man, with a record shocking to civilized sensibilities. It is said he deliberately poisoned a large number of Pit River and Modoc Indians whom he had invited to a council at Modoc or Tule Lake. By others he is spoken of as a sort of Spanish *caballero*, riding a glossy black horse, wearing the fringed buckskin suit, red sash, broad-brimmed hat, and jingling spurs of the *gente de razon* of California. It is said he had handsome features, fine dark eyes, and wore his black hair long. Investigation seems to prove that he was a Philadelphian by birth, of a good family, who was drawn to the Pacific coast by the gold-mines, who dug gold on the Klamath River and about Jacksonville. In 1852 there

was a great slaughter of immigrants by the Indians about Tule Lake, and, a company being raised to go to the assistance of a beleaguered train the handsome and popular Philadelphian was chosen captain. The immigrants were relieved, and the volunteers under Wright patrolled the dangerous part of the road for several weeks until all had passed. Many harrowing incidents were connected with the murder and captivity of women, which stirred the manly blood of Wright and his comrades, and doubtless the quality of their mercy would have been rather strained had it been appealed to. But it was not. The Modocs had laid a trap to catch the volunteers and prevent their getting out of the country, which being discovered, Wright turned the tables on his would-be slayers, and prevented their getting back to their fastnesses in the Lava Beds.

But this had nothing whatever to do with his death a few years later. The government had appointed him to act as its agent with the Chetcoe and other coast tribes, and he was doing all any agent could do for them when they killed him. The settlers who escaped the massacre at the mouth of Rogue River took refuge in a block-house erected a short time before, except a fugitive who escaped to Port Orford, where a corporal's guard of troops were stationed, whom the Port Orford people would not permit to leave had they so wished. Word had to be sent to San Francisco, where troops were arriving on their way to protect the interior of Rogue River Valley. In the month which intervened between the commencement of the siege of the block-house and the arrival of the troops, great privation and suffering were endured, and several lives were lost in making sorties to procure potatoes from a field, or milk from a cow for the starving children.

In the mean time and before the army reached Crescent City, a part of the few inhabitants of that place, commiserating the condition of the Rogue River men, if living, determined to discover their needs, and reinforce them, if possible. They proceeded up the coast as far as Pistol River, where they were attacked by the Pistol Indians and forced to defend themselves in a hastily-constructed log-pen, where Colonel Buchanan found them when he came marching up the same trail, and soundly berated them for meddling in military matters, of

which they knew nothing! It is not singular, everything considered, that Indian philanthropists are so rare among the border people.

The county of Coos, on the coast, is not a part of either the Umpqua or the Rogue River Valleys. It is a basin drained by the Coquille and Coos Rivers, which have many tributaries, and when well developed will prove to be one of the wealthiest divisions of Oregon. Coos is not an Indian name, the natives calling their river Cowes. I have already spoken of the discovery of this region by the fugitives from Port Orford. Cape Arago, at the entrance to the bay at the mouth of Coos River, was named by Spanish navigators, who probably also saw the Coquille, for they described it felicitously, comparing it to the rivers of Aragon for beauty, and also for similarity of the trees and shrubs growing upon its banks.

Soon after the Port Orford affair, in 1852, a small schooner, bound to the Umpqua River, entered Coos Bay by mistake, and remained there for several weeks, looking for the settlements, and in great fear of the Indians. Their plight was discovered by the Umpqua Indians, who informed the inhabitants of Gardiner, when they sent a pilot to bring the voyagers to their intended haven.

In 1853, P. B. Marple, of Jackson County, explored the Coquille Valley, and organized a company of forty men to settle on Coos Bay. Gold-mining on the coast began soon after at Randolph, near the mouth of Coquille, and a seaport town grew up rapidly on Coos Bay, called Empire City, which became the seat of government of Coos County, organized in December, 1853, and is the port of entry for the district of Southern Oregon. It has a small population, while Marshfield, four miles farther up the bay, and founded a little later, by J. C. Tolman, is a place of considerable importance, with a thriving trade. Between the two is the lumbering establishment of North Bend; and on the river, above Marshfield, are the towns of Coos City, Utter City, Coaledo, Sumner, and Fairview.

Coal was very early discovered on Coos Bay, and has been worked continuously for many years, employing a line of steam-vessels to carry it to San Francisco. The quality of some late discoveries in coal is claimed by experts to be of a very high

order. One analysis gives: fixed carbon, 47.23; volatile matter, 42.17; water, 2.30; ash, 8.25; sulphur, .60. Its coking capacity is 54.45. Others were nearly as good, and the quantity is practically inexhaustible.

Coal-mining is the most important industry of this region, lumbering the second, and ship-building the third, the shipyard at North Bend being the largest in the State. Many fine vessels, finished inside with the beautiful cabinet-woods of this section of Southern Oregon, have been launched from this yard, and have assisted to build up the fortunes of their owners and the wealth of the country.

Farming has not been much followed in Coos County, its market being chiefly supplied from California. This condition of agriculture arises from two causes,—namely, the density of the forest about the bay, requiring great labor and expense to remove it and prepare the ground, and the movable character of the people employed by corporations, the majority of the population being of this and the merchant class. Yet five acres of this rich, loamy soil, if farmed to vegetables and small fruits, would support a family in comfort. The mild, moist climate, furnishing feed all the year round, and the amplitude of pasturage offered by unoccupied lands should make this a superior dairy country. Dairying is followed to some extent, but not as it should be. Fruit does well in this region, and fruit, both green and dried, is one of the exports from Coos Bay.

The entrance to this harbor has not been regarded as favorable to commerce, on account of the shifting nature of the sands on the bar, and the insufficient depth of water. Accordingly, Congress was petitioned for aid in removing the obstructions to trade, the cost of the work required being estimated at about two and a half millions, of which two hundred and thirteen thousand seven hundred and fifty-six dollars have been appropriated, and one hundred and ninety-seven thousand four hundred and sixty-five dollars and eighty-one cents expended. This amount has been applied to the construction of a jetty, which, although completed for a distance of only seventeen hundred and sixty-one feet, has sensibly improved the bar, on which water enough is found for vessels drawing over fifteen feet. The work planned, it is expected, will make a good and permanent channel.

The average tonnage of vessels entering Coos Bay has been 300 tons. During the year ending June 30, 1890, the arrivals were 354; the net tonnage of which was 89,188, and the gross tonnage 117,726. The river and bay steamers are twelve in number, and their gross tonnage 740. Five tugs are employed, with a tonnage of 620, gross. The total exports of Coos Bay for the year ending June 30 amounted to 221,329.1 tons, value \$1,992,903; and the imports to 18,000 tons, value \$1,175,600; leaving a balance in favor of the port of \$817,303.

Coos Bay has hitherto been reached only by small sea-going vessels, or by mountain roads, with which the storms of winter dealt severely, leaving them unfit for travel the greater part of the year. The Scottsburg road from Drain's was the one usually taken. At the former place the stage was abandoned for a small steamer to Gardiner, or to the mouth of the river (I took the mail-carrier's small boat from Gardiner to the coast), whence a beach-wagon conveyed passengers twenty miles to the north side of Coos Bay, where they were met by a steamer and taken across to Empire City. The beach ride is wearisome, with the perpetual roll of the broad-tire wheels over the unelastic wet sand, and the constant view of a restless waste of water on one hand, with dry, drifting sand between us and the mountains on the other, varied only with patches of marsh and groups of scraggy pines at intervals.

All this is soon to be changed. Coos Bay is to be reached by rail from Drain's; and as lovely and genial a spot of earth as one could desire is to be made easily accessible. The prodigality with which nature has adorned the hill-sides hereabouts with the elegant rhododendron, the blue spirea, nutmeg, myrtle, and other trees and shrubs famed in the poetry of the Adriatic, was a constant joy to me while I remained here. The pleasure derived from it was like that of coming upon a volume of the odes of Callimachus or a painting by a master in an out-of-the-way place.

One of the immediate results of the changed prospects of Coos Bay is the founding of the town of Glasgow, on a fine site commanding a view of the bay and of the bar at its mouth. A wharf two thousand feet long has been constructed, and extends over a bed of Eastern oysters which were planted there

years ago, and almost forgotten, but which are now of good size. Mills and other improvements are going up at this place.

The Coquille Valley consists of tracts of fertile land on the main river and its branches, aggregating a hundred miles in length by one to three in width. Its population is more agricultural than that on Coos Bay, and has made greater improvements in farms. Coquille City is situated on a bend of the river about twelve miles from the ocean, and is a pretty town of about one thousand inhabitants. Without having a harbor of much consequence, Coquille has maintained for many years a coasting trade in vessels drawing from seven to nine feet. Steamers run from Bandon, at the mouth of the river, to Coquille City, a distance of twenty-three miles, and return, daily. There are about a dozen schooners in the coasting trade, and four river boats in the trade of the Coquille. The exports are chiefly of white-cedar lumber, for which this region is famed. The import of general merchandise last year was three thousand five hundred tons.

The government has made several appropriations for the improvement of Coquille River and bar, by means of jetties at the entrance, and clearing the river of impediments to navigation in the form of rocks and snags. A depth of ten feet at low water has been obtained in the channel, and a greater depth will yet be reached. To secure this result the people have largely contributed, both in money and labor.

Railroad connection with Roseburg is now promised, and lands all along the line, where formerly a single nearly impassable mud road gave outlet to the interior, are being rapidly taken up. In a few years this valley will be known as one of the choicest of many choice sections of Southern Oregon. There are now about twenty settlements in the whole Coos Bay region.

The scenery along the route from Coquille to Roseburg possesses all the charms peculiar to the Coast Mountains, and Enchanted Prairie, the name of one of the valleys on the east side of the range, conveys no sense of bombast to the beholder. The river cuts deeply into the mountains from its source in beautiful Camas Valley, the road approaching the edge of perpendicular cliffs of awe-inspiring height. From Camas, the

Roseburg road soon emerges into the Umpqua Valley, the distance by this route from Coos Bay being about forty miles.

What further remains to be said of Southern Oregon will be found under the specific heads of geology, mineralogy, mining, botany, etc.

CHAPTER XI.

ABOUT OREGON'S INLAND EMPIRE.

THE whole extent of country, lying east of the Cascades in Oregon, consists of immense plateaux, crossed from the northeast to the southwest by the Blue Mountains, from which numerous spurs put out in various directions. The best land in East Oregon lies along near the base of this transverse chain of mountains, and in the valleys of the streams flowing from it on either side, the upper portion of these valleys being invariably the best. All the timber of the country—fir, pine, cedar, spruce, and larch—grows on the high mountain ridges, except the mere fringes of cotton-wood and willow which border the streams. The Blue Mountains constitute a wall between the Columbia River Basin, to the north, and the Klamath Basin to the south; hence all the rivers of East Oregon head in these mountains, and flow into the Columbia and Snake Rivers, only excepting those in the Klamath Basin, which run south and empty into marshy lakes or sinks. Along these rivers and about the lakes there are large tracts of excellent land suitable for farming. Subtracting from the whole area of East Oregon what may be called the valley lands, the remainder is high, rolling prairie, with a considerable portion of waste, volcanic country in the central and western divisions. The country may be considered well watered throughout, as the streams are numerous, and water is to be found by stock at all seasons of the year. Owing, however, to the elevation of the plains above the beds of the principal streams, irrigation cannot be effected over a large portion of it, unless by artesian wells or by conducting water from the mountains. Such are the general features of that portion of Oregon lying east of the Cascade Mountains.

Attention was first drawn to the fertility of East Oregon by the population that rushed to the mines in 1861 and the three years immediately following. It became necessary to provide for the consumption of a large class of persons who dealt only in gold. The high prices they paid, and were willing to pay, for the necessary articles of subsistence, stimulated others to attempt the raising of grain and vegetables. The success which attended their efforts soon led to the taking up and cultivating of all the valley lands in the neighborhood of mines, and finally to experiments with grain-crops on the uplands, where also the farmers met with unexpected success. The nature of the soils on the south side of the Columbia is light, ashen, and often strongly alkaline on the plains, sandy and clay-loam at the base of the mountains, and richly alluvial in the bottoms, where it is often, too, mixed with alkali. It is discovered that on the highest uplands and tops of ridges there is a mixture of clay with loam, which accounts for the manner in which wheat crops endure the natural dryness of the climate in the growing season.

It would be difficult to generalize about East Oregon. The tourist who enters the State by the usually travelled routes would almost certainly receive a bad impression, because the longer railroad lines, in order to shorten their routes, avoid the better sections of the country and run through the worse ones. It is only by taking the branch lines, constructed later, that the traveller learns to reverse his first judgment in regard to this portion of the State. It might be added, it is only by actual experiment that an Eastern farmer acquires confidence in the possibilities of a country so different in appearance from any with which he is acquainted.

All along the Columbia, from The Dalles to the boundary between Oregon and Washington, there is a strip of sandy land, from five to ten miles in width, which is not cultivable,—at least, not without an abundance of water,—and which is a torment to the traveller and a serious trial to the railroad company, whose track it covers with drifts in many places.

For convenience the country may be said to be divided into sandy land, agricultural land, and mountain land, and still there remains the necessity of more special description, and to include desert land. The mountainous portions furnish timber—pine,

fir, spruce, cedar, tamarack, and juniper—for lumber and fuel, and in summer pasturage for cattle and sheep. There are probably half a million sheep in the Blue Mountains every year, from June to November. There are the saw-mills which manufacture lumber, which, with shingles, fencing, and fire-wood, is shipped by railroad or hauled by teams to the prairies. Unlike the mountains of West Oregon, these are traversable almost anywhere, besides affording game, fish, and pure, ice-cold water, features which make them a pleasant retreat in summer from the heat of the open country.

The so-called desert is that high, rocky portion lying along the base of the Blue Mountains in the central part of East Oregon, covered with sage, and blotched with frequent dark piles of basalt, where for miles and miles no water is found. Yet it is a fact that wherever the artemisia grows rankly other vegetation will flourish if water be applied. Water is the one great want of the "deserts" of the Northwest. The scenery of this rugged portion of the State is peculiar. Beginning with this "scabby"—a new word for basaltic out-croppings—land, the country rises into ridges of loosely-piled rock, gray with lichens, and crowned with stunted junipers. Now and then occurs a lake of alkaline waters, but more frequently the thirsty traveller is deceived by the mirage, which is a feature of this high and dry atmosphere, into thinking he sees in the distance what nature calls out for, and hastens towards it only to be disappointed. Beyond all is the mountain mass, in which rise the rivers flowing north through the cañons of such a depth as to preclude the possibility of diverting them to the uses of cultivation. Frost, too, comes early in this elevated region, which the Creator has reserved to keep pure the air we breathe and the thoughts we think.

Everywhere one goes in this middle land, between the Cascade and the Blue Ranges, the impression is received of newness,—I do not mean of men's work, but of God's work. The country is not finished. The soil is still being formed upon the bed-rock of the Columbia Basin, which in some places is yet uncovered. In other localities it is from five to twenty feet deep. Wherever it has such depth it is remarkably productive, for there is no better soil than that formed by the dis-

integration of the basalt and refinement of the other volcanic matter poured out over this country in the distant ages. One may still discover evidences that it was at one time a sea-bed; that later it was ground by monstrous icebergs; and that later still it was overflowed with lava. Here stalked the mammoth beside lakes now dried up, whose sands yet sepulchre his bones, with those of other extinct animals. It is a country full of wonders, which should never be heedlessly passed over, but should be the favorite study-ground of science.

East Oregon contains fifty-eight thousand square miles, and is divided into counties, fourteen in number, which often comprise the valley of a river. Union County, for instance, occupies the Grand Rond Valley, a circular grassy plain, long celebrated for its beauty and fertility. Here, in the early times of overland immigration by wagons, the traveller found food for cattle and rest for himself in these delightful meadows, after the long, exhausting march over the hot, sterile sands of Snake River. This valley is thirty miles in diameter, well watered, and very productive in all the cereals, fruits, and vegetables of the temperate zone. A considerable amount of the land is subject to overflow, which makes it greatly esteemed as grass-producing. Timber is also conveniently near on the encircling mountains, where mills are working up the fir, pine, spruce, and tamarack forest into lumber.

Union City, the county-seat, was settled in 1862 during the mining excitement in East Oregon and Idaho, but is not now as large as it was at that period. La Grande is the principal town, with two thousand inhabitants. It also dates back to the sixties; but when the O. R. and N. Railroad approached to within a mile without touching it, the sleepy old town arose and shook itself, and removed its business houses to the line of the railroad, where its growth finally reunited it to the older portion. There are a dozen saw-mills within a few miles of the town, the lumber being floated down by means of flumes to the shipping points, this method being found to be more economical and safer than driving down the logs to be sawed here, although in some localities this can be done. A part of the car-shops of the O. R. and N. Company have been removed from The Dalles to La Grande. A sash- and door-factory, a creamery, two brick-kilns,

a brewery, and a grain-elevator are among the industrial resources of the place. There were shipped from this point in 1888 one thousand car-loads of lumber and railroad supplies, and one thousand car-loads of live-stock. The mineral region of Baker County is supplied chiefly from this direction.

La Grande has a bank, with a capital of sixty thousand dollars and deposits averaging seventy-five thousand dollars. It has water-works, and an electric-light plant. The public schools are good, and a large brick college building is standing idle for want of an endowment,—the Blue Mountain University,—but the Methodists are about assuming charge. The Union Pacific has completed a branch from La Grande to Elgin, twenty-two miles northeast of here. It is to be extended to Wallowa.

Wallowa County is comprised in the Wallowa Valley, this river being a branch of the Grand Rond River, which bounds the county on the northwest, and having several branches of its own, with small fertile valleys. This region is known as the Tyrol of the Northwest, its average elevation being two thousand five hundred feet, and some of its lesser plateaux reaching four thousand. This is the valley for the possession of which Chief Joseph went upon the war-path in 1877. Its principal town and county-seat is named Joseph, in honor of this chief. It has already put on civilization, and is prepared, with newspaper, hotels, and churches, to utilize its resources, agricultural and mineral, and its abundance of water-power.

Umatilla is another county contained in the valley of that name. The reservation of the Cayuse, Walla Walla, and Umatilla Indians occupies a considerable portion of this county, probably one-third, which altogether has an area of about six thousand square miles. Of the remaining two-thirds, about half is reckoned as agricultural land, and the balance as grazing land of the very best quality. Water is plenty and excellent; but timber, as already indicated, is found only on the mountains. It is bounded on the east by the Blue Mountains, in which the Walla Walla and Umatilla Rivers have their sources. The wheat output of this county in some years is as much as sixty thousand tons.

Pendleton, the county-town, on the river, and on the O. R. and N. Railway, is also the terminus of a branch of the Oregon

and Washington Territory Railroad, or of what is known as the "Hunt System," which connects it with the Northern Pacific System, giving it access by two trans-continental roads.

It has a population of four thousand, good public buildings, and the best hotel in Oregon out of Portland,—the Hotel Pendleton,—besides several others of less proportions. There are two flouring-mills, foundry and machine-shops, sash- and door-factory and planing-mill, city water-works, telephone connection with every part of East Oregon, three banks, seven churches, good common school, a Protestant and a Catholic academy, and numerous substantial and costly business houses, not the least imposing of which is the office of the *East Oregonian* newspaper.

The Umatilla Reservation will soon be open for settlement, and will add one hundred and thirty-five thousand acres of the best land in East Oregon to the area of Umatilla County cultivable lands, and will greatly increase the wealth of Pendleton, which lies just on the boundary.

This prosperous town was founded in 1868, and named after George H. Pendleton. Here resides a descendant of that Alexander McKay who was on board Astor's vessel, the "Tonquin," which was destroyed by the Indians of the Washington coast, in 1812, and every soul with her murdered. His son Thomas, then about fourteen years of age, was left at Astoria when the "Tonquin" sailed on this expedition, and so escaped the fate of his father. Subsequently he came under the guardianship of Dr. McLoughlin, who married his mother, the widow of Alexander McKay. Thomas McKay was a noted man among the fur companies of the Northwest—a brave man, and a witty one. He married, first, a Chinook woman, and had three sons; married again, and had a son and daughter. The eldest of these children was William C. McKay, who was educated in the East and studied medicine. He is the physician on the Umatilla Reservation. His half-brother, Donald McKay, distinguished himself as a leader of scouts in the Snake and Modoc Indian wars, and both men have rendered important service in the struggles of the early settlers of the country with savagery.

Weston, Centreville, Adams, Milton, and several other small but thriving towns are in Umatilla County. The old town of Umatilla Landing, on the Columbia, was in the days of mining

excitement in Boisé and Owyhee a lively place, but its glory has departed with the boats of the Oregon Steam Navigation Company.

Morrow County, bordering Umatilla on the west, is drained by Willow Creek and branches. It has the reputation of being the banner county for stock, and a great wool-producing district. Even the sandy belt along the Columbia is said to furnish excellent range for cattle in the winter season, the grass growing well among the sage brush. The county was named after J. L. Morrow, a member of the Legislature when it was organized in 1885.

Heppner is the county-seat of Morrow, and was named in honor of Henry Heppner, who served the county in its infancy by securing mail connections and postal service. A railroad connects it with the O. R. and N. line. It has four churches, a public-school building, a newspaper, a bank, a flouring-mill, and various business firms. The wool-clip of 1890 delivered at Heppner will, it is said, exceed three million pounds.

Gilliam County, next west of Morrow, is a small district, watered by several small affluents of John Day River. It embraces a variety of surface, and has a greater variety of resources than some larger counties. The basaltic formation, so universal elsewhere, disappears in the southern portion of Gilliam County, and, instead of lava, sandstone conglomerates, shales, and other formations of the carboniferous era take its place. Beds of coal have been discovered which promise to be of great value; also coal-oil and iron.

Arlington, on the Columbia River, was the county-seat, which has been removed to Condon. Fossil, situated on the head of a small stream south of the basalt, as mentioned above, is so named on account of the remarkable fossils found in the neighborhood by Professor Condon.

The other towns in the county are Contention, Fletts, Clem, Matney, Lone Rock, Olex, Idea, Rockville, Blalock, and Willows. This county was named in remembrance of the pioneer, Colonel Gilliam, who was killed near Willow Creek by the accidental discharge of a gun while going to the relief of the volunteers, in the Cayuse Indian war of 1847.

Wasco County was organized in 1854, when it comprised the

whole of Eastern Oregon. It has been divided and subdivided until it is now contained between Des Chutes River on the east and the Cascade Mountains on the west, with a length from north to south of about sixty miles. A great number of streams rising in Mount Hood make this elevated region one of the choicest portions of East Oregon for grazing, as it is for fruit-raising and agriculture. Water-power is abundant, and timber and wool also, which should suggest factories in this region.

The Dalles, which is the county-seat, has been spoken of in another place. Hood River, also on the Columbia, and the O. R. and N. Railroad, is one of the popular resorts of the people from the west side. A Portland company has recently purchased a tract overlooking the Columbia, with a grand view of Mount Adams and White Salmon River, on the Washington side, with a lake in the immediate neighborhood, and other charms, including pure air and good fishing, and here is to be erected a comfortable hotel for visitors. The name of the new resort is Idlewilde. There are a dozen other towns and post-offices in the county.

The latest division of Wasco County was in 1889, when that part lying between Des Chutes and John Day Rivers was cut off to make Sherman County, which honors General Sherman. It consists of high rolling land, on which excellent crops are raised, including the cereals, sorghum, fruit, and vegetables. It has a number of towns and about two thousand inhabitants.

Crook County, south of Wasco, was named in honor of General Crook, and shares with Wasco the trade of the Warm Springs Indian Reservation, where reside the warriors who aided the general in his campaign against their old enemies, the Snakes, and who took part in the Modoc troubles. Crook County was organized in 1882. It is divided, like Wasco, by Des Chutes River, and watered amply by Crooked River and its affluents. It contains a good deal of broken basaltic land, but is nevertheless a good stock country, with many small agricultural valleys. Prineville, the county-seat, enjoys a good trade. A wagon-road to Eugene runs down the McKenzie fork of the Wallamet.

Although not on the main line of the Oregon Pacific, it will have a branch. This road is laid out on the lands of the Willamette Valley and Cascade Mountain Military Wagon-Road

Company, which secured an immense grant upon the pretence of constructing a public highway across the central portion of East Oregon, but which forfeited its franchise. The two companies are contesting their claims in the courts, and meanwhile the land in question is withheld from sale. There have been three of these military road projects across East Oregon, the other two being The Dalles Military Road and the Oregon Central Military Road, in the southern part of the State, neither having any just claim to the lands obtained from the government by misrepresentation and political jugglery. The Oregon Pacific will, it is expected, obtain title to the lands in dispute, when no doubt its affairs will brighten. The road passes southeast through Crook and Harney Counties, and makes its way to Snake River through the cañon of Malheur River, which, being very rocky and very tortuous, has demanded a heavy outlay in labor and capital. When completed it will work a wonderful transformation in this now remote region.

Grant County, occupying the central portion of East Oregon, and consisting of a series of high plateaux, is chiefly given over to sheep and cattle ranges. There are considerable tracts of pine, fir, and tamarack, and numerous small valleys where grain and fruit yield abundantly. This county formerly contained a greater area than any other in Oregon, being two hundred miles in length and ninety in breadth, but has recently been divided so as to include only the country drained by John Day River. Canyon City is the county-seat. It was first settled in 1862, and incorporated in 1864, when it had two thousand five hundred inhabitants and was the centre of great mining activity. It has to-day a population of eight hundred, having suffered the decline to which mining towns are subject, and having been devastated by fire. It is, however, having a revival of progress, to which it has been stimulated by the prospect of railroad connection with the O. R. and N. line.

Harney County, the territory cut off from Grant, is one hundred and thirty-five miles in extent from north to south, and ninety from west to east. It contains the Harney and Malheur Lakes, and the Christmas or Warner Lakes, of which we have all read in Fremont's explorations and other government reports. All are more or less impregnated with alkali. Geologically they

are supposed to be the last vestiges of that ancient sea which once covered this inter-montane region, around whose shores and in whose sands are found the fossil remains of prehistoric fauna and flora. Their modern history is closely connected with campaigns against the marauding tribes of Northern Nevada, whom General Crook finally vanquished.

Harney Valley contains about two hundred thousand acres of excellent land, of which forty thousand is a natural meadow, which is dotted over with numberless cattle and horses. The entrance to this valley is a surprise, after the ruggedness of the Blue Mountains. It is oval in shape, and lies encircled by ranges, some near, some distant, which enclose it like the rim of a bowl. The population is eighteen hundred and fifty, of whom about two hundred are Indians and Chinese.

Harney City, on the north side, near the site of old Camp Harney, was formerly the county-seat. This has been removed to Burns, fourteen miles south, on Silvies River, near the crossing of the Oregon Pacific, a new and growing town of five hundred inhabitants, and the most promising at present of any in this region. Saddle Butte and Silver City are two other embryo towns, with little to support them at present.

East of Harney is Malheur County, which is in the same category as to isolation,—only a wagon-road connecting it with Grant or Harney. It is about one hundred and forty-four by sixty miles in extent, with but a small portion populated, in the fork of the Malheur and Snake Rivers. It is watered in the southern part by the Owyhee River, and has Snake River on its eastern boundary.

The Oregon Short Line (Union Pacific) through Idaho crosses the Snake River near the northern boundary, and thus affords a means of transportation for this end of the county. The Oregon Pacific follows the course of the Malheur River to or near its mouth, where it crosses into Idaho, and when completed will run to Bois  City. The county was named from the river, which received its name (meaning unfortunate) from the early French explorers, who met with disaster of some kind upon its banks. The surface of the country is high, and the soil dry, but it is a good grazing region. The largest horse-farm in the United States is located at Ontario, on the Snake River, one company

owning ten thousand horses of improved blood. Vale is the county-seat, besides which there are several other settlements.

Immediately north of Malheur is Baker County, named after General E. D. Baker, who fell at Ball's Bluff. It embraces the valley of Burnt River, and shares with Union County the valley of Powder River, whose soil, according to a miner from that region, is so fertile that, "if a crowbar should be left sticking in the ground overnight, it would be found in the morning to have sprouted tenpenny nails."

But Baker County is more celebrated for its mineral than its agricultural products, about half its population being engaged in mining. There are several large lumber-mills in the county, and the exports are chiefly lumber, wool, and live stock, although marble, limestone, and granite are abundant, and fruit is marketed to some extent.

Baker City, on the O. R. and N. line, and having connection with the Northern Pacific, is the county-seat and chief town. It is, in fact, rapidly developing into a city of considerable importance, having a population of four thousand five hundred. It calls itself the Gateway of the Inland Empire, or at least the Southern Gateway of the same, and is earning its honors by a legitimate course of improvement. A stock company with a capital of two hundred and fifty thousand dollars has been formed for the purpose of bringing the waters of Powder River in irrigating ditches to Baker City and surrounding country. A railroad is being constructed forty or fifty miles west into the mining districts at the head of the John Day River, which will not only facilitate mining operations, but will open up a white-pine belt of great value, where a large mill is about to be erected. A project not quite so far advanced is that of building a railroad twenty-five miles east into the Seven Devils country in Idaho, where smelting ores of gold, silver, and copper are found,—copper predominating. The traffic on the upper Snake River is at present supported by these mines, which Baker City desires to make tributary to itself. The Union Pacific also contemplates a branch line to the Pine Creek mines, sixty-five miles northeast of this city.

There is no doubt of the enviable position of Baker. Colonel J. W. Virtue, owner of the well-known Virtue Mine, and the

pioneer mining man of this region, places the output of the placer mines at one million five hundred thousand dollars annually, and of the quartz mines at two million dollars. A company is being organized to bring water upon a dead river channel, or lead similar to the Blue Lead of California, from which it is expected to derive one million five hundred thousand dollars annually, and which will be tributary to Baker City. This channel has yielded nuggets weighing from eight hundred dollars to three thousand two hundred dollars. "Six miles from Baker," says Colonel Virtue, "there are farms upon one end of which the owner harvests forty, fifty, or sixty bushels of wheat per acre, and on the other end takes out gold dust at fifty cents a pan from his placers."

Baker City has a highly picturesque situation, being upon a level plateau of three thousand feet elevation, surrounded by cones and peaks of a variety of forms, some wooded, others bare, and still others rising to the snow-line. The city is supplied with excellent water from three artesian-wells, the water being pumped into a reservoir at the rate of sixty thousand gallons per hour. The religious sentiment of the population is represented by five church-edifices, well filled on the Sabbath. A thirty-thousand-dollar public-school building gives evidence of the value set upon educational facilities, as well as of the wealth of the community. The Catholics also have a school for young ladies. There are three newspapers, two of them dailies and weeklies. An electric-light plant furnishes illumination to the streets; and a street-car line runs from the railroad dépôt through the heart of the city. A new brick hotel—the Warshauer—is being completed, at a cost of one hundred thousand dollars. The foundation is laid by the Geroux Amalgamating and Manufacturing Company, with a capital of two hundred and fifty thousand dollars, for an amalgamator, and in connection with it a foundry and general machine-works. The present manufactures are confined to planing-mills, flouring-mills, brick-yards, etc. The Warm Mineral Springs of Baker are much resorted to. A national bank, assay offices, and a building and loan association facilitate business operations.

Baker City is the largest distributing point east of the mountains in Oregon, and in 1863 it was a stage station on the road

to Boisé. As the placer mines in Idaho and in East Oregon were worked out, many gold-hunters turned farmers and settled the fertile Powder River Valley, finally founding a city here, which has grown and prospered, while Auburn, a mining town eleven miles away which once boasted ten thousand inhabitants, is left like Goldsmith's Auburn,—a "deserted village."

Lake County, which lies south of Crook and west of Grant, belongs to that division of Oregon which is drained by streams not running in any general direction, but either sinking in the earth or flowing into some of the alkaline lakes frequent in this region. Salt marshes also are found, one on Silver Lake and another on Warner Lake, which produce salt of good quality. The soil is warm and productive, but, owing to the entire absence of railroads, stock-raising and wool-growing are the chief industries. The timber of the hilly portions is pine, juniper, and mahogany, which, with the facilities afforded for milling by the lakes, makes lumbering also an important business. It is expected that a railroad branching off from the Southern Pacific will cross this county some time in the near future. Whenever this section is made accessible to travel it is sure to be much sought by invalids, for the air is the most delightful that can be imagined,—so bright and sparkling, so warm and dry. The summer's heat is not oppressive, although the mercury runs up pretty well. The winters are cold, owing to the elevation, but are not long.

Lakeview is the county-seat and principal town. It is situated near the northern end of Goose Lake, at the foot of a range of wooded hills, and has tributary to it the whole Goose Lake Valley. The population is about eight hundred. It has a good court-house, two or three churches, a handsome public-school building, a bank, a newspaper, and several substantial business houses, and is, in fact, a representative new town of the West,—rather surprisingly modern and thrifty, considering its remoteness.

Klamath County, lying at the base of the Cascade Mountains on the east, is an elevated region with a diversified surface: the northern part being of a broken or "desert" character; the middle part, devoted to the Klamath Indian Reservation, containing a variety of land,—marsh, woodland, river-bottoms, and

plains; and in the southern portion the grassy valleys of Lost River and Link River, and of the Upper Klamath, Lower Klamath, Modoc, and other smaller lakes. Klamath County is well watered by Williamson, Sprague, and Lost Rivers, besides its many lakes. There is also a canal for irrigation purposes, starting from the head of Link River and running southeasterly forty miles to Lost River; another taking water out of Klamath Lake to float logs to a saw-mill twelve miles from the lake; and a third taking water to a large roller flouring-mill.

Klamath County has been devoted to stock-raising, as it had no means of moving crops. Yet it was wheat raised in this county which took the premium at the National Exposition of 1884, at New Orleans. Both Lake and Klamath Counties raise fine wheat at an elevation of four thousand and five thousand feet, and grow excellent fruit and vegetables.

The water-power of Link River is very inviting, there being a fall of sixty-four feet in a mile and a quarter, the average breadth of the stream being three hundred and ten feet; but only one saw- and one flouring-mill have been erected upon it. I have referred in another place to the peculiar features of the Klamath basin, which make it a wonderland,—namely, Crater Lake, the volcanic deposits, hot springs and cold springs, and rivers that start from nothing and after running some distance disappear.

Klamath County was long under the protection of Fort Klamath, established on the border of the Indian Reservation in 1864. It was the scene in 1872-3 of the Modoc War, and of many bloody battles and massacres, the story of which will long furnish material for the novelist as well as the historian.

Linkville, situated on Link River, which unites the Upper and Lower Klamath Lakes, is the county-seat and metropolis of this district. It has a population of about seven hundred, a handsome court-house, supports a newspaper, a church, and a graded public school, has several factories, and is a resort for health-seekers, who use the hot and cold baths furnished by nature in the immediate vicinity. The town suffered greatly by fire in September, 1889, but is being rebuilt in an improved style and with many fine structures. Linkville was founded in 1871 by George Nourse, who planted a nursery on the river-bank at the foot of the upper lake, which is still growing there,

furnishing fruit-trees to settlers. There are about a dozen other hamlets in this district, which are waiting for transportation facilities.

In this county resides, with his sons, the aged Lindsay Applegate, brother of the "Sage of Yoncalla," and a historic character. His father was Daniel Applegate, who fought in the Revolutionary War, and who married a daughter of John Lindsay, one of Daniel Boone's associates in the settlement of Kentucky. In the year 1823 Lindsay Applegate accompanied General Ashley in an expedition up the Missouri,—the first American company that fitted out for fur-hunting in the Rocky Mountains. Twenty years later he helped break the first wagon-road into Oregon, where he has borne his part in building up a prosperous commonwealth. Soon the last of this class of American State-builders will have passed away with the times which called them forth, but the coming generations should not be permitted to consign them to oblivion. The noblest thing that the Oregon poet, Joaquin Miller, has written refers to

"Those brave men buffeting the West
With lifted faces. Full were they
Of great endeavor. Brave and true
As stern crusader. . . .
Made strong with hope they dared to do.
* * * * *
What have endeavor to endure!
What patient hope, when hope was past!
What still surrender at the last
A thousand leagues from hope! How pure
They lived, how proud they died!"

A drawback to the settlement of East Oregon has been the large amount of land held by wagon-road companies, who in the past, under a pretence of building a needed highway to the Idaho or Oregon mines, secured grants from Congress upon terms never honorably complied with. These grants, which will eventually be declared forfeited, are still unsettled. Another class of idle lands is that fraudulently taken up under the Swamp Land Act, large tracts of which are being restored to the government and opened for settlement along with the other government lands. There are, however, good tracts free to entry, and de-

sirable for homes, in every part of East Oregon, but chiefly in the central and southern portions. As the country settles up the cattle-raisers will be restricted to narrower limits, and agriculture force from the earth the wealth now lying unrecognized.

The following is a comparative statement of the counties of East Oregon at the beginning of the year 1890.

	Acres of Improved Land.	Value of Land.	Value of Town Lots.	Value of Farm Animals.	Gross Valuation of all Property.	Indebtedness.	Exemption.	Tax Equalized by County Board.
		Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Baker . .	101,816	424,801	311,845	361,100	2,719,368	780,252	139,180	1,799,936
Crook . .	81,799	396,276	62,505	862,877	2,008,822	570,130	128,400	1,310,272
Gilliam . .	81,988	371,031	273,823	561,978	2,000,387	524,303	130,450	1,364,416
Harney . .	154,520	396,276	9,422	1,011,224	1,727,024	189,039	65,449	1,472,186
Grant . .	114,716	300,415	10,260	990,123	2,249,356	572,396		1,684,290
Klamath . .	341,137	562,612	88,314	480,317	1,607,491	345,063	146,865	1,115,593
Lake . .	79,402	321,805		861,148	2,180,079	385,829	115,894	1,678,366
Malheur . .	103,803	231,639	11,915	730,201	1,352,292	210,176	61,119	1,046,977
Morrow . .	126,279	417,735	158,355	621,533	2,344,415	810,176	255,444	1,333,824
Sherman . .								
Umatilla . .	380,209	2,247,585	1,052,379	885,980	8,396,759	2,666,262	590,700	5,035,469
Union . .	275,414	1,496,550	376,414	749,570	4,587,645	1,405,600	311,285	2,812,290
Wallowa . .	72,731			426,154	1,291,642	383,875	151,200	756,567
Wasco . .	169,777	649,609	722,142	560,839	3,758,026	929,900	201,460	2,623,666

The amount of mortgages recorded against property in Baker County is \$88,191; Gilliam, \$159,207; Klamath, \$30,223; Lake, \$192,194.

Wagon-road land, not included in the above, is valued in Lake County at \$92,406; in Wasco the number of acres is estimated at 68,609; in Crook County at 229,969. Railroad land in Morrow County is valued at \$272,000.

Travel in Eastern Oregon is often not very agreeable, unless one could choose his route, his season, and his conveyance. Early spring gives the greater chances of comfort; by which I mean a more agreeable temperature than either summer or winter, and less dust and drought than autumn. The few railway lines, excepting the O. R. and N., are not fitted up for tourist travel, but only for the short trips between local points. From The Dalles to Umatilla the road runs along the sandy belt near the Columbia, with only the sullen river and the bare hills to which to turn your eyes. From Umatilla it whirls you across six or eight miles of sage-brush, when it strikes the narrow

valley of the river of that name, which is cultivated and pretty with its gardens, cotton-wood groves, and thickets of birch, alder, sumach, and wild roses in the sharp bends of the stream. Proceeding up the valley you are constantly kept on the alert by the dodging of the train from one green vista to another, and from the shelter of bare hills on one side to the shadow of overhanging rocks on the opposite side of some promontory, or making a straight run for some distance under the perpendicular wall of a basaltic upheaval, to leap suddenly into a cotton-wood copse with a little farm home-place close by.

But all this is strictly local, and below the general level. The road from Pendleton to Snake River, running across the Blue Mountains and through the Grand Rond and Powder River Valleys, has more extensive views, and a greater variety of features. From Wallula Junction to Pendleton the road lies the greater part of the distance through a cañon between hills so high that only their sides are seen, bristling with rock or tufts of dry grass, for miles. But when we have crossed the sand-belt, we observe that for other miles and miles towards Pendleton a green blanket of growing wheat hangs over the rounded tops of these high hills, giving promise of freight for this line after harvest.

Leaving Pendleton for Lewiston, our route takes in a better country than that nearer the Columbia, skirting the Umatilla Indian Reservation, than which there is no finer body of land in East Oregon. The road follows the sinuous course of Wild-Horse Creek to the top of the ridge dividing the waters of the Umatilla from those of the Walla Walla River, and from which there is an extensive view of the surrounding country, which is one vast wheat-field as far as the eye can reach. From this point the Walla Walla Valley appears spread out as on a chart, with the city of Walla Walla set in its midst and embowered in trees.

From this ridge, after making a long circuit to head a small side valley, and to gain distance for the train in descending, steam is withheld from the locomotive, and this becomes a gravity railroad until we again strike a level, where the train shoots ahead through fields of wheat, barley, and corn to Walla Walla.

From this point to Snake River two similar ridges are crossed in a similar manner, the ascent and descent being made through narrow and crooked cañons entirely shutting out the view, which is seen only on top of the divides; but from each of these there



WHERE RAILROADS GO.

is the same grand spectacle of boundless wheat-fields rolling off into billowy hills in all directions. The railroad strikes the Snake River at Riparia, in the Palouse country. There the traveller is transferred to a steamboat for Lewiston, where he is landed after a twelve hours' struggle with the rapid current of the reptilian river. The distance is eighty miles; and when you come down it you make the voyage in four hours.

The scenery along the Snake is the same as along the Columbia above Celilo,—a strong, swift river between bare hills or columnar cliffs of basalt,—the difference being that every here and there along the Snake there are narrow shelves of warm

sandy loam at the foot of the cliffs which are taken up by fruit-farmers. As the steamer comes down, it being July, she gathers up thousands of boxes of berries, peaches, and early apples, to be shipped by rail to Walla Walla and Spokane Falls. These small farms are irrigated by water led on to them from springs, or pumped up from the river by steam-power.

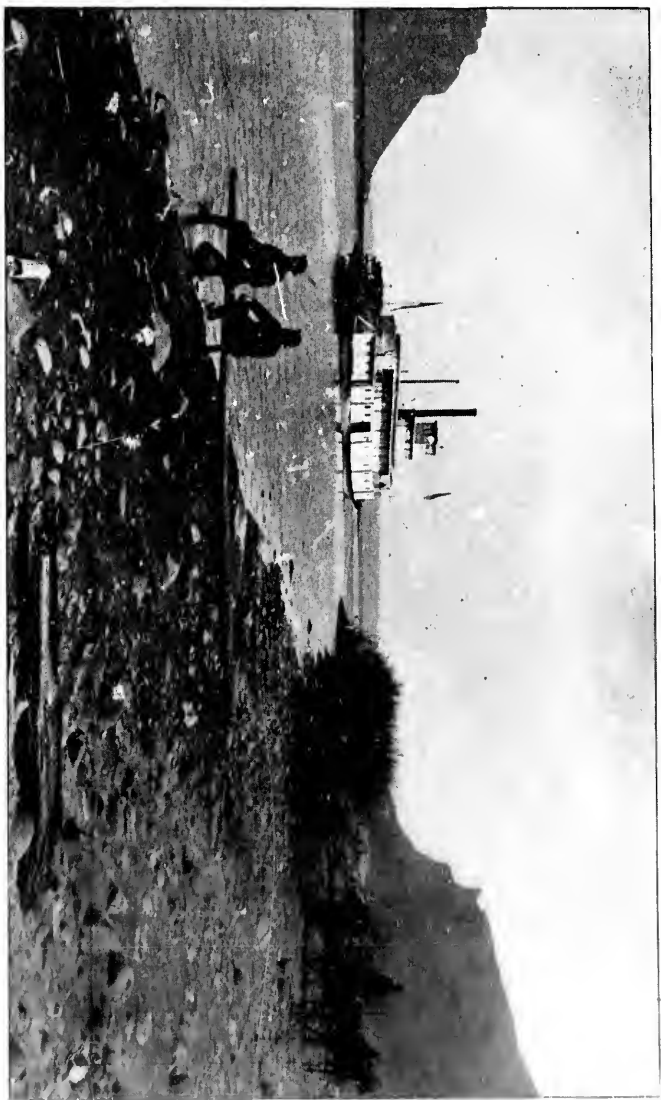
Lewiston, although an Idaho town, was built up by Oregon capital as an outfitting place for the Florence and Salmon River mines, in 1862. It is located on the point of land between the Snake and Clearwater Rivers, which form a junction here. It was on the latter stream, some twelve miles above here, that Lewis and Clarke encamped with the Nez Percés, with whom they left their horses to be cared for while they visited the coast, in 1805; and the town was named in honor of the explorer, Merriwether Lewis.

The site of Lewiston is a particularly pleasing one, the land sloping gradually up to the beautiful undulating country back of it, and having a water-front on both sides of the point bounded by the rivers. North of the Clearwater the land rises abruptly to a great height. It is over beyond this bluff and on this elevated plateau that the famous grain lands about Moscow and Genesee are located, which are tributary to Washington, being reached by the O. R. and N. and Spokane Falls and Palouse Railroads.

Lewiston has a charming climate, albeit rather warm in summer. It has about twelve hundred inhabitants, who are waiting for a railroad to infuse new life into its business system. It has gone ahead very little since the days when it had a transient population of several thousands, the chief improvement being in shade-trees. Both the Northern and the Union Pacific Railroads are making preliminary movements towards giving Lewiston the outlet it needs.

Between Lewiston and Mt. Idaho is a good farming country, to see which one must travel by stage, passing the beautiful Nez Percé Indian Reservation, and climbing toilsomely to the second plateau above Snake River, where is a pleasant lake resort,—or what would be a pleasant resort were the Lake Kouse anything but a board shanty,—the fare being excellent.

Thirty miles beyond, the traveller comes to a rolling plateau,



SNAKE RIVER.

four thousand feet above sea-level, scatteringly covered with lofty pines, underneath which grows the short, thick grass known as "pine-grass," giving, with the groups of cattle here and there, a park-like aspect to the woodland. Beyond this twenty miles, and five hundred feet lower, is the valley resembling Grand Rond, and known as Camas Prairie, with the town of Mt. Idaho in the southeast corner.

Here let us stop, for we are off our prescribed territory; but this pan-handle of Idaho naturally belongs to the State of Washington, and has been repeatedly claimed by it. It contains, besides a good deal of superior farming land, the Cœur d'Alene mines, all of which territory is at present tributary to Washington, and must in a great measure ever remain so, being shut off by natural barriers from Southern Idaho. On the other hand, the southern counties of this new State could ill spare the best of its farming territory, and, being now a State, will not.

CHAPTER XII.

A CHAT ABOUT OREGON MOUNTAINS.

If there is anything of which an Oregonian is more proud than another, it is of his mountains, for every one exhibits that personal interest in them which amounts to a sense of proprietorship. Portland shop-windows are full of bad pictures of Mount Hood, which, notwithstanding their deficiencies from an artistic point of view, are yet pleasingly suggestive. That they sell is certain, for the production never ceases.

I may as well confess right here that I am myself responsible for starting this particular fad. Years ago, on my first visit to Oregon, I was delighted with the charming cloud-effects so noticeably lacking in the drier climate of California, as well as with the woods and the snow-peaks. My enthusiasm in my correspondence with the well-known California artist, F. A. Butman, "slopped over" to such an extent that he came up here and made a good many sketches. On returning he painted a "Mount Hood" on a large canvas, with a beautiful foreground,

which, by the way, was a composition, for there is no such actual foreground for the mountain in nature. I purchased the picture, and rather thoughtlessly allowed it to be photographed. From that photograph, with variations never original enough to disguise the source of inspiration, have been painted numberless other Mount Hoods, which, could poor Butman, long since gone to the Hills Beautiful of a better country beyond the impassable bouree, behold, he would wish to blot out.



ON THE SUMMIT OF T. HELEN.

The name of Oregon's principal range, the Cascades, which has a nearly north-and-south course, probably came from the fact that the only passage known through them in the early explorer, hunter, or tourist was the one at the five-mile rapids, which rapids seem to have been always called the Cascades. These were of more importance to the voyageur who had to make a difficult portage than the mountains themselves, and in speaking of the latter he simply said, to distinguish them

from others, "the Cascade Mountains," and so named them for all time.

But Oregon has several other though not as high ranges,—namely, the Blue Mountains, so called from their color seen across the tawny waste of the plains, which have a northeast and southwest course through East Oregon; the Coast Range, which follows the trend of the west shore of the continent, near the sea; and three or four cross-ranges from the Cascades to the Coast Mountains in the southern part of the State. All these ranges have their peaks, but only the great Andean chain of the Cascades lifts up into the region of cold air its crumbling volcanic cones covered with snow, which even the fiercest heat of summer only diminishes, but never dissipates except on the sharpest ridges.

The most southern of these, and next above California's pride,—Mount Shasta,—is Mount Pitt, nine thousand two hundred and fifty feet high, named after the British statesman by British subjects in Oregon before the boundary question was settled. Frequent attempts have been made to change its name to Mount McLoughlin, in honor of Dr. John McLoughlin, the benevolent governor of the Hudson's Bay Company in Oregon, who rescued from starvation the immigrants of 1843, at a time when the London board would far rather they had been left to perish than have been rescued, to the injury of the fur-trade and the weakening of England's claim on the territory. So difficult is it, however, to make these changes understood, that the Oregonians have compromised by naming a lesser peak in Klamath County Mount McLoughlin.

Next north of Pitt is Union Peak, feeding the north fork of Rogue River. Thirty-five or forty miles farther north is Mount Scott,—whether a namesake of the general or of an Oregon pioneer I do not know,—eight thousand five hundred feet in height. About the same distance above Scott, and of the same altitude as Mount Pitt, is Mount Thielsen, so called in compliment to General Thielsen, of the Oregon Railway and Navigation Railroad. This peak feeds the south fork of the Umpqua River. Again in thirty or forty miles rises Diamond Peak, five thousand five hundred and ninety-five feet in height, which is the source of the middle fork of the Willamet on the west and of the

Des Chutes River on the east. At the head of McKenzie's Fork of the Wallamet is the remarkable group of snow-peaks called the Three Sisters, with Black Butte and Snow Butte eighteen or twenty miles farther north, and feeding streams on the eastern slope of the range.

At the head of the Santiam River is Mount Jefferson,—it should be Mount Thomas Jefferson,—named by Lewis and Clarke in 1806, and standing well east of the centre of the range. This is a very interesting mountain, and evidently has been much higher than at present, which is equally true of all the snow-peaks.

Mount Hood is situated about twenty-five miles south of the Columbia River, and sixty miles east of the Wallamet, rising, like Jefferson, from the eastern side of the main axis of the range. The western view of it is that of a massive pyramid, with some slight variations from exact lines; but from the Dalles its rugged features are more distinctly seen, and its outline is broken into separate peaks and ridges. It was named after Lord Hood by Vancouver's lieutenant, Broughton, October 29, 1792. The early Oregon settlers, or some of them, wished to change the name to Washington, and to call the Cascades the Presidents' Range, but custom prevailed, and Hood it remains. The height of Mount Hood has never been satisfactorily ascertained. The measurements taken have varied from eighteen thousand to eleven thousand feet, but later estimates make it about twelve thousand. Half its height is covered with perpetual snow,—that is, it towers more than a mile above the range into the region of clouds and storms of which the dwellers in the valley know nothing,—its venerable head buffeted by icy blasts even in summer.

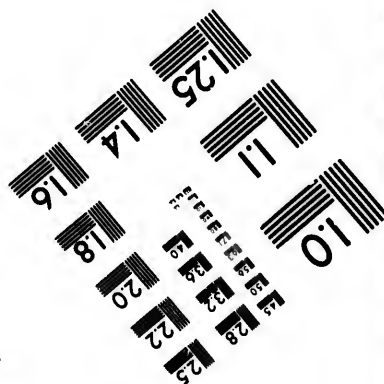
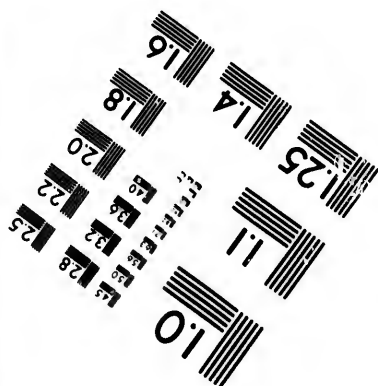
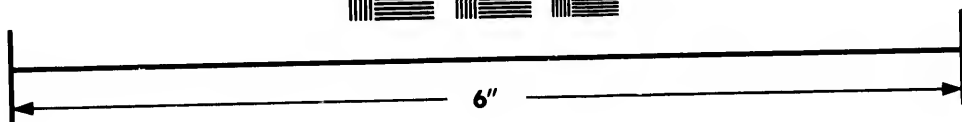
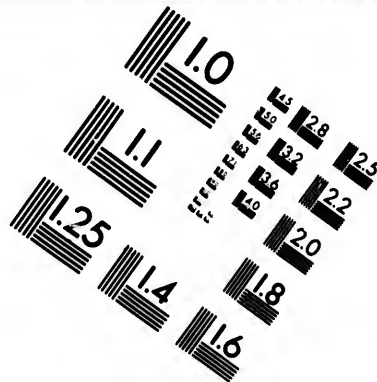
About seventy miles north and a little east of Hood is Mount Adams, nine thousand five hundred and seventy feet in height, named after President J. Q. Adams. It belongs to Washington, but is one of the five peaks visible from all parts of Northern Oregon. It is not so high as Hood or St. Helen, but it has a noble outline, and reminds me of a sleeping lion. One of the curiosities of Mount Adams is a series of ice-caves, lying at an elevation of four thousand feet, the trail to which leads up the White Salmon River, which comes into the Columbia opposite

Hood River. In their vicinity the earth gives forth a hollow, reverberating sound suggestive of openings beneath. The entrance to the largest cave is down a well-like shaft, by means of a rope. The apartment here is about eighty feet in diameter, and square. The walls are solid ice, the floor and ceiling supporting huge formations resembling stalactites and stalagmites, which when illuminated by torches give out a splendid display of colors. The air in these caves is clear, cold, and dry, the temperature being too low to permit of extended explorations. Is there buried here an immense glacier, or does there exist a combination of causes in the form of chemical constituents to produce ice? Let the scientists decide.

Northwest of Mount Adams, and a hundred miles or more north of Hood, is Mount St. Helen, so named by Broughton, in 1792,—another mountain of Washington which enters into the panorama of snow-peaks seen from the Columbia River. It is, presumably, nine thousand seven hundred and fifty feet in height, and remarkable for its dome-like symmetry of outline. It is approached from the Columbia by the north fork of the Cathlamet, or Lewis, River, and is not difficult of ascent. Mount St. Helen has been repeatedly known to throw out steam and ashes, scattering the latter over the country for a hundred miles to the eastward in 1832, so obscuring the daylight as to make it necessary to burn candles. On the southern slope is a hot spring that keeps the rocks always bare, which spot goes by the name of The Bear,—no pun intended.

I do not pretend to have ascended even one of the many snow-peaks of the Northwest. It requires strength and woodcraft, as well as alpine experience, to explore the Oregon mountains on their western flanks, where the cañons are deep and steep, where frightful precipices are to be scaled with ropes, and changes of temperature to be encountered, before reaching the snow-fields. Therefore I have contented myself with achieving an altitude of eleven thousand feet in some places and between seven thousand and eight thousand in others, and have taken my impressions at second-hand for the greater heights. The railroads of the West are great educators in this respect. They carry us easily and without asking our consent right into the heart of the great ranges, and show to the most delicate woman





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or the city-bred man the wondrous things of a creation forever going on, equally by building up and breaking down.

Cite, for instance, the Southern Pacific's entrance into Oregon. It leaves the Sacramento Valley only to enter the long, winding and beautiful cañon of the Upper Sacramento River, where the hillsides are covered with pine, oak, and madrono forest, the narrow bottoms with cotton-wood, poplar, and willow thickets, while the banks are overhung with water-loving plants, and the river dances down, down, bright, joyous, and tireless, towards the sea, bearing with it the weariness which may have oppressed us; for who can be weary in such scenes? Every now and then the toiling train glides past a settler's home, the chosen residence of some man who loves these beautiful solitudes better than the busy life of towns or the more genial climate of the valley. Then, again, up the cañon we catch a glimpse of Mount Shasta, with its massive bulk divided into triple peaks piercing the sky at fourteen thousand four hundred and forty feet,—shining white with a blue sky over it.

Up and up we go. Lower Soda Springs, Upper Soda Springs (and what delicious water!); Mossbrae Falls in a semicircle of mossy rocks,—emerald and silver,—where the water seems to come from the top of a mountain in many streams, a novel and charming effect; then up and up once more, following ridges and making long loops which take us past the spot we touched twenty or thirty minutes before, but at an elevation above it of several hundred feet;—then Sissons. At Sissons is a fine view of Mount Shasta, and an expanse of level country beyond, with this and other peaks in sight continually. Across this elevated plateau runs the Klamath River, and upon it is the once populous mining town of Yreka, where A. D. Richardson discovered a palindrome on a sign,—*Yreka Bakery*. I have no doubt this literary curiosity still maintains its position, but the railroad avoids the town, and travellers lose the opportunity of verifying it.

Soon begins the ascent of the Siskiyou (*seize cailloux*) Mountains, with their long piney slopes and dome-shaped summits, their cathedral-spire-like peaks, and magnificent forests surrounding them. By a winding way, with enchanting views on every hand, we glide smoothly down the north side into the

Rogue River Valley, having spent twelve hours amidst such scenery as can be met with in few parts of the earth. And this is only one of several roads, which, so to speak, make a feature of showing the mountains which traverse the Northwest Pacific Coast.

But to return to the Oregon snow-peaks. First a word about their explorers. Several young gentlemen of Portland, in October, 1887, organized the Alpine Club of Oregon, the object of which was to found and maintain a public museum, encourage amateur photography, and also alpine and aquatic exploration, and to look to the protection and preservation of game of all kinds. It divides the work into four departments, as just indicated. The explorers are very enthusiastic.*

The Alpine Club has made some special studies of Mount Hood, having ascended it more than once, photographed it from various points, and illuminated it with red fire on the evening of July 4, 1887, the illumination lasting fifty-eight seconds, and being seen from Portland on the west, and Prineville on the east side of the range, the former sixty miles, and the latter eighty miles distant. One hundred pounds of the combustible were used, which was dragged to the top by W. G. Steel and Dr. J. M. Keene, three of the party having become exhausted two hours after passing the timber line.

The practice of the club is to deposit a copper box containing a register of their names and a record of experiences on the summit of each peak explored by them. This is chained to a rock for security, but left accessible to any visitors who may make the ascent and desire to register. The illumination of Mount Hood was repeated in 1888, when heliographic communications were exchanged with the signal-service officers at Portland. This experiment suggests the use of a signal station on the mountain in time of war—provided the weather could be controlled.

* For the information of other similar associations wishing to correspond, I give the names of the officers. President, George B. Markle; Vice-Presidents, W. G. Steel, W. W. Bretherton, John Gill; Secretary, George H. Himes; Treasurer, C. M. Idleman. * W. G. Steel is president of the exploration department, and M. W. Gorman Secretary. President of the photographic department, W. W. Bretherton; Secretary, E. E. Norton.

The ascent of Hood is, considering its height, not difficult on the south side. There are the usual obstructions to alpine travel,—cañons to be crossed, precipices to be avoided, snow too soft at mid-day and too icy at morning or evening, and a temperature, with wind, on the peak which makes a protracted stay, if not impossible, undesirable and dangerous. A great crevasse is to be crossed, which is opened in an immense glacier extending quite across the side of the mountain and constantly moving south. The opening varies in width from a mere crack to a gorge of thirty feet across. The walls of the chasm are of solid ice, green for some distance beneath the snow, changing to blue, growing darker and darker until the line dividing it from space becomes invisible; nor does sound reveal when the rocks rolled into it reach bottom. This crevasse is crossed on a bridge of ice, which brings the adventurer to the last abrupt ascent of four hundred feet to the summit, which is accomplished by cutting steps in the ice.

The summit is an irregular arc of a circle once surrounding a great chimney vomiting forth molten lava, and is now rapidly crumbling away. Sulphurous fumes and steam are still thrown out at a point below the present summit called the crater, where mountain climbers stop to warm and take refreshments.

Some changes are reported as recently occurring on Mount Hood, the crevasses on the northwest side of the crater appearing to have widened, and the ice surface to be lowered. One of these crevasses can be seen to yawn conspicuously for fifteen miles. Many rocks have become detached and rolled down; among others, the one to which the record box of the Alpine Club was chained, which was, however, recovered in a battered condition and replaced by a new one.

Whoever has the hardihood to make the ascent of Mount Hood—and the number increases annually—has his reward in the prospect to be gained from it. From this altitude all the other peaks are plainly visible, both in Oregon and Washington, and the coast range as well. East and west Oregon and a large part of Washington are spread out like a map. The lordly Columbia may be seen wending its way to the sea, a distance of a hundred and fifty miles, the capes at the mouth showing plainly where it unites with the Pacific. A sunset view, with

the opening between the capes filled with a flood of golden glory, may be enjoyed from the mountain-tops. "To witness a scene like this," exclaims Steel, in his report, "many a man would circle the globe." Imagine the effect of moonlight upon it—a full moon—"changing the day's brilliance into a subdued glory." Surely there is matter for inspiration here. But 'at seven o'clock the wind blew fiercely, almost carrying the chronicler from his feet, and he had to keep in constant motion not to freeze. It lasted but for an hour, and at eleven o'clock the red fire was burned, casting a rosy glow over the whole mountain side, bringing into relief every crag and pinnacle, and causing the neighboring mountains to blush more delicately.

I have myself seen Hood only from the common level, but have beheld him in many moods and phases, when white, cold, and stern he towered rigidly over a winter landscape, and when draped from summit to base in a golden-tinted tissue of morning mist, through which he peeped like a girl in trying on a robe of yellow gauze,—not quite shaken down on one side, the petticoat of snow showing daintily underneath. Many are the solid old mountain's masquerading airs, and, despite the dignity of his thousands of years, he sometimes affects the blushes of the rose.

To pioneers of 1845 and later Mount Hood is full of meaning. The road over the range at its base, opened that year, was the Rubicon which they passed in pain and peril. The most skilful driving was not skilful enough to guide the staggering oxen through the way provided by the road-makers, and the constant tendency of a forward wheel to run up a tree on one side or the other was a dread to the drivers. But if wagons would run up trees on ascending ground, what was their course when they came to an incline of sixty degrees on the descending side, with a load urging the jaded oxen from behind? As succeeding trains widened the way a new difficulty arose. It was better to be halted by a tree than not to be able to stop at all, and to find one's team rushing down the side of a mountain like an avalanche, to death and destruction. To overcome this tendency, good-sized trees were attached by chains to the rear of the wagons, the branches left to act like grappling-irons, and hold back the weight. But woe to the unfortunate wight whose im-

provised brako became uncoupled! The best he could hope for in that case was that a fore-wheel *would* dash up a tree. It happened sometimes that the oxen struck their heads against a solid fir-trunk, when their proprietor became suddenly minus that pair of oxen, and plus a great many fragments of wagon and contents. A well-graded highway now follows the survey of the pioneers of 1845, and conducts the tourist to Cloud-Cap Inn, at the snow line, where much comfort may be enjoyed for four or four and a half dollars per diem.

About centrally situated with regard to the Oregon division of the Cascade Range, the Three Sisters may be ascended without difficulty from the eastern side. Indeed, to get a well-formed idea of the mountains it is necessary to behold them from this side. There is no labor in travelling over the piney slopes of the eastern incline. It is like riding through interminable parks, with little obstructing undergrowth, a dry soil, and abundance of flowers, and occasional small game. Three or four days' easy horseback travel from The Dalles through a country abounding in natural wonders brings us to the foot of the Three Sisters.

They stand in a triangular group, the base of the triangle being towards the west. Though perfectly distinct peaks, the northernmost being highest, they are connected near their base by lesser intervening elevations. Accustomed as we have become to mountains, the Three Sisters force from us the profoundest expressions of admiration and delight. So lofty, so symmetrical, so beautifully grouped! Nor are there wanting adjuncts which augment the interest of the scene. At the foot of the group stands a single needle of basalt several hundred feet in height, in its grim, black hardness looking like a sentinel guarding the Olympian heights above.

Our party prepare to ascend the north Sister. By reason of the greater general elevation of the country on the eastern side of the Cascade Range, and the more gradual slopes also, the toil of an ascent is greatly diminished. By keeping along a ridge we find it comparatively easy to clamber up. Two of our party, however, decide to attempt a more abrupt ascent.

As we course along our rocky ridge we watch the adventurers on the snow-field. After climbing over a sharp slope of

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broken rock, they come upon an incline of nearly eighty degrees—in fact, the snow-field appears concave to us—and commence crawling up it. By great exertion, and cutting steps in the snow with their hunting-knives, they reach the edge of the first crevasse, where we see them pause, holding on to the edge and looking into it. They can proceed no farther. The crevasse is fifteen feet across and hundreds deep. Could they throw themselves over, they must inevitably slide back into it, from the glassy surface above.

Starting cautiously to return, and holding back by striking their heels in the snow, making but slight impressions, first one, then the other, loses his hold, and down they go,—swiftly, swiftly, ever more swiftly,—darting like arrows from their bows, straight down the steep incline, towards the rocks below the snow-line. The younger and more active contrives to draw his hunting-knife from its scabbard, and, by striking it into the hard snow, to check his speed. What a grip he has! I laugh, while I am trembling with excitement, to see him swing quite round the knife-hilt, like a plummet at the end of a string swung in the fingers. He has arrested his descent in time to avoid the rocks.

Not so his clumsier companion, who comes down—luckily, heels foremost—among the rocky *débris* at the bottom. His bruises, though many, are not dangerous; and this little experience teaches our friends the needful prudence. They are content thenceforth to take the longest way round, which is the surest way to the object of their desires. After two or three hours of clambering, we reach the line of perpetual snow.

Just below it is a belt of cedars, with tops so flat that we walk out on them a distance of twenty feet, either side their trunks. Early in their struggle for existence their tops have been broken off by the wind, and the weight of many winters' snows has retarded their upright growth, until the result of a century of aspiration is a ludicrously short stump, and immensely long and broad limbs. In this region we find a few stunted mountain mahogany trees, but are quite above the pines.

Above this, in the snow, or rather in the thin layer of soil deposited in places among the rocks where the sun's action prevents the snow from accumulating, are several varieties of flowering plants with which we are familiar; the blossoms, however,

are but the miniature copies of their valley kindred. So fragile, of such delicate hues are they, that a feeling of tenderness is inspired by their lonely position on this bleak summit; and we ask ourselves, For whose eye has all this beauty been spread, age after age, where human footsteps never come? Let those who believe everything terrestrial was made for man search those places of earth where only God is, and study their adornments.

The view from the peak of our mountain is one long to be remembered. To the north of us stretches the Cascade Range, with its wilderness of mountains, from six to eight thousand feet in height, overtopped by Mount Jefferson and Mount Hood. To the south, the same wilderness of mountains is seen over the tops of the other Sisters, with Diamond Peak and Mounts Scott and Pitt beyond, while in the far distance we fancy we discern great Shasta.

To the east spread away immense plains, with their river-courses marked as on a map, and bounded by the Blue Mountains. Just below is Des Chutes, and on the other side of it, not far off, is the extinct crater of a volcano, its remaining walls being only two or three hundred feet high. All around it the country is covered with black cinders, ashes, and scoria. Turning towards the west, we behold the lovely Wallamet Valley, with its numerous small rivers, its hills and plains, and beyond it the blue wall of the Coast Mountains.

We resolve to return to the pine woods to camp, and with tomorrow's dawn to climb once more to the summit, to behold "morning on the mountains." The spectacle compensates for the extra toil. When we arrive, there is a veil of mist hanging between the valley and the mountain-top. We know that they in the valley see nothing of the summits, while we of the summits can discern nothing below this floating sea of vapor. How beautiful! It is as if out of a sea of golden-tinted mist are springing islands of dark-green, some of them crowned with glittering snow, and overhead a cloudless heaven. With every moment some new and beautiful, but almost imperceptible, change comes over the misty ocean in which are bathed those isles whose shores are abrupt mountain-sides; and, in turn, all tints of gold, rose, amber, violet, float before our enchanted eyes.

Not long the scene remains. An August sun quickly disperses the gossamer clouds, unveiling for us the scene of yesterday in its morning sharpness of outline, with high lights and deep shadows in the foreground, and with a soft, illusory glimmer in the deep distance. We hardly wait for the full blaze of day on the picture, preferring to remember it in this more striking aspect.

Along the crests of the mountains are frequent lakes, some of which occupy old burnt-out craters; others may have been formed by the damming up of springs by lava overflows; others by a change in the elevation of certain districts, leaving depressions to be filled by the melting snows or by mountain springs and streams. These lakes occur generally where signs of recent volcanic action in the neighborhood are most numerous, as in the vicinity of Mount St. Helen, Mount Jefferson, the Three Sisters, and Diamond Peak.

Pumice, cinders, scoria, and volcanic glass, with other evidences of eruption comparatively recent, abound all along the eastern base of the Cascade Range, and extend some distance through the central portion of East Oregon. The traveller must ever be amply repaid for the labor of exploration by the great and varied wonders which meet him at almost every step of his journey. It does not prejudice a country either, in a practical sense, that it is of volcanic formation. Such have been the lands where civilization came to the greatest perfection. Probably the east slopes of the Cascades will yet be celebrated in song as "the land of the olive and vine." It is certain that grapes and peaches raised upon this soil are of excellent flavor.

The lakes which are such a striking feature of the Cascade Range in both Washington and Oregon are not usually of much extent. Echo Lake, on Mount St. Helen, is three miles long by a quarter of a mile to a mile in width. It is filled with trout, and bordered by bold shores covered with evergreen forest. The character of the scenery here is of a gentler aspect than in some other parts of the mountains, tempting whole families every summer to encamp for two or three weeks in this vicinity.

On the contrary, Fish Lake, in the range east of Roseburg, is

set in a deep rim of frowning rocks, shadowing the brown depths where speckled trout disport themselves in ice-cold waters which in a mile or two plunge headlong over a precipice two hundred and fifty feet in height between pillars of basalt.

South of Fish Lake about three miles is Mount Volcano, with its western half blown off, leaving a sheer precipice six hundred and fifty feet, descending into a basin semicircular in shape, containing a forest of fir-trees, three charming lakes of small size, and several green marshes, between which yawn fissures opened ages ago when this basin was a fiery crater. Many such scenes have been discovered, and many yet await discovery among these half-explored mountains. Water-falls abound, and a very pretty one, appropriately named Silver Vail, occurs on a tributary of the Klamath River.

Some years ago—it was just after the Modoc war—I crossed the Cascades between Ashland and Linkville with a party, of whom the “Sage of Yoncalla” was one. It was an interesting trip from every point of view. We had an ambulance, a baggage-wagon, and horses, and walked or rode as it pleased us to do, taking three days for the passage. The first night we encamped in the valley of Jenny Creek, from which we took our supper of fish, and, not knowing any better, I left my shoes out in the dew, of the effect of which I became unpleasantly aware next morning; but I had a good sleep, quite undisturbed by grizzlies, of which there were not a few in the mountains. Next day our hunters killed a deer, and while we waited for it to be dressed, being in advance of the hunters, a huge brown bear trotted leisurely across the track in front of us; but the guns were behind, and we quietly watched his departure, thinking it was an escape on both sides. That night we encamped on the summit, and toasted venison on sticks around a blazing log-fire. We told stories, sang songs, and slept well afterwards. There was no dew to wet my shoes this night; but I was awakened about three o’clock in the morning by the voice of the Sage, who, like those of old, called upon me to observe the brightness of the morning star. And it was worth the misery of being wakened at such an hour to behold the great golden clusters sparkling above us,—two or three times as large as when seen through the murky air of the lowlands.

As we walked along next day the Sage told me the story of the opening of this road—the Southern Immigrant Road it was called—by himself and others, in 1846, when it was feared in Oregon that there might be a war with Great Britain, and it behooved them to be surveying out a track for the soldiers of the United States to take in coming to protect the Oregon settlers, which would be safer to travel than the Columbia or Mount Hood routes. He showed me, too, a tree near the crossing of the Klamath River where some of Fremont's exploring party carved their names in 1843.

Linkville was at the time of this trip but a few months old, and most of the settlers in Klamath Land had been driven out by fear of the Modocs—most of those not murdered. I was present at the trial of the Modoc prisoners at Fort Klamath, and spent some weeks at the Klamath Indian Agency, visiting notable places and studying Indian mythology under the tutelage of Captain O. C. Applegate, who is a master of Indianology.

But the crowning pleasure of those enjoyable weeks was an excursion to a lake then little known, but now famous in the Northwest. It was discovered in 1853 by prospectors from Jacksonville looking for gold, who, deeply impressed by its weird beauty, called it Lake Mystery. Subsequently some gentlemen from Fort Klamath visited it and called it Lake Majesty. Both these names were suggested by the effect upon the beholders. But exploration convinced all that the great rocky bowl containing these beautiful waters, whose rim was eight thousand feet above sea-level, was an immense crater, egg-shaped in form, and six by seven miles in extent of surface. This discovery changed the name to Crater Lake, which it is now called.

According to the belief of scientists and other observers, there once stood here a volcano higher by several thousand feet than any existing mountain, the angle of the remaining mass carrying an imaginary line to a height of thirty thousand feet. As surveyed by government officers the depth of the crater is four thousand feet, and of the water, two thousand feet over a large extent of the bottom, the shallowest part away from the cliffs being fifteen hundred feet. There is a crater within the crater, rising in a hollow cone above the water eight hundred and

forty-five feet, called Wizard Island, and another similar crater fathoms deep beneath the lake's surface.

The military road from Jacksonville to Fort Klamath runs within about four miles of the lake, and is the route usually taken by tourists. But the approach from the east side is much more easy, being a comfortable afternoon's drive from the Agency to camp at the turning-off point. Our party found bear-tracks close to camp, and deer-tracks in the ashes of our burnt-out fire when we arose from our mosquito tormented slumbers. Our ambulance was taken to the summit, although we walked a good part of the four miles, for the ground was very lumpy with rocks and frozen snowdrifts which July suns had failed to liquefy, and which, to them unaccountable, phenomenon kept our mules in a greatly agitated state of nerves.

On arriving at the summit we found the earth light and ashen, diversified by patches of snow, and by other patches of alpine flowers, some of which were very pretty in form and color. The air was bright and mild; we had left the forest behind us; there was nothing anywhere about more elevated than our position, nor any living thing anywhere near us. We were apparently on the highest point of the earth, for there was nothing to look up to, and it would not have surprised me to have been whirled off into space. *The solitude of the situation was thrilling.*

One cannot, owing to the sunken position of the lake, discover it until close upon its rim, and I say here, without exaggeration, that no pen can reproduce its image, no picture be painted to do it justice; nor can it, for obvious reasons, be satisfactorily photographed. At the first view a dead silence fell upon our party. A choking sensation arose in our throats, and tears flowed over our cheeks. I do not pretend to analyze the emotion, but, if I were to endeavor to compare it with anything I ever read, I should say it must be such a feeling which causes the Cherubim to veil their faces before God. To me it was a revelation.*

* That this is not an uncommon effect of the first view of Crater Lake is shown by Captain C. E. Dutton's report of the survey, in which he says, "It was touching to see the worthy but untutored people who had ridden a hundred miles in freight-wagons to behold it, vainly striving to keep back

The water of Crater Lake is of the loveliest blue imaginable in the sunlight, and a deep indigo in the shadows of the cliffs. It mirrors the walls encircling it accurately and minutely. It has no well-like appearance because it is too large to suggest it, yet a water-fowl on its surface could not be discovered by the naked eye, so far below us is it. It impresses one as having been made for the Creator's eye only, and we cannot associate it with our human affairs. It is a font of the gods, wherein our souls are baptized anew into their primal purity and peace.

The Indians, who are easily impressed by the unusual as well as the sublime in nature, hold Crater Lake in great awe. They have a legend running thiswise: A Klamath hunting-party came upon it unexpectedly, and regarded it with silent fear, for they knew at once that the Great Spirit dwelt here, and that they had no business with him; therefore they silently retraced their steps down the mountain, and made a distant camp. But one of their braves ventured to return, and passed the night on the rim of the lake. This he did for several successive nights, during which he heard strange noises and voices coming from the waters. Having familiarized himself after some months of venturing to visit the lake, he descended to the water and bathed in it, repeating this feat many times, thereby gaining the power to see spirits, and receiving supernatural strength. This led others to imitate his example, who likewise received great strength. But at length the first brave was impelled to kill a monster which he met with in the water, and for this act was set upon by *Uaos* or water-sprites, taken to the top of the cliffs, torn into small pieces, and thrown back into the lake to be devoured. Such, they since believe, will be the fate of any Klamath who ventures even to look upon this lake. A rock on the northern side of the lake has been named *Llaos* Rock, in memory of this superstition. Other points are named after persons and resemblances, as Dutton Cliff, Cathedral Rock, Phantom Ship, and—I mention it with due modesty—Victor Rock, in compliment to my early visits to this then almost unknown wonder,

tears as they poured forth exclamations of wonder and joy akin to pain. Nor was it less so to see so cultivated and learned a man as my companion hardly able to command himself to speak with his customary calmness."

and a trifling feat of daring performed to get a view of a beautiful reflection under this overhanging stone parapet.

The approach to the lake is from the west or northwest. To the right of the approach is a small grove of spruce-trees of a good height, in a sort of sink with piled-up rocks behind it; and on the south, inside the rim, are trees growing among the rocks for some distance, as also on Wizard Island, which has a belt of trees around its base; but for the most part there is no vegetation shown in this locality.

Crater Lake lies on a plane made by cutting off the top of a cone, its west side embedded in the range, and its east and south sides rising clear from the plain eight thousand feet below. A quarter of a mile from the lake one may stand on the edge of the plane before mentioned and look over the Klamath Valley, seeing distinctly the settlements fifty miles away. North of the lake is only a jumble of mountains, with Mount Scott and Diamond Peak rising more prominent than their neighbors.

Congress, in January, 1886, set aside Crater Lake and a body of land thirty miles long by twelve miles wide for a national park, Oregon agreeing to preserve and keep it for the pleasure of the people for all time. The boat used by Captain Dutton in his survey still remains at the lake, and as tourists multiply other means of viewing it in its whole extent will be furnished.

The railway tourist would most naturally leave the train at Medford, taking the old road to Fort Klamath and returning the same way. Rogue River rises in the range near Crater Lake, flowing for some distance through a deep cañon along the edge of which the road runs.

Even here are evidences of the forces which have rent the rocks asunder, as well as of the lapse of time which has assisted the elements to mould and carve them into fantastic shapes. Some distance off the road, we were told, is a locality where blocks of pumice as "big as a meeting-house" may be seen, which must have been produced in the furnace of the great dead volcano to the east. In one place Rogue River has a foamy passage through a narrow gorge called The Dalles, below which it widens out in a series of rapids, after which it gathers its waters for a plunge over a sheer precipice one hundred and eighty-six feet perpendicular. The mountains, too, are

delightful, being covered with a grand forest of the noble sugar-pine intermingled with other trees of the same family, and with the shrubby chinquapin, laurel, alder, and maple, according to locality or altitude. The air is bright, clear, and buoyant, almost intoxicating in its vivifying quality, and sweet with the balsamic odor of the *Pinus Lambertina*. Wherever there is an opening to the sun on the hill-sides, there blossoms the rhododendron, the mock-orange, the *Spiræa ariaefolia*, and other ornamental shrubs. Where the dust of the road has lain undisturbed from the day before, it is full of prints of tiny feet of birds and other timid creatures which shun our observation by day, but run about on their errands during the night or early morning.

Descending to the valley, the historical Table Rock, where General Joseph Lane fought the Rogue River Indians in 1853, becomes an object of interest. It is simply a high perpendicular bluff overlooking Rogue River,—the Gibraltar of the Indians in their wars. It brings us back to the contemplation of humanity in phases ill in accord with our late impressions of nature. It is a pity that the former should ever obliterate the latter.

I know how, if I were a painter, I should personify the young giant Oregon. Lithe, strong, beautiful should he be, with empire written on his brow, and power tempered by mildness beaming from his eyes. Of fair complexion he, with tawny blonde hair and curling golden beard. His robe should be of royal purple embroidered with wheat-ears, and his crown of burnished gold. His throne should be among the rugged mountains, with a lake at his feet, rolling yellow plains on one hand, and smiling green valleys on the other. His sceptre, shaped like the tapering pine, should be of silver, set with opals, emeralds, and diamonds. On his right should roll the magnificent Columbia, to which ships in the distance should seek entrance; and over his shoulder the white crest of Mount Hood stand blushing in a rosy sunset.

CHAPTER XIII.

THE GEOLOGICAL FORMATION OF OREGON AND WASHINGTON.

ACCORDING to Mr. Condon, formerly State geologist, the Rocky Mountains once formed the western breakwater of the continent, as the Coast Mountains now do. They were forced up by the subsidence of the ocean bottom, and the consequent upfolding of the earth's crust. The upheaval occurred near the shore-line, but left a narrow strip of the old sea-bed east of the Rocky Range; enough to prove that the upheaval occurred in the Cretaceous period. A large body of salt water was thus isolated, which gradually, by natural drainage, became brackish only, and finally quite fresh. This change is also proved by the nature of the deposits.

After a long interval of quiet, another upheaval took place, occasioned, like the first, by a subsidence of the ocean-bed. At this second folding of the earth's crust, the Cascades and Blue Mountains were forced up, and once more a large body of sea-water was divided off from the ocean, to form great salt lakes, which gradually became fresh. The Blue Mountains formed an island, separating the northern portion of these waters from the southern, which were drained respectively by the Columbia and the Colorado Rivers; but not until by deposits of various character did the bottoms of these basins become sufficiently elevated.

In like manner, the later upheaval of the Coast Range caused to be enclosed between these mountains and the Cascade Range another immense body of water, which became fresh in time like the older lakes, and with the gradual elevation of the sedimentary deposits was finally drained off like them. That the dates of the formation of these lakes were widely separated is evident from the fossils of each, which indicate the geologic period to which they belonged—the deposits of the Wallamet Valley being the most recent.

In the mean time vegetable and animal life flourished along the shores of these inland seas or lakes. There are cañons in East Oregon fifteen hundred feet in depth, whose walls present a

complete and undisturbed record of the geologic periods. First of all in this record is the old ocean-bed of the Cretaceous period, teeming with myriads of marine shells, perfectly preserved in form, though frequently containing, as a mould, a filling of chalcedony or calcareous spar, making specimens of the highest beauty.

Next above the salt-water deposits come those of the earlier Tertiary periods. In this division we find the leaf impressions of those grand trees that flourished during ages of tropical warmth and moisture,—palms, yew-trees, immense ferns. In some places an oak-leaf or an acorn-cup has left its print in the rocks.

Contemporaneous with the palms and ferns were two species of rhinoceros, and three or four species of *Oreodon*, an animal allied in some things to the camel and in others to the tapir family. Another animal of a tapir-like appearance, but called by geologists *Lophiodon*, also lived during this period, and left his bones in the muddy lake margins to become part of earth's history. Also a peccary of large size, and an animal bearing some resemblance to the horse, called the *Anchitherium*,—found also in France and in the *Mauvaises Terres* of Nebraska. The *hipparion*, or small three-toed horse, and a great number of cat-like, dog-like, and hyæna-like animals, besides rabbits and squirrel-like creatures, belonged to this period, as their fossilized remains demonstrate.

Following this age was one of volcanic action and the outpouring of immense quantities of ashes and lava. By the lava-streams issuing from the Blue Mountains new barriers were raised, dividing the northern portion of the great lake of East Oregon more completely from the southern, which, by reason of superior drainage, was the first to become dry land. The lake on the northern side of the Blue Mountains, remaining longest a lake, continued to receive the drift of its shores for a longer period, and consequently offers a more perfect record of the changes which took place through all the Tertiary periods. Several of the strata formed in this lake are of pure volcanic ashes, still rough as pumice stone to the touch.

Thus this Middle Tertiary period was closed in violence. Volcanic fire, earthquake-shocks, and molten lava destroyed

and blotted out all forms of vegetable and animal life. The ages roll on, and once more living forms of plant and animal haunt the shores of these shallowing lakes. The oak, the yew, the willow, have left their prints in the sedimentary rocks, and the bones of new creations of animal life, such as the camel and the horse, accompany them. But these, too, in turn suffer extinction by violence,—the whole country being covered more than thirty feet deep in volcanic ashes. Indeed, deposits of volcanic ashes exist in East Oregon which are one hundred feet in depth.

After a long night of geological darkness, during which there seems to have been a subsidence of earthquake and volcanic outflow, life once more appears upon this portion of the earth in the forms of elephant, ox, horse, and elk, accompanied by such vegetable forms as were suitable for their subsistence. Still another period of death was to ensue before the framework of the present Oregon was perfected. And this time the desolation appears not to have come from fire, but from frost and flood. How long it continued, or what mighty seas of ice moved over the face of the earth, marking the hardest rock with glacial abrasion, none can tell. But to have so clearly written in the rocks of Oregon the geologic history of at least one continent, is most interesting to scientist and amateur alike. So far as can be seen, the Columbia River Valley must become the most desirable field for the student of the earth's history, and also of research into the record of prehistoric man. For here, somewhere hidden in these ancient pages of rock, must the beginning of man's history be preserved, like that of God's other creatures, in tablets of stone.

From the brief sketch of Oregon's geologic history which has been given it will appear what the agency has been of those glistening white snow-peaks—Mounts Hood, St. Helen, Adams, Jefferson, and all the rest—in forming the Oregon and Washington of to-day. Time was when these mountains belched forth molten lava, and rained hot ashes over many miles of country on either side. For some reason—perhaps the direction of the prevailing winds—the ashes were chiefly deposited on the east side of the range. The volcanoes themselves, in general, stand on the east side of the summit of the range. A covering of

basaltic rock conceals from sight the record we have referred to, except where by the action of water the pages of the book have been cut through from cover to cover—from ocean-bed to overlying basalt.

For a distance of sixty miles east of Dalles this last overflow may be traced, growing thinner and thinner, until it becomes a mere capping on the hills. Underneath it all is sedimentary, except the interruptions, several in number, of the older outflows of lava. It is owing to the large extent to which volcanic ash enters into the composition of the earth and soil of this portion of Oregon and Washington that both earth and water are so often strongly alkaline. It forms a soil inexhaustible in fertility, and particularly adapted to the growth of cereals; but, owing to its elevation, and to the depth of the stream below the surface, together with a dry climate, is difficult of adaptation to the uses of the agriculturist.

Mr. J. Wessen, in an article published some years since in the *Overland Monthly*, thus speaks of the geological formation of the high plateaux and the lake region of Southeastern Oregon:

"Coming from the northeast, the Blue Range of Oregon, the Cascade Range from the north, and the Sierra from the south, blend into or form a vast steppe or table-land of lava and sage-fields, interspersed with a score of lakes, in size varying from five to forty miles in length, and proportionate width. This high separating belt of land and water commences at the Owyhee River and extends westward to the mountains, running at right angles to the ocean—a length of three hundred miles, and an average breadth of one hundred and fifty. There are three distinct chains of lakes in this district: The eastern, known as the Warner, inclusive of the Harney and Malheur. The second chain of lakes may be called the Goose Lake, including its northern links,—Albert, Silver, and other smaller lakes. Goose Lake nestles in the extreme north end of the Sierra, and is the source of Pitt River, the main branch of the Sacramento. This fact has been disputed, owing, perhaps, to the outlet being underground in the drier seasons. The third and last, and larger of the several chains, is the Klamath, embracing Wright and Rhett Lakes, farther south. The Warner Lakes string along more like a river; and the rapid current, setting north at all

times, is suggestive that this line of water is really the outcropping of a long, subterranean stream. The amount of water is apparently more than the natural drainage of the country adjacent; and the outline of a great river channel is distinctly traceable to the lakes of Harney and Malheur. The latter, however, are strongly tintured with the alkaline soil surrounding them."

Thus does the observing traveller confirm the views of the student of geological science. The southern half of East Oregon retains yet some of the features of the *undrained* lake districts of Oregon and Washington.

That portion of Oregon and Washington which lies west of the Cascades is part of a great trough, extending from the Straits of Fuca to the Bay of San Francisco. It is not, like East Oregon, elevated above the original sea-bed by immense deposits of volcanic matter; but its older rocks are buried from sight by deposits of the Tertiary and post-Tertiary periods.

There is a curious glimpse into the prehistoric record of man given by the fossils of the Wallamet Valley. For instance, the teeth and tusks of the elephant have been found in Linn, Polk, and Clackamas Counties, at no great depth below the surface,—as in three instances they were discovered by men engaged in digging mill-races, probably from eight to twelve feet in depth. Side by side with this fact is the one that at a similar depth some rude stone carvings have been discovered, buried in the alluvial soil of the Lower Wallamet, about two miles above its junction with the Columbia, in Columbia County. Stranger still, there has been discovered at a place just at the northern end of Multnomah County, the remains of a camp-fire, with the half-burnt brands lying in position, as if the fire had but just gone out, and buried under *twenty-seven feet* of alluvial deposit. Equally curious is the fact that in the Nehalem Valley, eight miles back from the coast, and twenty-five feet below the surface, in a place where there is no suggestion even of a possible land-slide, was lately discovered a large knife of pure copper, with a stone handle. Here is a *souvenir* of the stone and copper age! Shall we ever be able to collect any facts concerning these ancient Oregonians? The paleontologists have here a splendid field to delve in.

The work of the volcanoes is also very evident in West Ore-

gon. The valley of the Lower Columbia, in particular, reveals the immense overflows of lava in its forms of basaltic rock. In numerous places it occurs in solid masses of many feet in thickness; in others it has assumed the columnar form; and in many more it is broken into sharply angular fragments, mixed with earth. The fracture in the latter case is foliated,—every fresh cleavage showing what appears like the impression of palm-leaves. The most interesting form of basalt occurs in some columns in the high river-banks just below the town of St. Helen. These columns have been brought to view by the gradual process of denudation; and now project a dozen feet or so of their tops from the incline of the high bluffs. They consist of uniform blocks, of about ten inches in thickness, having six sides,—laid one above another so as to appear like a solid pillar. But their great peculiarity is that each individual block has a similar-sized chip off the lower side on its northwest corner or angle. With this exception the blocks are flat. Occasionally one gets thrown off, and so the columns never appear at any great height above the earth; but their fragments strew the river bank for a long distance.

This basaltic outflow evidently came from Mount St. Helen. On any of the sand-bars in the Lewis or the Cathlapootle River, which debouches into the Columbia on the opposite side, are to be found water-rolled fragments of pumice-stone in abundance; and there are seasons of high water which bring down from Mount St. Helen by some of its streams—the Cowlitz in particular—so much white volcanic ash as to render the water milky in its appearance. It is somewhat remarkable that, while on the Oregon side the basalt covers every stratified rock or sedimentary deposit, on the Washington side the hills are immense deposits of coarse gravel or sand and water-rolled stones.

About in the central portion of the Wallamet Valley are some gravel-beds of no great thickness; while in Washington, along the Columbia and in the Puget Sound region, the soil is gravelly to an extent which renders it almost unfit for cultivation. Did the facilities which the sound offered for drainage prevent the deposit of soil-making matter during the period of its submergence?

There are evidences, in the elevated beaches of the Oregon and Washington coast, of great changes of water level over

that portion of these countries west of the Cascades. At Shoal-water Bay, for instance, where the action of the surf has undermined large portions of the bluff shore, breaking it off, there are, exposed to the eye of any observer, vertical sections of sedimentary deposit one hundred feet above the present sea-level. Mixed with this deposit, and sometimes occurring in beds, are vast numbers of sea-shells, of the kinds now common to our oceans. The presence of oyster, clam, and other shells, only found in shallow water; as also of trunks of trees, leaves, seeds, and cones,—their forms preserved unbroken,—proves these fossils to have been deposited quietly in water of no great depth, and to have remained undisturbed since. Granting this apparent fact, the waters in which they were deposited must have stood more than a hundred feet higher than the present level of the ocean, or enough higher than the highest of these deposits to have sufficiently covered them.

Mr. Condon's theory, to which reference has already been made, supposes what is now the Wallamet Valley to have been the basin of a large body of water, to which, in an article in the *Overland Monthly*, of November, 1871, he gives the name of the Wallamet Sound. The conclusion of that article has this interesting summing up:

"And now, with our amended theory in mind, as a measuring-rod, let us retrace our steps to the lower country,—the Wallamet Sound of the olden time. Let the fall of the Columbia River, from this lake-shore east of the Cascade Mountains to the mouth of the Wallamet River, be stated at eighty feet. Our fossil remains on this lake-shore are two hundred and fifty feet above the present level of its waters, making a total of three hundred and thirty feet as the depth of those waters above the present surface at the mouth of the Wallamet River. How naturally one looks to the currents of such a vast body of water as the agency competent to the heaping up of that long, sandy ridge, one hundred feet high, through which the river has cut its way at Swan Island, north of Portland. But let us follow it still farther inland. Over where Portland now stands, these waters were three hundred and twenty-five feet deep; over Salem, one hundred and sixty-five feet; over Albany, one hundred and fifteen feet; over Tualatin Plains, one hundred and forty-five feet;

over Lafayette, one hundred and seventy feet. A narrow strait, over the present valley of the Tualatin River, ten or twelve miles in length, opened westward upon a broad, beautiful bay, extending over the present sites of Hillsboro' and Forest Grove, to Gale's Peak, among the foot-hills of the Coast Range. The subsoil of the fine farms of that rich agricultural region is itself the muddy sediment of that bay. Farther south, over the central portion of the present valley, and lying obliquely across the widest part of that Wallamet Sound, there arose above those waters an elevated island. It extended from a point south of Lafayette to one near Salem, and must have formed a fine central object in the scene. Three or four volcanic islands extended, in an irregular semicircle, where Linn County now is; and the islands of those waters are the Buttes of to-day—Knox's, Peterson's, and Ward's. One standing on the summit of either of those Buttes, with the suggestions of these pages before him, could so easily and vividly imagine those waters recalled, as to almost persuade himself he heard the murmuring of their ripples at his feet—so sea-like, the extended plain around him—so shore-like, that line of hills, from Mary's Peak, on the west, to Spencer's Butte, on the south, and only lost, on the east, among the intricate windings of extended slopes among the foot-hills of the Cascades. How natural would seem to him this restoration of one of geology's yesterdays!

"The shores of that fine old Wallamet Sound teemed with the life of the period. It is marvellous that so few excavations in the Wallamet Valley have failed to uncover some of these relics of the past. Bones, teeth, and tusks, proving a wide range of animal life, are often found in ditches, mill-races, crumbling cliffs, and other exposures of the sediments of those waters, and often within a few feet of the surface. Did man, too, live there then? The world feels an increasing interest in facts that tend to solve the doubts that cluster around this natural inquiry. A few more mill-races dug, a few more excavations of winter floods, more careful search where mountain streams wash their trophies to their burial under still waters, and this question may be set at rest, as regards that Wallamet Sound. Oregon does not answer it yet."

Washington, being formed by the same forces and at the same

period, presents in the Cascade Range, which divides it into east and west halves, the same general features found south of the Columbia River. It is noticeable, however, that there is a great thickness of gravel-beds and sandy deposits on the north side of this boundary, not to be found south of it. All along Puget Sound to the Fuca Strait this is apparent, but when we come to the archipelago in the mouth of the strait, and north for some distance, the upheavals are basaltic, with rounded, dome-like peaks.

The coast of the Olympic peninsula bordering on the strait is also basaltic, and this formation extends to and through the foot-hills of the Coast Range to Mount Olympus. Here the formation changes to slate, sandstone, gravel, and marl.* Granite in place occurs rarely, but lime deposits are found in the streams, indicating the presence of lime-rock or marble somewhere in their channels. The stratification is very much tilted, and therefore displayed in the cañons as orderly as books upon a shelf. The secrets of nature are revealed as plainly as in East Oregon, and give evidence of the comparative youth of these mountains. If other proofs were wanted, they are found in their sharp peaks and jagged sides, where other precipices of rock are found from one thousand to two thousand feet high. Even the beds of the streams are little worn. Where they run through deep cañons, it is where they have found and followed fissures. Cascades are frequent, often plunging over soft slate rock. Thin veins of quartz are seen in the slate and sandstone. Granite boulders are found which appear to be glacial, but there is no evidence of volcanic overflow from any part of this range.

A great deal of interest has been recently exhibited in the exploration of the Olympic Range, several expeditions being in the field this present summer. It does not seem probable that anything further will be learned concerning the general geological features than is already known, but it is hoped to discover some useful minerals. Indeed, since the explorations of a year ago, a copper-mine has been opened which promises well. Of this I shall speak more particularly in another place.

* This statement is made by Charles A. Barnes, geologist of a party which spent the winter of 1889-90 in exploring among the Olympic Mountains.

CHAPTER XIV.

WHAT I LEARNED ABOUT THE MINERALOGY OF OREGON.

THE valuable minerals which have been worked in Oregon are: first, the precious metals, gold and silver; and, second, copper, lead, iron, coal, marble, and salt.

Concerning the formation of the metals, more especially of gold, there are many theories. The age of the rocks associated with gold must serve as an indication of some value in pointing out its origin,—the most probable theory of which seems to be that, at a period when great changes were going on in the shape of the earth, the upheaval of mountains and overflow of volcanoes, certain vapors contained in the earth being forced by heat and pressure into the fissures of rock already hardened, or even into the substance of rock not yet solidified, became precipitated in the form of gold upon the walls of the cavities which shut them in. Much of this gold was subsequently set free by the action of the water, and is found mixed with sand and gravel or earthy matter in old river-beds or valleys between high mountains. Much of it still remains in its original position, and has to be got out of the rock by blasting and crushing.

The gold-fields of Oregon lie along the bases of, or in close neighborhood to, its mountain ranges; and there is no mountain chain which has not somewhere along it a gold-field, more or less productive; but in West Oregon their rugged nature and impenetrable covering of timber have prevented their being much prospected. It is only in the placer diggings of the southern counties and the beach diggings of the coast counties that mining for gold has been carried on to any extent.

After the rush of '49 to the gold-bars of the California rivers had made miners and experts of a hitherto purely agricultural population in Oregon, they began to find indications on their own soil of the existence of the precious metal. Travelling overland to and from California gave them opportunities of observing the nature of the country, and it was not long before the gold-hunters stopped north of the California line. As early as 1852

good placer diggings began to be discovered, and for a number of years were worked with profit. They still yield moderately, but are chiefly abandoned to the Chinese miners, who content themselves with smaller profits than our own people.

Jackson County was formerly divided into several mining districts, the gold being placer and coarse gold. Formerly nuggets were found not far from Jacksonville worth from ten dollars to forty dollars, one hundred dollars, and even nine hundred dollars; but such discoveries are rare of late. I note, however, the recent discovery of a three-hundred-dollar nugget in Jackson County. From first to last Jackson County has contributed thirty million dollars to the gold market of the world.

Without going into mining geology, it is sufficient to remark that the rocks of Rogue River Valley, where gold placers were discovered on Jackson Creek in 1852, are of the Cretaceous period mainly, instead of the earlier Jurassic. All the auriferous rocks are metamorphic, and tilted up at high angles. It is not among rocks of this formation that large or continuous veins are to be looked for, while small gold-bearing veins of quartz are numerous and often misleading. The annual production of gold in Jackson County had dwindled in 1870 to two hundred thousand dollars per annum, which was mined by Chinamen.

At Wagner Creek, in Rogue River Valley, are some quartz mines that have yielded fairly well. Gold Hill, discovered in 1860, and located at the extreme western limit of the valley, is regarded by geologists and miners with a curious interest,—by the former because it is in the midst of a tract of eruptive granite unlike anything else in this region, and by the latter on account of its wonderful promise and pitiable failure. A pocket yielded one thousand ounces per week at the first, which was expended in mining machinery, and it was then discovered that the claim was exhausted. The most recent discovery in Rogue River Valley is of a reputed silver-bearing ledge on Evans's Creek, assaying ninety dollars per ton in silver and two dollars in gold.

There was scarcely a stream in Southern Oregon which would not pay to work, and all were tested. The well paying were Jackson, Althouse, Applegate, and Illinois Rivers; and the best of those were the streams tributary to Applegate, Illinois, and

middle Rogue Rivers, where mining is still carried on by the hydraulic process, and where large sums have been expended in the construction of mining ditches. The Stirling Mine, southwest of Jacksonville, is the most important hydraulic mine in the State, and is owned in Portland. Near Waldo, in Josephine County, there is another well-equipped and paying gravel mine. The water is conveyed to it by a ditch twenty-three miles long, capable of delivering one million two hundred and fifty thousand gallons per hour. Its width is eight feet at top and four at bottom, and it is three feet deep. The hydraulic mean pressure employed is three hundred feet, with three nozzles of six inches aperture. The slope of this ditch is thirteen feet to the mile. Near Uniontown is a hydraulic claim owned and worked by a Chinaman, who employs his countrymen. Water is brought to it by a ditch seven miles long, carrying one million four hundred thousand gallons per hour during the season. The cost of these ditches was ten thousand and twelve thousand dollars respectively. The Applegate ditch, which furnishes water to several claims, is five miles long, with a width at top of six feet, at bottom of three feet, and a depth of three feet. The slope is twenty-two feet. Squaw Lake ditch, twelve and a half miles long, cost, with the dam at the foot of the lake, twenty-six thousand dollars. These ditches render available a large extent of auriferous ground whose working would otherwise be debarred by elevation. Squaw Lake, situated on the Oregon and California line, is a considerable body of water, with an altitude of five thousand feet. A new hydraulic mine has recently been opened in Southern Oregon, at a cost of twenty-two thousand dollars, which promises to return double or treble that amount per annum. It yields twelve and a half cents per yard, which is considered rich dirt. Some nuggets have been picked up in this claim valued at from three hundred and fifty to five hundred dollars. This is a Blue Gravel mine, situated on the Klamath, and there are other claims on this deposit.

Douglas County has several mining localities, the best of which are on the affluents of the South Umpqua River. Of these the chief is Cow Creek, where the placers are extensive and have been worked for thirty years. Quartz mines are also found in the lateral cañons. Two, the Lucky Queen and the Esther, have

enjoyed some notoriety. They are just over the line in Josephine County, the Queen being a few miles only from Grant's Pass. The company expended twenty-five thousand dollars on it, but abandoned it in 1879, since which it has been re-located. The Esther was also abandoned and its machinery sold, the company having expended as much as the mine produced.

The mines of the southern part of Josephine County yield annually about seventy thousand dollars. The pocket mines of Jackson County have furnished a total of about seven hundred thousand dollars, nearly all of which was yielded in the years from 1860 to 1865. The failure of quartz mining in Southern Oregon seems to be owing to a lack of skill and persistence quite as much as to the quality of the rock, which yields assays that should warrant the necessary expenditure to work them.

Coos and Curry Counties, being of the same geological formation as those immediately east of them, have mines of the same character, quartz, gravel, and placer, but not to so great an extent as Josephine. They have besides the black sand of gold beaches, which has been mined quite steadily ever since its discovery in 1852 by some half-breed Indians, at a place a few miles north of the Coquille River. In 1853 they sold their claim to McNamara Brothers for twenty thousand dollars. Pans of black sand taken from their claim yielded from eight to ten dollars. Over one hundred thousand dollars were taken from this claim, which led, as might be expected, to a rush from the valleys to the sea-shore. But few locations paid like the first one, and, although the sand continues to be worked, no one makes more than fair wages.

An ancient sea-beach, three miles inland, was discovered by Mr. Hinch, who took up a claim there which he sold for ten thousand dollars to John Pershbaker & Co., who sold it again for thirty thousand dollars. Like the first location on the lower beach, it was better than any afterwards taken.

The beach sands are black in color because they are composed chiefly of magnetic iron, or oxide of iron, called magnetite. It is hard, strongly magnetic, and infusible. The particles of gold accompanying the sand are extremely small, and so flaky that often they will float upon water, nor can they be brought to unite with quicksilver. This latter quality has caused miners to con-

tend that each particle is coated with a film of iron sulphide which prevents amalgamation, but the microscope reveals nothing to confirm this theory. It is easy to see that, with the sand so heavy and the gold so light, it must be difficult to capture a fortune from beach-mining, the sand of the ancient beaches yielding an average of three dollars per ton. There are more than a hundred of these auriferous beaches, extending from Gray's Harbor on the north to Gold Bluff in California. Twenty-seven of them have been worked. The most important of these are at Yaquina, Alsea, Cape Lookout, Umpqua, Coquille, Ellensburg, and Cheteo. The production varies. The estimate for 1883 in Curry County was twenty thousand dollars. On the other hand, one mine in Coos County yielded eighteen thousand dollars in twelve months.

Quartz and gravel mining are now on a better basis in Southern Oregon than formerly. There are more mills, more mining ditches, and altogether better facilities for extracting the gold of the country, handled undoubtedly with a better knowledge. What the farmer gets out of the earth in one shape the miner extracts in another, and the exchange of products results in a benefit to the agriculturist; hence it is desirable to have a mining population for consumers, a happy combination which exists in Southern Oregon.

The mines of Lane County lie high up on the Middle Fork and McKenzie Fork of the Willamet River in the foot-hills of the Cascade Range. The Bohemia mining district, on the Middle Fork, is about thirty-five miles southeast from Cottage Grove, on the Southern Pacific. The rock of this district is slate and granite, the veins cropping strongly and carrying free gold at the surface. In general the quartz is rose-colored, containing gold and silver, with galena, pyrites, zinc blende, and occasionally antimony. A small stamp-mill is at work in this district, and some rich gold discoveries have been made within the present year.

The Blue River mining district on McKenzie Fork is in a rough and almost inaccessible region, abounding in the magnificent scenery of this range, well wooded and well watered. The quartz veins in this district are in an amygdaloidal trap rock, or graywacke, an altered and decomposed form of igne-

ous rock, which rests upon granite. The veins are large, some of them twelve feet in thickness. The rock is easy to excavate near the surface, but will probably be found harder as it goes down. Free gold is found at the top.

It has been known for twenty-five years that gold existed in this district, and the Treasure mine was worked by arastra for a little time, but abandoned as unprofitable. More recently it has been reopened by other parties, who find it to assay from thirty dollars to forty dollars per ton, and to be free milling. There are several locations on the Blue River ridge dating back no further than 1887. The Eureka, just south of Treasure, is an extension of the same. It has been tested in a small mill, and yields from twenty dollars to thirty dollars per ton. A group of three locations, three-quarters of a mile west of Treasure, are incorporated together under the name of the Blue River Mining Company, and owned in Eugene. The assays of the ore from the Cræsus vary from three dollars and seventy-five cents to one hundred and nine dollars per ton, and of the Imperial from five dollars and fifty cents to twelve hundred dollars. This company has a small mill.

The Lane County Mining Company also own three claims in this vicinity, but have worked only one, the Durango, which assays from two dollars and twenty-five cents to eighty-seven dollars per ton. The King-Bee, a large ledge, was worked to a limited extent twenty-five years ago, and abandoned. It assays from three dollars and seventy-five cents to two hundred and eleven dollars per ton, principally gold. Near the King-Bee is the Buck, owned in Eugene, which assays from four hundred dollars to nine hundred dollars. There are perhaps as many more claims on and immediately about Treasure Hill, which have yet to be heard from. But there seems little doubt that this is a veritable gold-mining district.

Discoveries were also made twenty-five years ago, as well as more recently, at the heads of the Santiam and Molalla Rivers, in the Wallamet Valley. On the latter, in Clackamas County, is a very thick ledge of bluish-white quartz, carrying free gold and pyrites, which assays twenty-five dollars in gold and two hundred and thirty five dollars in silver to the ton. Specimens from this district are shown which assay seven hun-

dred ounces of silver per ton, besides some gold. Other specimens not so rich contain cubic galena, copper, iron pyrites, and zinc blende,—a good smelting ore.

The mines near Wilhoit Springs, on a branch of the Molalla, at an altitude of about twelve hundred feet above sea-level, are found in rocks of a more recent geological era than elsewhere. It is here that a deposit is found, of great extent, which is not rock at all, but a soft, light, silver-bearing earth, in some places sixty feet in depth, with a hardness about that of gypsum. In color it is a gray, varying to red or brown, with a specific gravity of 1.5. The silver contained varies from one to ten ounces per ton, with a small admixture of lead. No practical tests have been made of the value of this remarkable earth.

The most promising mining districts of those bordering the Wallamet Valley are situated on the North and South Forks of the Santiam, and are reached from the Southern Pacific by wagon from Turner, in Marion County. The formations are porphyritic and granitic, similar to the belt along the range, north and south. Some slate, silicious and approaching sandstone, is found. Quartz is abundant, and float carrying gold is frequently found in the water-courses. Greenhorn district was discovered by Dr. E. O. Smith, of Portland, in 1864. Several locations were made, of which the White Bull became famous for giving to the world the most beautiful specimens of arborescent gold ever seen. The quartz was of the nature called "rotten,"—that is, crumbling and stained; and in it occurred what were called "eagles' nests," which, in fact, they resembled, being cavities as large as the crown of a man's hat filled with sticks or straws of gold, which, on examination, proved to be skeins of the finest wire-gold, as evenly twisted into threads as if it had passed through a thread-mill. These skeins were attached to the irregular angles of the quartz on the walls of the cavity, and, crossing in every direction, held some bits of quartz in the tangles they made. The effect of the whole was surprising and magnificent. These elegant specimens, worth twice the gold they contained, were simply ground up like common ore. There was another class of quartz in this mine which was hard, white, and stuck full of bits of gold from the size of a pin-head to a bird-shot.

The sight of these treasures naturally caused great excitement, and gave the owners hope of fabulous riches. A quartz-mill and saw-mill were purchased and set up in the district; but, like the Gold Hill mine in southern Oregon, which, indeed, it resembled, it suddenly failed, the pocket being exhausted. Afterwards the mill was burned. A second effort to make something out of this mine by other parties was also a failure, and a second mill was burned. It is believed, however, that with different methods and concentration, this mine might be made to pay, and recent developments go to confirm it.

Another mine in this district,—the Canal Fork,—carries free gold at the surface only. By working-test it yields from nineteen dollars to thirty dollars per ton. Lower down the ore becomes very base with galena, and assays from two hundred dollars to five hundred ounces per ton of silver. There is a mill on this mine which produced from two hundred tons five thousand dollars, or twenty-five dollars per ton. The cost of the mill and other expenses were twenty thousand dollars. Even at this amount the mine could be made, with good management, to pay.

Other mines in the adjoining district of Galena assay well, and quartz leads charged with lead, copper, iron, and zinc sulphides, the galena carrying silver, are frequent. One galena lode, four feet in width, assays forty ounces of silver to the ton, with no minerals prejudicial to smelting accompanying it.

The Bonanza mine, owned by the Albany Mining and Milling Company, is in the Quartzville district of the Santiam. The ore is free gold in decomposed quartz, and resembles the product of the White Bull mine, assaying, in some instances, twenty-six thousand dollars to the ton. At present this mine promises to hold out for a year or more of milling, in which case the company will secure an ample fortune for all.

Why these mines are not more developed may be owing to several causes. Primarily, a heavy expense attends quartz mining anywhere, and in a country so difficult of access it is increased. Again, these locations have not been made by practical miners, but by merchants and farmers, who have an assured living out of other pursuits, and who have neither the knowledge nor the capital to make a success of mining, but who

hold their discoveries by patent away from improvement by others.

West Oregon has never had a mining population, except so far as they became such temporarily through efforts to mend their fortunes in occasional rushes to placer diggings.* The nearly impenetrable character of the forest on the western slope of the Cascades, hiding from observation by travellers, and even explorers, the character of the rocks, is also a potential reason why so little is known of the mining possibilities of the Wal-lamet Valley.

Quartz veins are found in rock—sandstone running into a smooth whetstone rock, with limestone and soapstone suggestions of a cretaceous origin—in Tillamook County. A few thousand dollars were spent in exploiting a claim on Trask River, which exhibited some good top rock that soon gave out. A working result of sixty-six dollars per ton was obtained from one location, but no development further has ever been made.

The most interesting recent discovery in mining is of a deposit of nickel near Riddle, in Douglas County. It is owned by a California company who purchased it from the Oregon owners for three hundred thousand dollars, and eastern capitalists are negotiating for it. It is claimed that the ore can be worked and refined at a profit of twenty-two dollars and fifty cents per ton.

Natural gas is a recent discovery, made in Linn and other counties, which is regarded as of great importance. The indications are confirmed by the very general presence of coal underlying the foot-hills in almost any part of West Oregon, especially along the lower Columbia and in the Coast Range. Iron most frequently is found near the coal-beds, a feature which promises well for the future manufacturing interests of the State. Columbia County, which faces on the Columbia River, possesses these features in a striking degree, and combined with

* An example of mining by unprofessional miners is this: William Ruble, of Salem, a farmer, and well advanced in life, has been working a mine in Josephine County for the past seven years. His claim consists of three hundred and fifty acres of gravel, out of which, without much capital, he has managed to obtain twenty-five thousand dollars, and to get his ground into good working shape. He could sell it now for ten thousand dollars per acre, but it is worth more to hold and work.

an abundance of timber. Clatsop County has similar resources, though less accessible.

Coal was discovered in Oregon before Washington was separated from it, or about 1852. The first coal, and so far the only coal, mined in this State has been at Coos Bay. A vessel named the "Chauncey" in 1854 was loaded with a cargo taken from a drift in a claim a mile and a half from Coal Bank Slough, and carried in wagons to that place, where it was transferred to scows and taken to Empire City to be put aboard the vessel. After all this labor, the vessel and cargo were lost on the bar. Another cargo was soon afterwards shipped in the same manner, which reached San Francisco, where it brought forty dollars per ton, the freight on it being thirteen dollars.

The following year the Newport and Eastport mines were opened, and commenced shipment in 1856, since which time they have continued to furnish fuel to the California market. The shipments amount to about five thousand tons monthly. The mines opened, after the Newport and Eastport, were the Hardy, in 1871; the Utter, in 1874; the Henryville, the same year; and the Southport, in 1875. Recent reported discoveries of a superior hard coal in the mountains about Coos Bay are interesting capitalists.

Other coal-beds exist in different parts of Oregon, chiefly in the region of the Coast Range. The United States Geological Survey for 1887 gives the following analysis:

	Water.	Volatile Matter.	Fixed Carbon.	Ash.	Coke.
Coos Bay	20.00	32.59	41.98	5.84	
Astoria	2.56	46.29	48.49	2.74	Fair.
Blue Mountain	1.08	24.40	84.71	39.81	Very good.
Camas Mountain . . .	1.53	42.82	44.94	10.71	Non-coking.

CHAPTER XV.

A GLIMPSE OF THE MINES OF EAST OREGON.

WHEREVER in East Oregon the irregular range of the Blue Mountains has lifted itself above the high table-lands and the sedimentary rocks, there are seen the metamorphic or mineral-bearing rocks in which mines may be looked for. These eruptive heights are divided by local nomenclature into Owyhee, Powder River, Pine Creek, John Day, Malheur, Cedar, and Steen Mountains. The mining districts, so far as discovered, are situated on the John Day, Powder, Malheur, and Burnt Rivers and their branches, as they come out of these mountains.

The John Day placer mines were discovered in 1862 by a party of Californians *en route* to Salmon River, in Idaho. These placers were on Granite, Elk, Dixie, and Cañon Creeks, and very productive, as many as five thousand miners being at work there for several seasons. These placers are now given over to a few miners, most of whom are Chinese; but there are others on the numerous creeks upon the head-waters of John Day which are yielding good wages to white men.

The second discovery of any note was in 1863, at Humboldt or Mormon Basin, which lies on the flat top of a ridge between Burnt River and Willow Creek, a fork of the Malheur. Along the sides of this ridge and at its feet were the camps of Rye Valley, Malheur City, Amelia, El Dorado, and Clarksville. Mormon Basin was destitute of water, except that furnished by two small streams, and the melting of the winter snows, which give from twenty to eighty days of a mining stage, according to the season. The first year one hundred miners made an ounce a day to the hand as long as there was water. Later their claims were abandoned, and eventually fell into the hands of companies who worked the deep gravel mines by hydraulic machinery, of which there are several plants in operation. One firm employs twenty-six men, and uses two sets of sixteen-inch sluices, emptying into a thirty-inch flume two thousand feet long. Their hydraulic apparatus consists of seven-inch pipe,

supplying two grants with two-inch nozzles, working under one hundred to two hundred feet head. Their pay-dirt is from five to twenty feet deep, and contains a great proportion of quartz boulders, some weighing a ton or more, and many showing free gold. Several thousand dollars' worth of fine gold quartz specimens have been found in the sluices, which leads to the belief that a valuable quartz mine will yet be discovered. The claim yields from eight thousand to twenty thousand dollars, according to the season. The other firms in Mormon Basin clear up in a season about fourteen thousand four hundred and fifty-six dollars. The total product in 1883 was thirty-five thousand dollars, and at the present rate of working the mines are likely to last for twenty years longer.

El Dorado district, west of Mormon Basin, is furnished with water by the great ninety-mile ditch of Burnt River, and is one of the most important in the State. The Weatherby placers, on Burnt River, produce ten thousand dollars a year by hydraulic process; and the Clarkeville mines, owned in Chicago, with forty miles of ditches and extensive water-rights, carry on a large mining business.

The product of the Granite Creek district, in the John Day Valley, is about twenty thousand dollars per annum—a part of this being from the silver-mines Cabell and Beagle. The Cabell is named after a Nevada miner of that name, who, in searching for smelting ores on the South Fork of Powder River, discovered a number carrying lead, gold, and silver in paying amount. The Cabell ships its ore to Omaha to be smelted, at a cost of fifty-eight dollars per ton, and still makes a profit.

Dixie Creek district, always a productive one, still pays about forty thousand dollars a year from placer mining. There are a good many quartz locations, a dozen or more of which have been worked, in this district, with unknown results. But the annual output of the placers of East Oregon has been estimated to be about three hundred thousand dollars, but, possibly, not over two hundred and seventy-one thousand dollars.

The Nelson Mine, seven miles west of Baker City, is a deep gravel property producing forty thousand dollars per season. It consists of seventy acres of patented land with a deposit of gravel one hundred and seventeen feet in depth, and lies high

enough to afford room for dumping. It is owned by Californians, who bought it for three hundred thousand dollars in 1887, and put in sixty thousand dollars' worth of improvements. There are other valuable gravel mines at Sumpter and Deer Creek, besides many yet to be developed. A railroad is being constructed from Baker City to Sumpter.

Quartz mining had not been profitably carried on formerly for several reasons, mainly the lack of capital and transportation. The first mine discovered and worked was the Virtue, near Baker City. This famous property comprises three thousand feet on a strong vein from two to six feet wide. It has been prospected for one thousand feet to a depth of two hundred and fifty feet. The quartz is free milling costing only seven dollars and fifty cents, while the ore is worth forty dollars. It is estimated that it has yielded two million dollars.

Another valuable free-gold quartz mine is the Conner Creek Mine, on Conner Creek, in Baker County, three miles from Snake River. Although not a high-grade ore, it is so cheaply milled as to yield very large profits. It is partly owned in Portland, and partly in Baker County. The Gold Ridge Mine, four miles from Burnt River, is a similar property, which pays ten dollars per ton, but is now lying idle. It is owned in California.

The silver-mines of Baker County are the Green Discovery and the Monumental, thirty-five miles south of Baker City, in Rye Valley, the Mammoth, thirty miles west of Baker, and the Cabell, already referred to. The first named was found by Green, a prospector, in 1869. The Green vein was large, but only a few inches of it was pay-rock. The total production was twenty-five thousand dollars, but the expenses were twice that amount. The Monumental, belonging to the same company, and only a mile distant, was sold to a Boston firm for fifty-five thousand dollars, which brought the original company out about even. The Mammoth Mine has a vein twenty feet wide, of low-grade rock, in granite. About forty thousand dollars had been taken from this claim in 1888, from face-rock which paid twenty dollars per ton in gold. There are other locations on the same lode. Recent discoveries in the Greenhorn Mountain district are attracting much attention, and this is thought to be one of the richest silver-producing districts in the Northwest.

The Keystone Gold Mine, owned in Portland, is situated seven miles north of Prairie City, in Grant County. It is the most important property in this (Quartzburg) district. It comprises three claims, and has a continuous length of forty-five hundred feet. The quartz carries free gold, metallic silver, iron and copper pyrites, zinc blende, and galena. Assays show one hundred and six dollars per ton in gold, and from one hundred dollars to one thousand dollars in silver. The property is valued at fifty thousand dollars.

The Pine Creek mines, of which one hears a good deal, are situated near the Snake River boundary of Union County, and are geologically interesting, as the stream on which they are situated rises in rugged peaks of greater elevation than any other in the Blue Range. The geology of the district is clearly seen in the cañons of Pine Creek, which show that the foundation of this region is granite overlaid by slate, which, when the internal heat of some volcanic period had fused the granite, was lifted up, broken, and thousands of its fissures filled with the molten rock, by which means the eccentric granite dikes of the district were formed. Other fissures were opened, cutting the granite, which gradually filled with mineral solutions carrying quartz, iron pyrites, copper, galena, and, in smaller proportions, gold and silver. At some later period other convulsions followed, during which dikes of lava, trachytic or porphyritic in character, were forced up through the strata, cutting the quartz veins. At a still later period there was an outburst of melted trap rock, which filled deep fissures, and cooled in thick sheets over all. Water and ice wore away this covering forming the soil of East Oregon, as previously noted, and also in carving out the perpendicular dikes left cavernous recesses in the cliffs, but the lava dikes were left standing like monuments to the dead granite and trap.

It is superfluous to remark that where successive meltings and upheavals have occurred the quartz veins in the older granite are often interrupted and lost, and that no miner is safe from such an ending to his enterprise. Nevertheless, the Pine Creek mines enjoy a high reputation.

About 1862 some Umatilla Indians brought a quantity of gold, which appeared to have been extracted from quartz in an im-

perfect manner, to a trader at Walla Walla, who with others attempted, on information given by the Indians, to reach the mines, but, failing, joined the gold-seekers then rushing into Idaho through the Grand Rond Valley, and it was not until 1884 that the locality so long ago sought was discovered. The mines lie in granite, in granite and slate, and sometimes in the plane of contact between the two.

The Contact Silver-Mine, sixty or seventy miles northeast of Baker City, is an example of the latter vein. It is accessible only from Cornucopia, from which place it is distant three miles, and two thousand feet higher. The vein runs along the south side of the mountain, one thousand feet above the stream, and parallel with it. It has an average width of four feet, and lies upon granite, with the slate above, dipping into the mountain at an angle of forty-five degrees. The rock is easily mined, and said to be rich.

The Whitman Mine has been worked more than any other in the district. It is owned in Louisville, Kentucky, by a company with capital sufficient to develop whatever riches it may contain. They have at least found geological eccentricities enough to confound the scientists.

Several claims opened only by prospect holes are located on the mountain, of which Red Jacket, Robert Emmet, Union, and Companion mines are most prominent. On the middle fork of the Imnaha River, graphic tellurium has been discovered in Silver Tongue Mine, owned by private parties. The ore assays from two hundred and twenty-five dollars to twenty-one thousand dollars per ton, in gold. A large country remains unprospected in the Pine Creek region, on the Wallowa County side, where argentiferous galeña and gold-bearing ores are known to exist.

The ores of this district are base, and smelting will be a necessity. The free gold which appears on the surface is owing simply to the decomposition of sulphurets into oxidized compounds of the other accompanying metals, which, being friable and loose, have been washed away, leaving the gold free; but this, although highly gratifying at first, cannot go below a certain depth.

Metallurgical works have been established at Allentown, for

chlorinating and leaching gold and silver ores. A roasting furnace for desulphurizing concentrations, a two-stamp mill for working test lots, an assay-office, and other conveniences are also to be found in the Pine Creek, or, as it is named, Granite district.

On the stage-road from Baker City to Pine Creek are the Sparta, Eagle, and Hog 'Em districts. The first of these is old placer-mining ground, which formerly yielded thirty-five thousand dollars per annum. A gold quartz mine, for which a Salt Lake company paid fifty thousand dollars, is located in the latter district. There is a ten-stamp mill here, and a mill at Sparta. A Salmon pulverizer and an arastra furnish crushing power to the mines hereabouts.

It will be readily seen from the foregoing that quartz mining is in its infancy in Oregon, yet that its mineral resources are considerable. Just what amount of gold and silver is produced cannot be shown, owing to the fact that ores are often milled or smelted away from the producing locality, and the results coined in the several mints of the United States, where the locale of the precious metals is not always known. Perhaps an average of half a million of gold is obtained from the mines of this State annually. The silver-production is much less, this metal never being found in placers, and requiring mills and smelters to dislodge it from its matrix.

The mineral belt of East Oregon is but a continuation of the Idaho metal-bearing mountains, as, for instance, the Seven Devils country, north of the Weiser River, and directly east of Union County. This region has an elevation little above that of the Pine Mountains, and derives its Satanic appellation from a group of seven peaks which overshadow one of the greatest copper-mines in the world. This district covers a scope of country fifteen by twenty-four miles, and contains vertical veins from thirty to one hundred and fifty feet wide and thousands of feet deep.

This district was discovered twenty-five years ago by one Levi Allen, who located the Old Peacock, the phenomenal surface mine of the world. He held it by doing one hundred dollars' worth of work on it annually until 1888, when he was forced to take in Montana parties, who now own thirteen-sixteenths.

The mine is valued at several millions. The ground has been sluiced off for half a mile for the free gold it contained, exposing twelve acres of copper running from thirty to eighty per cent., of a value of between five and six millions.

There are several other mines as rich in the Seven Devils country. The Peacock group contains the South Peacock, with one hundred yards square of copper, of unknown depth; the Bodie, Standard, Little Peacock (assaying fifty-seven per cent. copper, thirty dollars gold and silver), Copper Key, Confidence, and Side Issue. Then there is the Lockwood group of three mines. Four tons of this ore make one ton of copper matte, with thirty-two dollars per ton of matte in gold. It carries its own flux, as it has sufficient iron in and near it to make it the best smelting ore in the country.

The River Queen, near Snake River, is promising to merge into silver and gold, assaying fifty-six per cent. copper, ten dollars and eighty cents silver, and five dollars in gold. It carries its own flux also. The Decora has an extensive deposit of low-grade ore and a fine mill-site. There are ten or a dozen other mines and one hundred and twenty-five locations in this region. Some capitalists of Montana have expended one hundred and seventy-five thousand dollars in development. The possibilities of Seven Devils mineral belt are beyond computation.

The nearness of this wealth to the eastern counties of Oregon is of great significance to this part of Oregon. The difficulty hitherto has been the inaccessibility of these mines, which were reached by two hundred miles of exceedingly rough and dangerous travel. But capital, which smooths all our ways, will find a means of making travel to these mines as easy as to any others, and the scenery of the route is magnificent.

As I have endeavored to classify the other productions of the State somewhat by counties, it may not be without interest to present the following table of mineral productions by counties, which I borrow chiefly from statistics published by the State Board of Agriculture.

Baker.—Gold in quartz and placers, silver in lodes, copper (native), coal(?), building-stones, nickel ore, limestone and marble, cinnabar.

Benton.—Coal, building-stones, gold in beach sands, iron pyrites

Clackamas.—Iron ore and ochres, gold in quartz lodes, copper ores, building-stones, galena, coal.

Clatsop.—Coal, potters' clay, iron ore, and jet.

Columbia.—Iron ore, coal, salt springs, manganese ore.

Coos.—Coal, gold in beach sand, stream placers, and quartz lodes, platinum and iridosmine, brick-clays, chrome iron, magnetic sands (auriferous).

Crook.—Gold in placers and ledges, opal, building-stones, coal, mica, chalk, moss-agate, iron and copper ores.

Curry.—Iron ore, gold in stream placers and beach sands, platinum and iridosmine, chrome iron ore, silver(?), coal(?), borate of lime, building-stones.

Douglas.—Gold in lodes and placers, nickel, quicksilver, building-stones, copper, native and ore, coal, salt springs, natural cement, chrome iron ore, platinum, and iridosmine.

Gilliam.—Coal(?).

Grant.—Gold in lodes and placers, silver in lodes, coal, iron ore.

Jackson.—Gold in lodes and placers, iron ore, quicksilver, mineral waters, graphite, building-stones, coal, limestone, infusorial earth.

Josephine.—Gold in lodes and placers, copper ores, heavy spar, limestone, and marble.

Klamath.—Mineral waters.

Lake.—Mineral waters.

Lane.—Gold in quartz and placers, zinc ores, coal(?), magnetic iron ore.

Linn.—Gold in quartz and placers, copper ores, galena, zinc blende.

Malheur.—Nitrate beds, alkaline salts.

Marion.—Gold and silver in quartz, limestone, bog iron ore.

Morrow.—

Multnomah.—Iron ore, building-stones.

Polk.—Building-stones, salt springs, mineral waters, iron pyrites, limestone.

Tillamook.—Gold in beach sands, coal, rock-salt, iron ores, building-stones, iron pyrites.

Umatilla.—Gold in lodes on head-waters of Umatilla River, placers on Columbia River, coal and iron ore.

Union.—Gold in lodes and placers, silver in lodes, hessite, ochre.

Wallowa.—Gold in lodes, silver in lodes, copper, building-stones.

Wasco.—Mineral waters.

Washington.—

Yankhill.—Mineral springs, iron pyrites.

CHAPTER XVI.

A TALK ABOUT THE FORESTS OF THE NORTHWEST.

IN the Northwest the forests are found almost exclusively on the mountains. Along the margins of streams there is usually a belt of timber a quarter of a mile in breadth; and on Puget Sound the timber reaches from the mountains down to this inland sea, the same as on the outer coast. On the Columbia this belt, even on the low grounds, is wide, and, as there is a range of highlands of considerable elevation extending from the mouth of this river to and beyond its passage through the Cascade Mountains, with only occasional depressions, there is a great body of timber within reach of tide-water.

The base of the Coast Mountains on the west comes within two to six miles of the sea, and frequent spurs reach quite to the beach, forming high promontories. From the coast to the eastern base of the Coast Mountains is a distance of from twenty to thirty miles. Allowing for the margin of level land toward the sea and for openings among the foot-hills on the eastern side, here is an immense body of forest lands extending the whole length of the State, from north to south.

Again, the Cascade Range has a base from east to west of about forty miles, including the foot-hills. All the west side of this range is densely wooded, making another great supply of timber. The east side, having an entirely different climate, does not support the same heavy growth of trees.

These forests furnish a most interesting study to the botanist. Beginning our observations on the coast, we find that near the sea we have, for the characteristic tree, the black spruce (*Abies Menziesii*). It grows to a diameter of eight feet, and to a considerable height, though not the tallest of the spruces. Its branches commence about thirty feet from the ground, growing densely, while its leaves, unlike the other species, grow all round the twig. The foliage is dark green with a bluish cast. The bark is reddish and scaly, and the cones, which grow near the ends of the branches, are about two inches in length, and

purplish in color. In appearance it resembles the Norway spruce. It loves a moist climate and soil, growing on brackish marshes and inundated islands. The timber is used in making packing-boxes for fruit, as it has no strong flavor like the fir.

The Oregon cedar (*Thuya gigantea*) grows very abundantly near the coast. This tree attains to a very great size, being often from twelve to fifteen feet in diameter, but is not so high as the spruce. The branches commence about twenty feet from the ground. Above this the wood is exceedingly knotty; but the lumber obtained from the clear portion of the trunk is highly valued for finishing work in buildings, as it is light and soft, and does not shrink or swell like spruce lumber. For shingles and rails it is also valuable, from its durability.

The Indians make canoes of the cedar nearly as light and elegant as the famous birch canoes of more northern tribes. Formerly they built houses of planks split out of cedar with no better implement than a stone axe and wedge. An axeman can split enough in two or three days to build himself a cabin. This tree is nearly allied to the *arbor vitæ*, which it resembles in foliage, having its leaves in flat sprays that look as if they had been pressed. On the under side of the spray is a cluster of small cones. The bark is thin, and peels off in long strips which are used by the Indians to make matting, and a kind of cloth used for mantles to shed the rain. It is also used by them to roof their houses, make baskets, etc. Altogether, it is the most useful tree of the forest to the native.

Hemlock-spruce (*Abies Canadensis*) is next in abundance near the coast. It grows much taller than the cedar, often to one hundred and fifty feet, and has a diameter of from six to eight feet. The color is lighter and the foliage finer than that which grows in the Atlantic States, and the appearance of the tree is very graceful and beautiful.

Another tree common to the coast is the Oregon yew (*Taxus brevifolia*). It is not very abundant, grows to a height of thirty feet, and flourishes best in damp woods and marshy situations. The wood is very tough, and used by the Indians for arrows. When much exposed to the sun, in open places, the foliage takes on a faded, reddish appearance. It bears a small, sweet, coral-red berry, of which the birds are very fond.

A few trees of the red fir (*Abies Douglassii*) occur in the Coast Mountains, but are not common; also an occasional white spruce (*Abies taxifolia*), and north of the Columbia small groves of a scrub-pine (*P. contorta*) appear on sandy prairies near the seabeach. It grows only about forty feet high, and has a diameter of two feet.

Of the broad-leaved, deciduous trees which grow near the coast, the white maple (*Acer macrophyllum*) is the most beautiful and useful. It grows and decays rapidly,—the mature tree attaining to the height of eighty feet, and a diameter of six feet; then decaying from the centre outward, lets its branches die and fall off, while from the root other new trunks spring up and attain a considerable size in four or five years. The wood has a beautiful grain, and is valuable for cabinet manufactures, taking a high polish. The foliage is handsome, being very broad and of a light green. In the spring long racemes of yellow flowers give the tree a beautiful and ornamental appearance, which make it sought for as a shade-tree.

The Oregon ulder (*Alnus Oregona*) is another cabinet-wood of considerable value. The tree grows to a height of sixty feet, with a diameter of two or three feet. It has a whitish-gray bark, and foliage much resembling the elm. On short stems, near the ends of the branches, are clusters of very small cones, not more than an inch in length. When grown in open places, with sufficient moisture, it is a graceful and beautiful tree.

Three species of poplar are found near the coast,—the cottonwood (*Populus Monilifera*), the quaking asp, *Populus Tremuloides*, and the balsam-tree (or *P. Angustifolia*). They are found on the borders of streams and by the side of ponds or springs, but not so abundant near the coast as east of the Coast Mountains.

Along the banks of creeks and rivers grows one kind of willow (*Salix Scouleriana*), about thirty feet in height, and not more than a foot in diameter, with broad, oval leaves; of very little value.

The vine-maple (*A. Circinatum*) is more a shrub than a tree, seldom growing more than six to twelve inches thick near the ground, and not more than twelve to twenty, rarely thirty, feet in height. It grows in prostrate thickets, in shaded places, twining back and forth and in every direction. The wood being

very tough, it is almost impossible to get through them; and they form one of the most serious obstructions to surveying or hunting in the mountains. The leaf is parted in seven dentated points, and is of a light green. These bushes make a handsome thicket at any time from early spring to late autumn, being ornamented with small red flowers in spring and with brilliant scarlet leaves in autumn.

Another shrubby tree, which makes dense thickets in low or overflowed lands, is the Oregon crab-apple (*Pyrus Rivularis*). This really pretty tree grows in groves twenty feet in height, and so closely as with its tough, thorny branches to form impenetrable barriers against any but the smaller animals of the forest. The fruit is small and good-flavored, growing in clusters. The tree is a good one to graft upon, being hardy and fine-grained.

Another tree used to graft on is the wild cherry (*Cerasus Mollis*), which closely resembles the cultivated kinds, except in its small and bitter fruit. In open places it becomes a branching, handsome shade-tree, but in damp ravines sometimes shoots up seventy feet high, having its foliage all near the top.

When we undertake to pierce the woods of the Coast Mountains, we find, in the first place, the ground covered as thickly as they can stand with trees from three to fourteen feet in diameter, and from seventy to three hundred feet in height. Wherever there is room made by decay, or fire, or tempest, springs up another thicker growth, of which the most fortunately located will live, to the exclusion of the others. Every ravine, creek, margin, or springy piece of ground is densely covered with vine-maple, cotton-wood, or crab-apple.

As if these were not enough for the soil to support, every interstice is filled with shrubs, some tough and woody, others of the vining and thorny description. Of shrubs, the sallal (*Gaultheria Shallon*) is most abundant. It varies greatly in height, growing seven or eight feet tall near the coast, and only two or three in the forest. The stem is reddish, the leaves glossy, green, and oval, and the flower pink. Its fruit is a berry of which the Indians are very fond, tasting much like summer-apple. This shrub is an evergreen.

Three varieties of huckleberries belong to the same range,—

one, an evergreen, having fruit and flowers at the same time. This is the *Vaccinium Ovatum*, with leaves like a myrtle, and a black, rather sweet berry. The second has a very slender stalk, small, deciduous leaves, and small acid berries of a bright scarlet color. This is *V. Ovalifolium*. The third—*V. Parvifolium*—resembles more the huckleberry of the Eastern States, and bears a rather acid blueberry. In favored localities these are as fine as those varieties which grow in Massachusetts or Michigan. In addition to these is a kind of false huckleberry, bearing no fruit; and a species of barberry, resembling that found in New England.

Of gooseberries there are also three varieties, none of them producing very good fruit. They are *Ribes Laxiflorum*, *Bracteoseum*, and *Lacustre*.

The salmon-berry (*Rubus Spectabilis*) is abundant on high banks and in openings in the forest. It resembles the yellow raspberry.

Of plants that creep on the ground there are several varieties, some of them remarkably pretty. Of wild roses, *spiræa*, woodbine, mock-orange, thorn-bushes, and other familiar shrubs, there are plenty.

The devil's walking-stick (*Echinophanax horridum*) is a shrub deserving of mention. It grows to the height of six feet, in a single, thorny, green stem, and bears at the top a bunch of broad leaves, resembling those of the white maple. When encountered in dark thickets it is sure to make itself felt, if not seen. Add to all that has gone before, great ferns,—from two to fourteen feet in height, with tough stems, and roots far in the ground,—and we have the earth pretty much covered from sun and light.

These are the productions, in general, of the most western forests of Oregon. When we try to penetrate such tropical jungles, we wonder that any animals of much size—like the elk, deer, bear, panther, and cougar—get through them. Nor do all these inhabit the thickest portions of the forest, but the elk, deer, and bear keep near the occasional small prairies which occur in the mountains, and about the edges of clearings among the foot-hills, except when driven by fear to hide in the dark recesses of the woods. In the fall of the year, when the acorn

crop is good in the valley between the Coast and Cascade Mountains, great numbers of the black bear are killed by the farmers who live near the mountains.

As this region just described is, so is the whole mountain system of West Oregon and Washington. Along the eastern slope of the Coast Range, around Puget Sound, along the Columbia highlands above a point forty miles from its mouth, and on the western slope of the Cascades, the same luxuriance of growth prevails. Indeed, nearly all the trees enumerated—the black spruce and scrub-pine are exceptions—belong equally to the more eastern region. And the same of the shrubs.

But in this more eastern portion grow some trees that will not flourish in the soil and climate of the coast. Of these the most important is the red fir (*Abies Douglassii*). Very extensive forests of it inhabit the mountain-sides and Columbia River highlands. It grows to a great height, its branches commencing fifty feet from the ground. The bark is thick and deeply furrowed, the leaves rather coarse, and the cone is distinguished from other species by having three-pointed bracts between the scales.

The red fir is more used for lumber than any other kind, though it is of a coarse grain and shrinks very much. It is tough and durable if kept dry. It is a very resinous wood, from which cause large tracts of it are burnt off every year. Yet it keeps fire so badly in the coals that there is little danger of the cinders carrying fire when buildings constructed of it are burned: it goes out before it alights.

The yellow fir (*A. Grandis*) is also a tree which does not like sea-air, and is very valuable for lumber. It is distinguishable at a distance by its superior height, often over three hundred feet, and by the short branches of the top, which give it a cylindrical shape. It is admirably adapted for masts and spars, being fine-grained, tough, and elastic. The best of lumber is made from this fir, and large quantities of it are exported from the Columbia River. The bark of the yellow fir is smoother and not so deeply furrowed as the red, and the oval cone is destitute of bracts.

The other species of fir are *Abies concolor*, called white fir in California, and found in the mountains south of the Three

Sisters; *Abies nobilis*, inhabiting the mountains at an elevation of three thousand to five thousand feet; *Abies amabilis*, or lovely fir, the most beautiful of its genus; and *Abies sub-alpina*, a mountain tree. The hemlocks are the mountain hemlock, known as *Abies Williamsonii* and *Pattoniana*. Sitka cedar, *Cupressus nutkaensis*, is found at the base of Mount Hood; and *Libocedrus decurrens*, thick-barked cedar, from Santiam River southward.

Of foliaceous trees not found on the coast, is the oak (*Quercus jarryana*), which does not attain a very great size, not growing more than fifty feet high, except in rich, alluvial lands, where it attains fine dimensions. Another and smaller scrub-oak (*Quercus Kelloggii*) is common, and the wood is good for axe-helves, hoops, and similar uses. The wood of the larger variety is used for making staves, and the bark for tanning.

Of all the trees growing along water-courses, the Oregon ash (*Fraxinus Oregona*) is the most beautiful. In size it compares closely with the white maple. Its foliage is of a light yellow-green, the leaves being a narrow oval. Like the maple, it has clusters of whitish-yellow flowers, which add greatly to its grace and delicacy of coloring. The wood is fine-grained, and is useful for manufacturing purposes.

A little back from the river, yet quite near it, we find the Oregon dogwood (*Cornus Nuttallii*). It is a much handsomer tree than the dogwood of the Atlantic States, making, when in full flower and in favored situations, as fine a display of broad, silvery-white blossoms as the magnolia of the Southern States. As an ornamental tree it cannot be surpassed, having a fresh charm each season, from the white blossoms of spring to the pink leaves of late summer and the scarlet berries of autumn. Its ordinary height is thirty or forty feet, but in moist ravines and thick woods it stretches up towards the light until it is seventy feet high.

A very ornamental wild cherry, peculiar to Oregon—a species of choke-cherry—is found near water-courses. The flowers are arranged in cylindrical racemes of the length of three or four inches, are white, and very fragrant. It flowers early in the spring, at the same time with the service-berry, when the woody thickets along the rivers are gleaming with their snowy sprays.

A broad-leaved evergreen is the arbutus (*A. Menziesii*), commonly called laurel, which is found in the forests of the middle region from Puget Sound, north of the Columbia, to California and Mexico. In Spanish countries it is known as the madrone-tree. The trunk is from one foot to four feet in thickness, and when old is generally twisted. The bark undergoes a change of color annually; the old, dark, mahogany-colored bark scaling off, as the new, bright, cinnamon-colored one replaces it. The leaves are a long oval, of a bright, rich green, and glossy. It flowers in the spring, and bears scarlet berries in autumn resembling those of the mountain-ash. Altogether, it is one of the handsomest of American trees.

White oak, *Quercus garryana*, is common to all parts of West Oregon and Washington, but the *Quercus Kelloggii*, or black oak, is confined to the southern and middle counties of Oregon. Mountain-ash, *Pyrus sambucifolia*, a beautiful ornamental tree, is a native of the sub-alpine ranges. Chittim-wood or bearberry, *Rhamnus purshiana*, a shrubby tree growing in the valleys, furnishes a bark which is an article of commerce, being extensively used in the preparation of cathartic and tonic medicines.

A very peculiar and ornamental shrub is the holly-leaved barberry (*Berberis aquifolium*). It has rather a vining stalk, from two to eight feet high, with leaves shaped like holly leaves, but arranged in two rows, on stems of eight or ten inches in length. It is an evergreen, although it seems to cast off some of its foliage in the fall to renew it in the spring. While preparing to fall, the leaves take the most brilliant hues of any in the forest, and shine as if varnished. The fruit is a small cluster of very acid berries, of a dark, bluish purple, about the size of the wild grape, from which it takes its vulgar name of "Oregon grape."

In damp places away from the rivers grows the rose-colored spiræa (*S. Douglassii*), in close thickets; it is commonly known as hardhack. Near such swamps are others of wild roses of several varieties, all beautiful.

I am not able to give the names of all the numerous kinds of trees and shrubs which grow in close proximity in the forests of the Northwest, although I have been at some trouble to do so. Beginning at the river's brink, we have willows, from the red cornel, whose crimson stems are so beautiful, to the coarse,

broad-leaved *C. pubescens*, ash, cotton-wood, and balsam-poplar. On the low ground are roses, crab-apple, buckthorn, wild cherry; a little higher, service-berry, wild cherry again, red-flowering currant, white *spiræa*, mock-orange, honeysuckle, low blackberry, raspberry, dogwood, arbutus, barberry, snowberry, hazel, elder, and alder. Gradually mixing with these, as they leave the line of high water, begin the various firs, which will not grow with their roots in water. As the forest increases in density the flowering shrubs disappear, to reappear at the first opening. The blue elder becomes a handsome tree forty feet in height in the Columbia region, and two other varieties, with red and yellow berries, are highly ornamental.

It would be impossible to exaggerate the beauty of such masses of luxuriant and flowering shrubbery covering the shores of the streams. Even the great walls of basalt which are frequently exposed along the Columbia are so overgrown with minute ferns, and vivid-green mosses and vines, as to be much more beautiful and picturesque than they are forbidding.

In the Southern Oregon forests one finds some trees and shrubs not found in the Wallamet division of Oregon, nor in that part of Washington drained towards the Columbia,—namely, the myrtle, *Umbellularia Californica (oreodaphne)*, a beautiful tree with glossy foliage, and one hundred feet in height; Port Orford cedar, *Cupressus lawsoniana (chamæcyparis)*, one of the most valuable trees of commerce, growing two hundred feet high; redwood (*Sequoia sempervirens*), two hundred and fifty feet in height; nutmeg, resembling the myrtle, and found in the same habitat, bearing a smaller nut than that of commerce. In the southern valleys the live-oak (*Quercus chrysolepis*), chestnut-oak (*Quercus densiflora*); on the foot-hills of the Cascade Range, the chinquapin (*Castanopsis chrysophylla*), sugar-pine (*Pinus lambertina*), a magnificent tree, two hundred and fifty feet in height, bearing cones eighteen inches in length, and having a sweet and viscid sap, which when dry resembles sugar; and *Pinus tuberculata*, a small tree found in patches. The flowering shrubs of Southern Oregon, not common to the Columbia and Wallamet regions, are the manzanita (*Arctostaphylos pungens*), blue spiræa, found on the Umpqua and at Coos Bay, and the *Rhododendron maximum*, found there and also on the foot-hills of the Cascades.

It is a singular fact that this beautiful shrub reappears as far north as Port Townsend, while it avoids intermediate country in both Oregon and Washington.

On the east side of the Cascades and on the Blue Mountains, the trees not common to the whole State are the larch, or tamarack (*Larix occidentalis*), used for lumber; *Larix lyallii*, a small larch; *Pinus albicaulis*, a mountain pine; *Pinus monticola*, or silver pine; mountain mahogany, *Cercocarpus ledifolius*; *Juniperus occidentalis*, mountain juniper; and along the streams in East Oregon and Washington a small birch, *Betula occidentalis*, the box-elder, and the sumach. Doubtless some few trees and many shrubs have escaped notice, but the omissions are unimportant. All that is here said of Oregon applies equally to Washington, where Puget Sound might be substituted for Columbia River; while the trees of the mountain ranges and sea-coast are the same in both States, with some local exceptions, such as that of the Port Orford cedar.

Washington contains more large bodies of timber standing on level ground than Oregon does. An immense extent of fir and cedar forest encircles the whole sound and borders all the rivers, besides that which is found on the foot-hills of the Cascade and Coast ranges. It is estimated that three-fourths of West Washington is covered with forest, a large proportion of which is the finest timber in the world, for size and durability. It is nothing unusual to find a piece of several thousand acres of fir, averaging three and a half feet in diameter at the stump, and standing two hundred feet without a limb, the top being seventy feet higher. Three hundred feet is not an extraordinary growth in Washington. It is estimated that the area of forest land in Oregon and Washington covers sixty-five thousand square miles. Not all of this timber is accessible, nor all of it valuable for market, and yet the quantity is immense that is marketable. Some day it will all be found fit for lumber-making, but at present only the largest and straightest trees are sawed up, and those in a very wasteful manner, a great deal being thrown away and burned up, except in East Washington, where, timber being scarce and the mills located in the mountains, slab and unmarketable lumber is cut up into firewood.

The mills of Oregon manufacture about one hundred and

seventy million feet of lumber annually; those of Puget Sound and the East Washington mills, one billion feet. Most of the Oregon production is consumed at home, while the Washington output is very largely exported.

The kinds of timber adapted to lumbering purposes are known as the red, white, and yellow fir, cedar, hemlock, and, in some localities, pine and larch. The red fir constitutes the great bulk of common lumber; the yellow fir is used where strength and elasticity are required, as in spars of vessels, piles, wharves, bridges, and house-building; and cedar for foundations of houses, fence-posts, and inside finishing of houses.

The cabinet-woods are maple, alder, and arbutus. There is oak for staves and other purposes; but nothing that answers for wagon-making grows on these mountains. Hemlock becomes valuable as furnishing bark for tanning leather. Ash is used for some mechanical purposes, and makes excellent firewood.

The red fir, being very resinous, might be made valuable for its pitch. Oregon turpentine is of superior quality, but, owing to the high freights and high rates of labor on this coast, has not heretofore proved profitable as an export. It is common to find a deposit of dried pitch or resin in the trunks of large fir-trees—especially those that have grown on rocky soil—of one to two inches in thickness, either forming a layer quite round the heart of the tree or extending for fifty feet up through the tree in a square "stick."

Trees that have been destroyed by fire have their roots soaked full of black pitch or tar, and even the branches of growing trees drop little globules of clear white pitch on the ground. This wood makes excellent charcoal, in the burning of which a great deal of tar might be saved by providing for its being run off from the pit. There is also plenty of willow wood for making charcoal growing on all the bottom-lands. Fires are permitted to destroy much fine timber every year, settlers being unable to remove the heavy growth by any other means.

CHAPTER XVII.

ABOUT THE BOTANY OF THE NORTHWEST.

MANY of the flowering shrubs of Oregon and Washington have already been mentioned in the chapter on forests. One of the first to blossom is the red flowering currant (*Ribes sanguineum*), which puts forth its flowers before its leaves are fully expanded, like the Judas-tree of the Missouri Valley, which it resembles in color. There appear to be two or three varieties of this species, as the color varies from a pale rose-color to a full crimson. The flower is arranged in clusters upon a slender stem like the green blossoms of the garden currant, but is much larger, and of a different shape. The bush is highly ornamental when in blossom, and generally introduced into gardens for decoration. It flowers in March. East of the Cascades is a yellow species very similar. Both of these grow near streams, and in the edge of the forest.

Of the *spiræa* there are several species. The wax-berry, with its tiny pink flowers and delicate leaves, is found in bottom-lands and on river-banks. In autumn the bottoms of the Columbia furnish thickets of wax-berries which, growing side by side with the wild roses, make a pretty contrast to the crimson capsules of the latter. In higher ground, yet subject to overflow, is found the *Spiræa tomentosa*, or hardhack, as it is commonly called, which grows in thickets and bears a cluster of a purplish-pink color. But the most beautiful of the *spiræas* is the kind known as sea-foam (*S. arifolia*), which its great creamy-white clusters really resemble. This grows along the river-banks and in the shade of the forest's edge, and blooms in June and July, according to its locality. It sometimes grows to a height of twenty feet in the shade, though usually about five or six feet high. The stems are very delicate, like all the *spiræas*, and bend most gracefully with the weight of the clusters.

Side by side, usually, with the last-named *spiræa* is the beautiful mock-orange (*Philadelphus*), with its silvery-white flowers crowding the delicate green leaves out of sight. Throughout

Oregon this shrub is called syringa, to which family it does not belong. It is very ornamental, and blooms in June and July.

Of wild roses there are several species and many varieties, from the dainty little "dime rose," of a pale pink color, to the large and fragrant crimson rose which grows in overflowed ground. There are always some roses to be found from June to December. It is usual to find the shrubs here mentioned growing in close proximity; and these, with the flowers of the woodbine (*Lonicera Occidentalis*), and the blossoms of various kinds of wild fruit-trees, make a perfect tangle of bloom and sweetness along the river-banks in summer.

We have elsewhere spoken of the dogwood, which is as handsome as a magnolia-tree when in blossom, and of the wild cherries and other fruits whose flowers are sweet and beautiful. The Oregon grape, or holly-leaved barberry, bears a flower that is very ornamental, of a bright yellow color, in clusters a finger long. The leaves of this shrub are also very beautiful, which makes it desirable to cultivate. Its fruit is ripe in August, and is of a bluish-purple, like the damson plum.

In Southern Oregon, the *Rhododendron maximum* is one of the glories of the mountain-tops, with its immense branches of rose-colored flowers. It is occasionally seen in gardens. The buff-colored *Azalea occidentalis* is also confined to the southern and eastern portions of Oregon. It is said that the clematis grows east of the Cascades, but we have not seen it; and also the ilex-leaved mahonia. The wild grape (*Vitis Californica*) is another shrub or vine which is confined to the southern portion of Oregon. In the Rogue River Valley, in October, it is a striking ornament in the landscape, the foliage being turned a rich ruby-red color, and forming clumps upon the ground or hanging pendent from way-side trees. It does not seem, however, to furnish much fruit.

Of field flowers there are a great many in all parts of Oregon and Washington, beginning with the early spring to beautify the earth, and kind succeeding kind throughout the summer and autumn. There are, especially near the Columbia, where the soil which covers the rocks is often a thin, black mould, countless varieties and species of very minute flowers, so small frequently as to need a microscope to analyze them successfully, but of

lovely shapes and colors. I have found within the range of an acre forty kinds of flowering plants in the month of July, half of them of this minute size.

Of the plants peculiar to the Northwest which bear handsome flowers the Camas family is prominent. The *Camasia esculenta*, or edible camas, of whose roots the Indians make bread, grows about eighteen inches high, and bears at top a bunch of star-shaped flowers, of a beautiful lavender color, with a golden centre. The leaves grow from the root, and are lanceolate. The places where they are most abundant usually are called "Camas prairies," and they form a feature of Eastern Oregon and Idaho. They are also plentiful in Western Oregon. The flowering season is about the middle of May near the Lower Columbia. There are several species of the camas, one of which is poisonous.

Only a very thorough and industrious botanist could enumerate the flowering plants native to this country. Among the most useful is the yellow lupine, which with the white, blue, and purple varieties grows abundantly in East Oregon. The yellow variety is found to be a power in reclaiming the sandy wastes where it is sown. The seed should be mixed with rye, which grows faster and protects the young plant from the encroachments of the sand; but once the lupine is fairly above the ground it becomes aggressive, not only defending itself, but absorbing the life of the rye. In the autumn the lupine sheds its leaves, which form a pasty muck over the ground, while new ones start out; and this it does for five years, when it dies, having fulfilled its mission. The ground can now be sown with grass and harrowed, when the grass comes up richly, and the billowy sand waste is a verdant plain. It was by this means that the military reservation and Golden Gate Park at San Francisco were reclaimed. The same method might be applied to making the sandy Union Pacific Railroad line along the upper Columbia more comfortable, as well as more agreeable to the eye.

The blue iris, familiar to all observers of the brook-side in spring, is not absent here; nor the purple larkspur; nor the musk-plant, *Mimulus longiflorus*; nor the *Mimulus luteus*; nor yet the buttercup, *Ranunculus occidentalis*. Violets blue and yellow embroider the verdant earth-mantle, and anemone *detroides* shelters itself under every bush. Running over the ground in

the open woods is the yerba buena, or "good herb," after which San Francisco was first named. It bears a tiny trumpet-shaped flower close to the main stem. Botanists call it *Micromeria Douglassi*, after David Douglass, Oregon's first explorer in this field of science, who was killed by wild cattle on one of the Hawaiian Islands while in pursuit of his studies of plants. The early settlers used its aromatic leaves in place of tea, which caused it to be called Oregon tea. Side by side with the yerba buena is the twin-flower, *Linnæa borealis*, with a very similar leaf, vine, and flower, except that it supports, upon a slender peduncle two inches in length, a pair of blossoms instead of a single one.

The red columbine, *Aquilegia formosa*, looks quite at home among the ferns in woody places and on mossy banks by the roadside; and the adder's-tongue keeps company with the anemone among the bushes. The lilies, *golden erythronium*, *Lilium canadense*, and *Lilium Washingtonium*, display their royal robes as in the days of King Solomon, some in the fence-corners, some among the grass and ferns by the rivulet, and others in the grain-fields. The *Washingtonium* is a native of the Wallamet Valley. When it first opens it is a pure white dashed with some purple pin-points of color. As it grows to be a day or so old it adds a pink blush to its whiteness, and in another day is of a very decided pink, so that, with several on a stalk in different degrees of development, it offers a pleasing range of color. In shape it resembles the tiger lily.

The California poppy, *Eschscholtzia*, is found in Southern Oregon, and the golden coreopsis also. The Indian pink, *Castelia brevifolia*, asserts its right to look gay anywhere there is a bank of loose warm earth. In the shadowy edges of the forest one may find the Indian pipe shooting up its colorless stem, and the pretty "tobacco-pouch" *cyripedium*, with its striped white, brown, and purple pocket held invitingly open.

In the fields and on sunny slopes grow the "shooting star" (*Dodecatheon Meadia*), of several colors; flax-flower (*Linum*); "boys and girls" (*Cynoglossum*), pink and blue on the same stem; convolvulus, white and pink; phlox (*Clarkia*); *Collomia grandiflora*, in old-gold color; *Hesperoscordum grandiflorum*, white stars marked with green lines; *Hosackia bicolor*, white and

yellow, and *dicen. a.*, white and scarlet. Tangled among tall grass and bushes is the pea-vine (*Vicia Americana*); while such familiar plants as yarrow, sheep-sorrel, St.-John's-wort, and spearmint inhabit about cultivated ground.

Bending over springs may be found the lady's-ear-drop (*Delphinium nudicaule*), red; and the dainty dew-bell (*Cyclobothra alba*). The autumn fields display the aster, golden rod, and sun-flower, but of lesser size than the same plants in the Eastern and Middle States. The native dandelion, too, is a small and ragged flower, while the imported plant blooms in extraordinary splendor, to the distress of lawn-keepers.

It is, indeed, to be remarked that seeds take lodgement in this soil without the encouragement of cultivation. An instance of this is to be seen in the valley of the Lower Umpqua River. A lady brought with her from New York some common flower seeds early in the "fifties," there being among them the snap-dragon. The wind scattered the seed from her garden, which took root outside of it, and these outside plants again scattered their seed, by the aid of the wind, further away, until now the whole valley about Gardiner for miles grows snapdragon as a common weed, and very troublesome, because poisonous, to cattle-owners. The traveller on the O. R. and N. Railroad may observe, between The Dalles and Hood River, a long stretch of blue bachelor-button, self-sown from the garden of some early settler. The same evidence of fertility and adaptability was noticed at the old mission in the Walla Walla Valley, where the red poppies from the mission garden spread themselves through the meadows of Mill Creek, where they were blooming luxuriantly a quarter of a century after the garden and all about had been destroyed by savage warfare.

The prevailing colors of wild flowers west of the Cascades are purple, yellow, and white, with a fair proportion of pink or red. East of the mountains there are still fewer red flowers. Blue flowers are very rare in any portion of this country, as they are everywhere. I remember to have seen some lovely blue flowers growing in the sands between Wallula and the first crossing of the Touchet, but they were unknown to me. Buff or salmon-color is still rarer, the *Collomia* being the only one I remember seeing. Yet, with all the different shades of the

common purple, yellow, white, and red, with their differing forms, a great deal of beauty may be expressed.

Southeastern Oregon has some handsome wild flowers quite new to me; and its marshes grow the *Wocus*, or yellow pond-lily, the seeds of which furnish food in large amount to the Indians, who macerate them and make them into a sort of oil-cake for winter use.

Very few flowers are fragrant on the coast; while, on the contrary, very many of those found east of the Cascades are highly perfumed, as they are also in Southern Oregon, where the blue violet, quite scentless near the Columbia, is deliciously fragrant.

The soil and climate of Oregon and Washington are highly favorable to the growth of flowers, and we may find in the gardens here plants from almost every clime growing in more or less perfection. From the plenitude of moisture, they continue to blossom very late in the season, a bouquet of roses and a dozen other varieties of elegant flowers being often gathered at Christmas. Frequently gardening can be resumed in February, which gives a large proportion of the year to the enjoyment of one of the purest and most wholesome of pleasures.

The United States Exploring Expedition collected, in the year 1854-55, three hundred and sixty species of native plants, of which one hundred and fifty are peculiar to the prairies of Oregon and Washington.

From a pamphlet published by Thomas Howell, of Arthur, Oregon, in 1887, it appears that a list of all the species and varieties known to exist in the territory west of Wyoming and north of California comprises twenty-one hundred and fifty-two species and two hundred and twenty-seven varieties of plants, or twenty-three hundred and seventy-nine in all.

CHAPTER XVIII.

SOMETHING ABOUT GAME AND WILD SPORTS.

NOTWITHSTANDING the thick growth of the forests of Oregon and Washington, the hunter may find sport, with game worthy of his rifle, if he is not afraid of the exertion and foot-service. There are numerous "openings" in the forest, and plenty of wild country in the foot-hills, where game may be found if the *habitat* of each animal is known.

The most formidable of the bear family is the grizzly, which inhabits less the thick forests of the north than the manzanita thickets and the scrub-oak coverts of Southern Oregon. The color of this bear is a silvery gray, its bulk immense, sometimes weighing two thousand pounds, and its habits herbivorous chiefly, though it will, on sufficient provocation, kill and eat other animals, and even man. It subsists in Southern Oregon upon the berries of the manzanita, of which it is very fond, and will feed upon any berries or fruits within its reach,—occasionally, as a relish, digging up a wasps'-nest for the sake of the honey, not being able, like the black bear, to climb in search of bees'-nests.

In seasons when drought has destroyed its customary food in the mountains of California, it has been known to descend into the valleys and dig up gophers for food. If it scents fresh venison or beef, it will steal it if possible, and has been known to take the hunter's provisions out from under his head while sleeping. In such a case it is better to pretend to be sound asleep during the stealing, even if very wide awake, as is most likely to be the case, for any movement will be certain to bring down the bear's paw with force upon the hunter's head,—“a consummation most devoutly to be” avoided.

This trick of the grizzly—striking a man on the head, or “boxing his ears”—is a dangerous one. It is not at all rare to find men in the mountains and valleys where the grizzly ranges who have had their skulls broken by the blow of its immense paw. It is much to be dreaded in a personal encounter, and by

no means easy to kill unless hit in the vulnerable spot behind the ear. Those who fancy lion-hunting in the jungles of Africa might find equally good sport in hunting grizzlies in California, Oregon, and in some parts of the Rocky Mountains.

During the summer months they retire to the mountains; but, as the berries ripen, they seek the foot-hills and river-banks, to feed upon their favorite fruits. If a cavern is not at hand when winter comes on in the cold regions, they make a bed for themselves in some thicket, or sometimes dig a hole below the surface, in which they pass the winter sucking their paws. It would seem that where the winters are as mild as in the Coast Mountains of California, they do not hibernate, as they are met with all through the winter season, and kill, and are killed, more than ever at that time, on account of the scarcity of berries.

There are several curious facts in the natural history of this bear, one of the most singular of which is, that the period of gestation is entirely unknown, even to the most observant and experienced mountain men. No one has ever killed a female carrying young, at any time of the year, though they are often discovered with their cubs evidently but a few weeks old. Where they hide themselves during this period, or how long it lasts, no hunter has ever been able to observe, though there are men who have spent half their lives in the mountains, and killed, in desperate encounter, many a grizzly, and at all times of the year, even when hibernating.

The grizzly seems to be "a man of many minds," with regard to attack. Usually, unless in charge of cubs, it quietly avoids a meeting with the hunter, and at times even seems timid and easily alarmed. But because one grizzly has given you room, you must not depend upon the next one doing the same. It is quite as likely that he will challenge you as you pass; and, unless well prepared to take up the glove, you had better "take up" the first tree you come to. It is not a pleasant sight to see one of these monsters on his hind-quarters, with his fore-paws ready for action; and when it comes to running, he can run as fast as you can.

The brown, or cinnamon, bear is also a savage creature, with many of the traits of the grizzly, but inferior in size. He in-

habits the same regions with the latter, and also is found in the thick forests of Northern Oregon and Washington.

The black bear is common to every part of these countries, living in the mountains in summer, and visiting the low hills and small valleys, or the banks of rivers, in autumn. When the acorn crop is good in the foot-hills, bears haunt the groves which furnish their favorite food. If they can find a stray porker engaged in foraging, they embrace him a little too tightly for his health,—in short, “squeeze the breath out of him,”—after which affectionate observance they eat him. But, unless exasperated, they never attack the human family, and are not regarded as dangerous under ordinary circumstances.

An animal which is ferocious, and not unfrequently met with in the mountains, is the cougar,—an animal of the cat species, with a skin something like a leopard's, and a long, ringed tail, but a head with a lion-like breadth. It is variously called the California lion and American panther. We saw one large specimen, which was lying dead by the roadside on the Calapooya Mountain, which measured seven feet from tip to tip. This animal seldom attacks a man, but is very destructive to calves and colts in the vicinity of the mountains, especially in the newly-settled parts.

There are three species of the wolf in Oregon and Washington, of which the black is the largest and most ferocious. It stands two and a half or three feet high, and is five to six feet from tip to tip. Such was its destructiveness in the earliest settlement of the country that special means were resorted to for its extermination, until now it is rarely ever met with. It attacks young cattle and colts, as does the cougar.

The white or gray wolf is another enemy to the stock-raiser, though it is satisfied with smaller game than the black wolf, contenting itself with full-grown sheep; and, being more powerful than a dog, is a great destroyer of flocks in some localities, and so sagacious that it is very difficult to poison. The coyote, or barking wolf, is also a depredator, taking young pigs and lambs. One of these little animals has the voice of several, and can imitate the barking of a whole pack. It is almost too contemptible to be considered game, and is given over to strychnine.

There are two or three species of lynx, or wild-cat, also troublesome to settlers near the forest, carrying off young pigs and such small farm stock. When not stealing from the farmer they subsist upon young fawns, hares, squirrels, and game birds. These pests are numerous in the woods of the Lower Columbia. We have seen numerous good specimens depending from the limbs of trees, where they had been hung after shooting.

Of foxes there are the red, silver-gray, black, and gray varieties. It is thought that the black fox is a distinct species; as is also the gray, which is smaller. But the silver-gray is said by the Indians to be the male of the red species, the female only being of a reddish color. This species, in all its varieties, is very common on the eastern side of the Cascades, and the smaller gray is most abundant in Southeastern Oregon. Their skins, though not as handsome as the silver-gray, are still very fine. The gray is the "medicine fox" of the Indians, a meeting with which brings misfortune.

Elk are found both in the Cascade and Coast Mountains, but are most abundant in the latter, especially in the Olympic Range. In summer they keep pretty high up, but when snow falls in the mountains descend to the plains and river-bottoms. They travel in well-beaten trails and in large droves, which make them easy game. When quite wild they show considerable curiosity, stopping to look at the hunter, thus offering a fair shot. When wounded and in close quarters they are formidable antagonists, from their great size, heavy head, and large antlers. The immense size of their antlers would appear to be an obstacle to their escape when running in the forest, but by throwing back their heads they drop them over their shoulders so well out of the way as to enable them to pass through the thick woods without difficulty. There still are immense herds of them in the mountains near the mouth of the Columbia; and may be hunted in summer by parties sufficiently hardy for overcoming the obstacles of the forest. But autumn and winter are better seasons for hunting elk, as they then come down to more open ground. Elk-steaks are no rarity in Astoria, and occasionally they are to be met with in the Portland markets. It is estimated that not less than one thousand elk were killed in one year in Coos County alone, for the skins only.

Three species of deer are found in Oregon and Washington,—the white-tailed, black-tailed, and mule deer. The two first-named species inhabit the country west of the Cascades, the black-tailed being most common. They also inhabit east of the mountains, but have been greatly decimated by the Indians, who kill them wantonly in snowy winters when they cannot run. In the mountains along the Lower Columbia and Lower Willamette they are still very plentiful. Game-laws exist in Oregon for protecting them during a certain season, and yet lawless persons are found who kill them without regard to their condition. The mule deer is found only east of the Cascades, and is not common. It seems to be a hybrid between the antelope and black-tailed deer.

The antelope was an inhabitant of East Oregon, and was hunted by the Indians by a "surround,"—for, though curious enough to stop to look at the hunter, it is very fleet and soon distances pursuit. Hence the Indian method of driving them into a corral, by coming down upon a herd from all sides and gradually forcing them into an inclosure made for the purpose,—a very unsportsman-like way of taking such delicate game.

East Oregon also furnishes the mountain sheep. In the region of John Day and Des Chutes Rivers, they were formerly very numerous. Their flesh is good, though likely to be flavored with whatever they feed most upon. It appears from the testimony of early voyagers to this coast, that the Indians formerly made a kind of cloth from the wool of the mountain sheep, but the process of its manufacture is unknown in Oregon at this period. The fact of the sheep being native to the grassy plains of East Oregon and Washington furnishes a hint by which wool-growers have profited.

The prairie hare—a large, blue-gray species—is found in East Oregon and Washington, as well as on the mountains of Southern Oregon, where it is very common. The flesh is good eating.

In the Olympic Mountains of Washington lives a curious creature known as the whistling marmot, or mountain beaver. It is very numerous about the head of the Quilcene River. These animals are about the size of a fox, and have long, bushy tails. When disturbed by the presence of man, whom they probably regard as an enemy, they run about from rock to rock, sometimes

sitting bolt upright as if surveying the danger, sometimes lying down as if to avoid it, but continually whistling to each other. They have two long front teeth for cutting, like the river beaver, and feet like a squirrel. In the winter they burrow under the snow, and their fur, which in summer is yellow, becomes a dark gray.

Of fur-bearing animals which are hunted for their skins, there is the hair-seal in the Columbia River, a pretty creature of a bluish-gray color spotted with white. They swim up the river as far as the Cascades, and in high water as far as The Dalles. They are smaller than the red seal of the Pacific, and very docile in disposition. Instances have occurred of their domestication, when they have shown the same attachment to their masters that the dog does, following also by scent, even into the thick woods, where they have torn themselves fearfully in their efforts to overtake those who had deserted them. The Indians roast and eat them.

Minks are common to the waters of Oregon and Washington, but are most numerous in the lakes and streams of the latter. It is said that when they inhabit the Sound they subsist upon shell-fish. The beaver, which was nearly exterminated during the occupancy of the country by the Hudson's Bay Company, is again quite abundant in the streams of all the wooded portions. One of the features of the Columbia attractive to the sportsman is the sight of the hunting-boat—a scow with a house upon it—which goes peering into all the creeks and sloughs leading into the river, after game of this sort, and, in the ducking season, after water-fowl. The “California otter” also inhabits the mountain streams, especially those which come down from the Cascades.

The pine-marten, or American sable, is found along the streams of the Cascade Mountains, and clinging to the pine-trees on their eastern slopes, in Oregon and Washington. Their skins are quite valuable, though not collected except by Indians, who prize them for ornament.

The sea-otter, whose fur is of such exquisite fineness, is taken off the coast of Washington, from Damon Point, at the entrance to Gray's Harbor, northward to Point Grenville, a distance of only twenty-four miles. Considerable preparation and

skill are required in this sport. The hunter constructs for himself a derrick about forty feet high, this mechanism consisting simply of three slim poles securely bolted together at top and spread out like a tripod at bottom. This is placed on the beach at a point midway between high and low tide, firmly planted in the sand, and braced, with the means of ascent and descent provided by cross-pieces on the inland side. Near the top a platform is provided, with walls on the ocean sides to hide the hunter from view, and screen him from the wind which often is sharp and biting. At low tide the hunter betakes himself to his eyry, and seating himself on the top of the tripod begins his watch, which lasts six hours. He is armed with a good pair of glasses and a Sharpe's rifle. When the tide begins to flood his range is six hundred yards, but as it runs in on the beach it is shortened to half that or less. At either distance it requires close calculation to get a good aim, or to overcome the effect of the ocean swell and movement. The best marksman may miss ninety-nine times out of a hundred; and no wonder, for when the tide is full his derrick is in the midst of the dizzying breakers. The shooting is done during flood-tide, that the spoil may be washed ashore, but it is often several days before it is beached, and then an Indian may have gotten it. Each hunter has a particular mark by which his bullets are known, and if an otter comes ashore without a bullet in him, it is the property of the finder; but an Indian would not trouble himself about "brands."

The natives hunt the otter in canoes, sometimes going far out to sea and remaining for days. In fact, they drive them away from shore, and injure the sport of the white hunters. The season for killing is from May to October, and a hunter does not take more than four in a season. The skins are valued at from ninety dollars to one hundred and fifty dollars to the hunter, but a Russian or a Chinaman will pay for an otter-skin overcoat from one thousand to two thousand dollars. The otter will soon be hunted out, and disappear, even as forest animals are doing.

Whales are frequently harpooned by the Neah Bay Indians near the entrance to the Strait of Juan de Fuca. It is a hazardous sport, requiring great "medicine" to succeed in; but when

a whale is captured the occasion is one of general rejoicing and feasting—a *pollatch* of much consequence to the whole tribe.

The woods of the Pacific Coast have not been noted for singing-birds, the songsters of the Atlantic States and Europe being strangers to the Northwest. The meadow-lark is almost the only bird which cheers the traveller on his way over the wide plains of East Oregon and Washington, where his short but inspiring warble greets one from every side. In the garden trees of the Wallamet Valley the native canary sings merrily, and a variety of chirping, sober-hued, and shy winged and feathered visitors make free with the fruit to be found there. The lack of songsters impelled the Agricultural Society to import them, and a few years ago there were brought from abroad and set free in the fields and woods the bullfinch, greenfinch, goldfinch, nightingale, black-headed nightingale, chaffinch, ring-ouzel, bobolink, black thrush, song thrush, starling, and singing quail. How they were received by their forest brothers is not known, but that they have to some extent increased is evidenced by the greater variety of notes which one may hear any morning in summer from his open window in the vicinity of trees.

Of game birds there are great numbers, as might be conjectured from the nature of the country. The habits and habitats of this kind of game are too well known to need remark. The most common are the mountain quail, valley quail, dusky grouse, ruffed grouse, sharp-tailed grouse or prairie chicken, sage-cock, curlew (the last three east of the Cascade Mountains), killdeer, plover, golden plover, Virginia rail, English snipe, red-breasted snipe, summer duck, Canada goose, white-fronted goose, black brant, mallard duck, canvas-back duck, blue-winged teal, brown crane, green-winged teal, and several others omitted or unknown. The golden pheasant of China (imported) is also beginning to be a very familiar sight to the sportsman.

In autumn the waters of the rivers, lakes, and sounds are swarming with water-fowl. A week's sport with a party in a hunting-boat or steam-yacht, with good living on board, is thought "worth the shot." When I add that the waters of the country afford the best of sport for the angler, from a seventy-pound salmon to a dainty speckled trout, it must be allowed that there is amusement for pleasure-seekers, not to say health-

ful pastime for invalids, to be found here. There are also here, what cannot be readily found in the Atlantic States,—men who have made hunting and trapping the business of their lives, and who, while they lend their knowledge of the craft to younger disciples, entertain them with volumes of humorous and exciting personal adventure with every sort of game, from a beaver to a grizzly, or a Blackfoot Indian.

The curious tourist may find in Oregon men who were with Sublette, Wyeth, and Bonneville in the mountains nearly sixty years ago; men who met there Stanley, the painter; Douglas, the botanist; Farnham, the would-be founder of a communist colony; men who hunted beaver and Indians with Kit Carson; who laugh at Fremont as a pathfinder; who served Wilkes on his surveying expedition, and who saw Oregon in danger of becoming an independent government, but whose stanch patriotism saved it to the republic of the United States.

CHAPTER XIX.

FROM PORTLAND TO OLYMPIA.

I STARTED from Portland in the forenoon of May 2, 1890, to "make the tour of the Sound," for in that familiar manner do Oregonians speak of a journey through that division of Washington which lies west of the Cascade Mountains. They have not quite forgotten that Washington was once a part of Oregon, and that in early times they warred with the British fur company for its possession, holding on with courage and pertinacity until the boundary question was settled in 1846, and conducting its affairs until 1853, when the territory north of the Columbia set up for itself under the name it now bears as a State.

This, however, was not the title chosen by the territorial convention which petitioned Congress for a separate organization, at Monticello, on the Cowlitz River, in 1852, which convention asked for the adoption of Columbia as the name of their new commonwealth. But the bill was amended by Stanton, of Kentucky, and Washington substituted.

The change is to be regarded as fortunate, for, had the country north of the great river been called by the same name, the individuality of the latter would have been destroyed, and this mighty highway have seemed to constitute a part of a single State, whereas it belongs, first and last, to several.

But to go back to the beginning of a journey from Portland to and through West Washington. The Northern Pacific (Branch) road skirts the Wallamet highlands and river for fifteen or twenty miles, the traveller getting glimpses of each, and of Sanvé Island, as he rushes past old homesteads whose sacredness the "steam eagles" of civilization have invaded, the iron track often cutting in twain blooming orchards, now laden with the promise of a rich harvest. There certainly never were such cherry-trees as grow in the Northwest; enormous in height and spread of limb, and phenomenal in wealth of snowy blossoms, quite concealing leaves and stems. And the wonder culminates when we find the fruit has ripened after the same fashion, quite concealing the branch on which it grows. Pears are blooming with the same freedom, as are also plums, although receiving no care. All the pretty things of May-time are smiling at us from the wayside, and the dandelion, which is an immigrant to this country, has "taken" it, immigrant fashion, and the owners of the soil have much difficulty to teach it its proper place in agricultural politics. But it looks pretty and smiling and golden against the green sod, and I find it hard to have it compared to a dago.

No breadth of cultivable land is seen along this road for some distance, which finally emerges into a good farming country about the head of Scappoose Bay, an inlet from the Columbia at the mouth of the Lower Wallamet. Suddenly the character of the surface changes, and for a couple of miles, back of St. Helen, a sheet of basalt, some time poured out of Mount St. Helen, covers the underlying sand rock, and supports a thin soil on top, sufficient to sustain scattering groups of trees, which have a pleasing effect in contrast with the denser woods of the hill-sides.

The crossing of the Columbia about twelve miles below St. Helen is made by a ferry-boat large enough to convey the train to the opposite side of the river, where we are landed on terra

firma at Kalama, a few miles above the mouth of the Cowlitz River.

Kalama, like most railroad towns not terminal, is a failure, because it can show no *raison d'être*. It was started when the Portland Branch of the Northern Pacific was being constructed from the Columbia to the Sound, about 1870, and the company's head-quarters were established there, which were, on the completion of the road, removed to Tacoma. It was also made the county-seat of Cowlitz County, which did not save it from decay. But I am assured that the place is feeling a return of life in sympathy with the present upward and forward movement of the whole State, which has for several years been enjoying a rapid growth. We do not tarry long here, but speed on our journey to the "Mediterranean of the Pacific."

About the time the N. P. Railroad was being located from the Columbia to the Sound I made my first visit to this region. In that day we took an open mail-wagon at Monticello, near the mouth of the Cowlitz, for the drive to Olympia, having to cross Pumphrey's Mountain at the forks of the Cowlitz by a very rough road with rarely a human habitation along it. But it was in July, and I enjoyed the ride, break-downs and all. What struck me then was the magnificence of the timber. Such a forest as that on Pumphrey's Mountain was something to have seen. Trees straight as Ionian columns, so high that it was painful to bend one's neck to see the tops, and with a diameter corresponding to their height. If there is anything in nature for which I have a love resembling love to humanity, it is for a fine tree. The god Pan and the old Druidical religion are quite intelligible as expressions of the soul struggling "through nature up to nature's God," and one is at once in harmony with the sentiments of grandeur and solemnity, akin to worship, which a scene such as this inspires.

Added to the awe which the mighty shafts of fir, naked for a hundred and fifty feet, and the "dim religious light" filtering through their closely-meeting tops, awakened in my mind at that time, was a secret dread of encountering in these shadow halls of silence something unusual—and terrible—a brown bear or a cougar, for instance; but nothing more appalling than a gray hare, some grouse, and mountain quail attempted to

cross our road. The larger game, if there were any near, took warning from the noisy rattling of our wagon and hid themselves from observation.

A few years later, when the railroad up the Cowlitz Valley had been completed, I again visited Olympia, and found the road to run through a wild and densely-timbered country almost from the Columbia to the Chehalis River. There were, it is true, a few stations cut out of the forest, with no excuse for being except that all railroads must have "stations" scattered along,—to give tourists, by their forlorn aspect, a contempt for the country, I privately remarked.

But on this May-day, 1890, I found the stations had grown into towns, and there were so many of them that I seemed to be travelling over town-sites all the way to my destination. Not that all of these twenty or more embryo cities were astoundingly large and populous for their age, but that there was so much evidence of growth as to keep up a feeling of curiosity and surprise as to what brought these people here, and how they accomplished so much in so short a time. How many sturdy strokes it took to clear away the heavy forest to make room for farms and towns! Yet the work had been done, and in the place of the noble firs I had so much admired stood homes, school-houses, churches, hotels, stores, mills, and all the ordinary conveniences of established society. It was a revelation.

That the Cowlitz Valley is a fertile one none can doubt who travel through it, but it is not a wide or long one. It rather consists of small side valleys, in each of which there is room for a settlement. The real wealth of the Cowlitz country consists of lumber and coal, with other minerals used in manufactures.

At Kelso, which calls itself the "Gateway to the Sound Country," are two saw-mills and four shingle-mills. The place has about six hundred inhabitants, and is the prospective seat of a Presbyterian Academy. Winlock and Toledo are two thriving settlements within a few miles of each other, in Lewis County.

The chief town of the county of Cowlitz is Castle Rock, which has about eight hundred inhabitants. It is located in the midst of good farming-lands, large coal-fields, and fine timber, and is a point of supply for several mines in their first stage of develop-

ment. It has railroad and river transportation, which, with its natural resources, ought to secure for it a prosperous future.

There is a curious mixture of English and Indian words in the nomenclature of this part of Washington, and indeed of the whole State. Take the names along the railroad from the Columbia to the Sound. There are Carrol, Kelso, *Coweeman*, Freeport, Stockport, Tucker, Castle Rock, *Olequa*, *Sopenah*, Little Falls, Mill Switch, Winlock, Napavine, *Newaukum*, *Chehalis*, Centralia, *Skookum-Chuck*, *Seasco*, *Tenino*, Gillmore, Spurlock, Plumb, Bush Prairie, *Tumwater*, Olympia.

The railroad does not touch the pretty village of *Claquato*, on the Chehalis River, an old-fashioned, quiet, respectable-looking place before the railroad brood of towns came into existence. We are not permitted a glimpse of its tidy orchards, gardens, gray, unpainted frame houses, and its modest "*Claquato Academy*," which showed the reverence of the pioneer for education, and its equally modest wooden church.

A short distance from Newaukum, which is on a branch of the Chehalis River just east of Claquato, is Chehalis, the county-seat of Lewis County. It was first laid off in 1873 and called Saundersville, after the owner of the land. Its location was a fortunate one, and it became the seat of county government in place of Claquato, which had long enjoyed that distinction. It was the centre of a fine agricultural district, and, being upon the railroad, soon began to show considerable activity. During the year just passed it has had a remarkable growth, owing not only to its natural resources, but to railroad building on two lines, either of which will connect it with the sea, one at Gray's Harbor and another at Shoalwater Bay, or, as it is now called, Willapa Bay. These roads make the lumber business active. Eastern men, I am told, are negotiating for a site for a woollen-mill, water-power being conducted to the town by a flume from the Newaukum. There is a pump-manufactory located here, and other industries looking this way. A railroad line is projected to connect with Hunt's system, in East Washington, *via* Yakima Valley, which road will go to Willapa, it is said; and the Union Pacific has made a survey from Seattle to Portland which closely parallels the Northern Pacific through Chehalis County. All this is very exciting to real-estate dealers, and also

to settlers. The State Reform School is located at Chehalis, and a block of land has been deeded to the Catholic Church to establish a Sisters' School in the town. An effort is being made to secure the land-office which is to be opened in the district. Thus, with land, railroad, lumber, and water companies, there is enough to keep up the spirits of an aspiring new town.

But we have hardly glanced at this healthy and sturdy place, or had our queries answered, before we are at Centralia, at the junction of the Skookum-Chuck and Chehalis Rivers. This young city is situated at about an equal distance from Puget Sound and the Columbia River, and also midway between the mountains on the east and the ocean on the west—hence its name, which does not impress me as being equal in dignity to its prospects. On the 1st of January, 1889, Centralia had eight hundred inhabitants. One year from that date its population was three thousand two hundred. Railroad-building had, no doubt, some effect to increase the census; but that there was a very rapid growth during the year is evident from the improvements which one may see on every hand. Its advantages are identical with those of Chehalis, while it enjoys the still further one of being only two miles from the coal-fields, which are being slowly developed, and which will soon have a railroad to them to bring out the mineral. Besides the railroads already named which come to Centralia, the Port Townsend and Southern is expected to reach here within a year, on its way to Portland.

Centralia is situated on a prairie, or rather on rich bottom-land, which would make a very productive hop-farm or raise small fruits in abundance. There is good fruit-land all about it, and in the vicinity mighty forests of the most valuable timber. Lumber and shingles are shipped from here to the cities of the East. Iron and copper are numbered among the minerals within easy reach. It is, besides, a fit place to live in, with a good public-school system, an academy, an opera-house, several churches, a bank, a daily newspaper, and many substantial business blocks.

Speeding on, the next half-dozen miles brings us to Bucoda, or Seatco, which is its post-office name. Here is located a large lumber-mill and sash- and door-factory. The population is one thousand. Bucoda coal is beginning to have quite a good

reputation. Bucoda was destroyed by fire, sustaining a loss of one hundred and thirty-three thousand dollars, but is now rebuilt better than before.

On leaving the Chehalis Valley we enter upon gravelly prairies, separated by belts of timber. A particularly interesting section is Mound Prairie, which is covered with mounds from two to two and a half feet high, as close together as potato-hills in a field. Various theories have been advanced as to their origin, but it is merely a matter of conjecture still.

At Tenino passengers for Olympia leave the Northern Pacific, and take passage on the Olympia and Tenino Railroad, recently sold to the Port Townsend and Southern. The distance is only about fifteen miles, but the road was a narrow-gauge, the track in bad order, travel light, and the service anything but agreeable. I was told the track was to be widened and the road put in good order, which has, I believe, been done by its new owners.

This little road, with all its faults, had my sympathies. It was built by local capital and local labor, even the ladies of Olympia assisting by having what they called "field days," when they all went out with baskets, coffee-pots, and frying-pans, and fed the volunteers upon the grade, who were the men of every rank of society in the little capital city. The Northern Pacific had disappointed its good people grievously by passing by and taking a short cut to Commencement Bay,—which its want of funds probably forced it to do,—and the Olympians, with true American pluck, determined to have a branch, and did have it, taking a just pride in the successful accomplishment of their undertaking.

Most of the prairies about the head of the Sound were taken up in early times, and bear the names of the first settlers upon them. Bush's Prairie is perhaps the most noted of any on the line of the road, simply because Bush, being a colored man, of sound sense and a kind heart, who made himself useful to his white neighbors, defended his well-deserved claim to a donation, which the government finally granted him, although the law read "white male citizen." His son exhibited wheat raised on Bush Prairie, which received a medal at the Centennial Exposition.

Tumwater, which is the Chinook dialect for strong or rapid water, is the name of a village at the head of Budd's Inlet, on

which Olympia is situated. There are mills and manufactories on Des Chutes River, which here falls into tide water, making a very pretty cataract. The town itself is sleepy and old-fashioned, and for that reason more interesting than those bran-new ones, all bustle and discomfort. Here was made the first American settlement, in 1845, when seven emigrants, five of whom had families, forced their way through the forest along the Cowlitz and the Chehalis Valley to Puget Sound. The leader of this mighty host was Michael T. Simmons, a Kentuckian of the Daniel Boone order, who selected this place for settlement, and erected the first flouring-mill in all this region, a small affair in a log-house, the millstones being hewn out of blocks of granite found on the beach. Even unbolted flour was a luxury after a year of boiled wheat. Tumwater is a good place to listen to pioneer stories and reflect what man can do.

A belt of timber about two miles in breadth encircles the Sound, even where the back country is prairie. Olympia therefore was hewn out of the forest, but it has a pretty situation, and resembles a New England town more than any other I have seen in the Northwest. Perhaps I should say it did resemble a New England town, for I found on the occasion of my late visit that it was partaking of the hurry and exhilaration of real-estate transfers in anticipation of coming events—and railroads. I prefer to speak of it as it had appeared to me on former occasions, when it had an air of home comfort and cheerful leisure, produced by snug residences, good sidewalks, pleasant gardens, shade-trees, and a neighborly friendliness joined to a frank independence in its citizens, who withal were rather above the average in intelligence. And why not, when the capital had always been here, and the people were used to hearing public questions discussed?

One of Olympia's charms to me was its long bridges and wharves—for the tide has a great rise and fall in this inlet. To be suspended over water on a bridge, a long one, was always to me fascinating. To be at rest over the restless water, and gaze upon its instability and dream! In Olympia one can do this, when the tide is in. When it is out one can watch the millions of squirming things left by the receding flood in the oozy mud. Standing on the long bridge, too, we can gaze upon the Olympian

Range—the most aerial mountain view in this country of mountains.

Olympia was settled as a donation claim in 1846 by Levi L. Smith, who had for a partner Edward Sylvester. Smith died, and Sylvester remained in possession of the claim, which was patented to him. Here he lived and died in peace and plenty, leaving a handsome estate. In spite of the rivalry of other towns, Olympia has always been the choice of the people for the capital, that choice being definitely confirmed by an election held after Washington became a State. That matter being settled, capital and corporations are now looking for investments, and the quiet little town is in danger of blossoming forth into a city. Its present population is a little over eight thousand. Its lumber trade amounts to five hundred thousand dollars annually. It is connected with all the cities on the Sound by steamer lines, and with some of them by railroad, as also with the Columbia River and Portland. It is expected that the Port Townsend and Southern will be extended north to Port Townsend and south to Portland. The Northern Pacific will connect it with Tacoma and Gray's Harbor, with which latter place it is already in communication by steamer and rail. The air is full of rumors of railroad projects by old and new companies, but it is with facts accomplished that I prefer to deal.

West Washington, unlike West Oregon, has no chief river, with its numerous tributaries, draining a great valley; but it has, nevertheless, its central body of water, into which flow numerous small rivers, draining the Puget Sound Basin, which is bounded, like the Wallamet Valley, by the Cascade and Coast Ranges on the east and west, and by their intermingling spurs on the south. These rivers, unlike those of Oregon, are all affected by the ebb and flow of the tides, and have their lowest bottom-lands overflowed. The Sound itself is not one simple great inlet of the sea, but is an indescribably tortuous body of water which is not even a sound, being too deep for soundings in some of its narrowest parts. So eccentric are its meanderings that the whole county of Kitsap is inclosed so nearly in the embraces of its several long arms as very narrowly to escape being an island.

That particular arm of the Sound upon which Olympia is situated is six miles in length by from one to one and a half miles in width, narrowing to a quarter of a mile when opposite the town. At low-tide the water recedes entirely at this point, leaving a mud flat all the way from here to Tumwater, a mile and a half south. The mean rise and fall of the tide is a little over nine feet; the greatest difference between the highest and lowest tides is twenty-four feet.

The land adjacent to this inlet is considerably elevated along the shore, and rises yet higher at a little distance back, being level, however, in some places. The same general shape of country surrounds the whole Sound, the land having a general rise back from it for some distance. This, of course, must be the case where a basin exists of the character of this one. That portion of it which lies adjacent to the Sound possesses a porous, gravelly soil, nevertheless, heavily timbered with trees of immense size. This belt of timber is several miles in width. The roads through it and across the small prairies which lie on its outskirts are all that could be desired in the way of natural macadam, and furnish delightful driving. One thing observed regarding these beautiful prairie spots was, that along their edges, where they receive the yearly accession to their soil of the leaf mould of the forest, the orchards and gardens looked very thrifty, and also that wherever there was a piece of bottom-land on any small stream the hay-crop was the heaviest we had ever seen.

About ten miles back from the Sound on the east, the country commences to improve, and from there to the foot-hills of the Cascades furnishes a good grazing region, with many fine locations for farms. The foot-hills themselves furnish extensive clay-loam districts suitable for grain-raising, and will, when cleared, become very valuable farming lands. Around the base of the Coast or Olympic Range, on the west, there is also another large body of clay-loam land, and to the south, between the Chehalis and the Columbia,—or, more properly, between the Columbia and the higher ground which separates the Columbia Valley from the basin of the Sound,—there is a still larger district which may be converted to grain-raising. But the vicinity of the Sound, within a distance of from ten to twenty miles,

affords little land that is good for grain, for, as before noticed, these streams coming into the Sound are affected by the tides, the lowest land being overflowed daily. That portion of each valley which is free from submersion furnishes the most fertile soil imaginable for the production of every kind of grain, fruit, and vegetable, if we except melons, grapes, and peaches, which, owing to the cool nights, mature less perfectly than in East Washington. The valleys of these small rivers, like those of West Oregon, already described, are covered at first with a rank growth of moisture-loving trees, such as the ash, alder, willow, and poplar. But they are easily cleared, and the soil is of that warm, rich nature that it produces a rapid growth of everything intrusted to its bosom. Owing to the fact that these valleys are narrow, and head in mountains at no great distance, they are occasionally subject to floods. As floods never occur, however, except in the rainy or winter season, a proper precaution in building, and harvesting his crops, should insure the farmer against loss from them when they do occur.

Olympia has a college, a hundred-thousand-dollar hotel, electric lights, water-works, and street-railway service. The State House is a wooden structure which, although in good repair, is no credit to the rich young State of Washington, to whom Congress has given one hundred and thirty-two thousand acres of land for public buildings. The State constitution does not locate all the public buildings at the capital, but distributes them among the several towns and cities. Vancouver, on the Columbia, has the State School for Defective Youth; Medical Lake, in the extreme eastern part of the State, has the Insane Asylum; Seattle, the State University; and Walla Walla, the State Penitentiary. The State Agricultural College will probably soon be located by the commissioners at some point in East Washington. I do not like this plan of distributing public institutions so well as Oregon's plan of concentrating them at the capital, making a handsome city at the seat of government, and keeping these affairs of the government under the eye of the appropriating power.

Washington's Territorial Penitentiary was on McNeil's Island, in Puget Sound, about twenty miles northeast of Olympia; and the Insane Asylum was at Steilacoom, on the mainland opposite,

occupying the buildings erected by the general government when Steilacoom was a military post. Both institutions are likely to be retained in use for some time.

Washington received as its portion when it assumed the burdens of statehood one hundred thousand acres for the establishment of a scientific school; one hundred thousand acres for normal schools; for other educational and reformatory institutions, two hundred thousand acres; and will receive five per centum of the proceeds of the sales of public lands lying within her borders for the support of common schools, in addition to the sixteenth and thirty-sixth sections in every township. As the constitution of Washington makes the minimum price of school land from five to ten dollars per acre, according to quality, the public school fund is likely to prove abundant for the needs of the successive generations.

CHAPTER XX.

FROM OLYMPIA TO GRAY'S HARBOR.

AFTER a few days spent in Olympia, my impressions of which remain most agreeable, I took steamer for Kamilleche, the port on Little Skookum Bay, where one is transferred to a railroad. The weather was charming; the Olympic Range, with Mount Olympus draped in yet unmelted snow, on one hand, and Mount Rainier on the other, towering over the dark range of the Cascades, grand and speckless, drew the eyes away from the too dazzling expanse of the quiet waters through which we were speeding, and the delightful air inspired one with a feeling of overflowing vitality.

Little Skookum is one of half a dozen inlets similar to Budd's which radiate from a common centre on Puget Sound, like a cluster of small tubers on one large one. As we go down Budd Inlet, Mount Rainier is on our right; as we go up Skookum it is on our left, and, the course of the steamer being unnoticed while I study the shores, now being dismantled in many places

of their forest dress, my ideas of locality become much disturbed.

Kamilche is found to be a small new settlement in the edge of the woods, with a wharf and warehouse where passengers wait three-quarters of an hour while the train backs down a sharp grade to take us on. This railroad from Kamilche to Montesano, called the Satsop Railroad, is an accident, or a necessity, or both. It was commenced as a logging tramway to bring timber out of the Chehalis Valley to tide-water, for towing to the great mills down the Sound. The people of Chehalis Valley, having no facilities for travel, persisted in riding on the logging-trucks until the owners were forced to put on a box-car. This concession so increased travel that a better track was laid, and a comfortable passenger-car added to the equipment. At the time I took passage there were two cars quite well filled. The distance from Kamilche to Montesano is thirty-five miles, and the same company own eleven other miles of road, from Shelton to the timbered lands west of the Sound. The Kamilche and Montesano portion has recently been acquired by the Northern Pacific, as a part of the Tacoma, Olympia, and Gray's Harbor Railroad, now in progress.

The ride through the forest was very pleasant, the road winding in and out to accommodate itself to the variations of surface. The various tints of green with the light falling through made a lovely study in color, and the woodsy vistas looked invitingly cool, yet with dashes of sunlight across them which relieved them from gloom.

A feature of these forests, and particularly of the Chehalis Valley, is the occurrence here and there of prairie spots with not a tree upon them. These prairies were early taken up, and are known by the names of their first settlers, like those at the head of the Sound. I counted eight of these openings in the forest provided by nature to encourage settlement. On one of these, twelve miles above Montesano, is the town of Elma, surrounded by hop-fields. It has also a flouring-mill,—the only one in this region, where the mills are all lumber establishments. Its position in the valley ought to insure its growth, which is already quite promising. On the last and largest prairie the town of Montesano is situated. It is well chosen for a town,

being at the head of tide-water navigation on the Chehalis River, where we are transferred to a small steamer to continue our journey. We had encountered a number of stations along the railroad, and now found a great frequency in towns along the river.

Montesano is the county-seat of Chehalis County, although it is only since 1883 that it has enjoyed that honor. Formerly Montesano and the county-seat were on the south side of the river two miles below the new town, at a place now called Wynooche, which has about two hundred inhabitants and is said to be a prosperous little settlement. But it is quite overshadowed by the more modern town, which boasts a population of over two thousand, good public and private schools, is lighted by electricity, has two saw-mills, several manufactories, a good country trade, well-stocked stores, and banks. Its county buildings are good; it has an "elaborate system" of water-works, and is about to construct an electric railway. At least so said my informant, and the town had a thrifty look which bore out the statement, besides supporting a daily and weekly newspaper.

A little way below Wynooche we passed Melbourne, a trading-post and post-office. I could not sufficiently admire the winding river and the overhanging shrubbery,—the vine-maple, with its delicate spring tones, the glossy gray-white catkins of the willows, the dark-green of the crab-apple and alder, the silver boughs of the hemlock, and the varnished whorls of the spruce, beyond all of which was the dark background of cedar- and fir-trees. This wealth of arboreal beauty reminded me of the rich foliage of the Florida bayous, the comparison being strengthened by the narrowness of the stream and its frequent turnings, cutting off the views, so that we seemed at the end of our voyage, which unexpectedly recommenced a moment later.

But soon the river widened, and behold another town, very prettily situated, on the south side of the river, and looking bright and new, although in fact the oldest in the Gray's Harbor country, having been settled in 1860. This is Cosmopolis. Like all the other places of consequence, it has a large saw-mill, which furnishes employment to a good many men. The town has all the modern features of a good hotel, good schools, public reading-room, and church organizations, besides a healthy trade

with the surrounding country. Its population is about four hundred.

Three or four miles below Cosmopolis, and on the north side of the river, is Aberdeen. It is situated at the mouth of the Wishkah, a tributary of the Chehalis, and just inside the mouth of the latter river, where it broadens out into an inlet of Gray's Harbor. This point was settled, I am told, by Samuel Benn, in 1866, but no town was founded until 1884. As the little steamer swung alongside the wharf, I was reminded of Astoria, so much of the town is built upon wharves extending over tide-land. The whole of the business part of the town is planked, and most of the residences are on the higher ground. Four large saw-mills are located here, a salmon-cannery, a foundry and machine shop, a brickyard, and a shipyard. It has an electric-light plant, good hotels, schools, churches, banks, a population of between two and three thousand, and two newspapers, the *Herald* and *Bulletin*. Early in 1890 a company purchased land on the south side of the river, laying it out in town lots, and calling it South Aberdeen. The first sale of any consequence was made just before I saw it, to a Michigan company, who bought seven hundred feet of the water-front for the purpose of erecting a shingle-mill and box-factory of large capacity.

I was now in sight of my destination,—Hoquiam, on Gray's Harbor,—to which we steamed on after disembarking a large number of passengers at Aberdeen. A few minutes brought us alongside a wharf at the head of the north channel, and to the little maritime city with an Indian name, which faces the south, and lies at the mouth of the Hoquiam River. Like Aberdeen, it requires much planking, being laid out on land which Vancouver, in 1792, described as "low and apparently swampy, the soil thin over a bed of stones and pebbles," and the country at a small distance covered with wood, "principally pine of an inferior growth." A hundred years may have elevated the land somewhat, and have increased the size of the trees, for there is only the marsh grass and rushes of any tide-flat to liken it to a swamp, and the trees are not at present of an inferior growth. The beach, like most of these northern waters, is rough and shingly; the flats and shallows being unsightly with the drift brought down by the rivers. And the mention of this feature



GRAY'S HARBOR, FROM HOQUIAM (1889).

reminds me that the meaning of the word Hoquiam is "hungry for wood."

The growth and business of Cosmopolis and the two Aberdeens was incited by Hoquiam, which is the father of them all. The history of this section is interesting.

Gray's Harbor extends inland fifteen miles, and has a width for half that distance of twelve miles, gradually narrowing towards the east until it forms a rather sharp point at the mouth of the Chehalis River. The *tout ensemble* is not very different from an arrow-head. The entrance is between two sand spits, Point Brown, on the north, and Point Hanson (Chehalis, or Petersen's Point), on the south, and is a mile and a quarter wide, with a nearly straight channel a little north of east to the mouth of the river; the water in the channel being for the greater part of the distance twenty-two feet at mean low water, and thirty-one feet and upwards at mean high water. North Bay and South Bay are north and south of the entrance, and separated from the sea only by long and narrow necks of low land. Channels from the main one ramify into these bays, also one to the mouth of John's River, which enters on the south side, another to Jones's Point, a little further east, which continues on to the mouth of the Chehalis, and is known as the South Channel. There is also a channel running north from the main one to the mouth of the Humptulips River, an important stream, and to two other streams flowing into North Bay, besides some cross-channels; and there is an anchorage of fully six thousand acres in the harbor where twenty-five feet at low tide is to be found. Nothing has ever been done to improve Gray's Harbor. Its commerce has been created by private enterprise alone; but there is a petition before Congress asking for surveys and improvements, and to have it made a port of entry. A very favorable feature of this harbor is the absence of the destructive teredo, so active in the waters of the Sound. So many fresh-water streams come into it that the teredo cannot live in it, and a ship's bottom covered with barnacles is thoroughly cleaned in forty-eight hours.

Gray's Harbor was discovered by the same doughty Captain Gray who discovered the Columbia, but he modestly named it Bulfinch Harbor, after one of the owners of his vessel. He

spent three days in it with his vessel, trading with the natives, who probably came out to him in canoes, as he makes no mention of any rivers or the appearance of the shores. Gray pronounced the entrance a good one. Vancouver's lieutenant, Whidby, was ordered to survey it, but, after doing so,—very imperfectly, it seems,—pronounced it "a port of little importance," which afforded "but two or three situations where boats could approach sufficiently near to effect a landing." He also declared the water on the bar to be so shallow that it was impracticable for vessels even of a very moderate size to pass it except near high water, and then "with the utmost caution," because he believed it a shifting bar. Whether in compliment or not, he renamed it Gray's Harbor.

So doctors disagree. But it happened, as it so often has, that the professional was wrong and the non-professional right. The bar is quite straight and well defined by breakers on each side, with a channel through it a third of a mile in width, and a depth of water at low tide of twenty-two feet, and at high tide of from eight to fourteen more. Vessels go in and out all the time with perfect safety; but a new survey is in progress, which will have the result—no doubt desired—of calling attention to the actual merits of the harbor.

Whether it was the doubtful reputation of this port or other inscrutable cause which prevented it, no commerce sought its waters. It is true that in 1850-51 a town-site was laid out by John B. Chapman, and named Chehalis City; but nothing ever came of it, and Chapman went to the Sound. In 1852 J. L. Scammon and four others took claims where Montesano now stands, on the Chehalis; but the only man who resided at the mouth of the river was James A. Karr, who settled on the east side of the Hoquiam River in 1858, and who still resides there.

But one settler does not make a commercial port any more than one swallow makes a summer, and Karr remained solitary with all Asia in front of him until some lumber-dealers bethought themselves of the fine timber in the Chehalis Valley and determined to get it to market. In 1882 the Hoquiam Mill Company was organized, with Mr. George H. Emerson, manager, and a new era was inaugurated.

The saw-mill of to-day is very unlike the saw-mill of the past.

It means steam-power, a vast amount of machinery, possibly a railroad, a large force of men both in the logging-camp and at the mill, with capital to set all in motion. No attempt was made at first, or at any time, by the mill company, to found a town at Hoquiam; but the activity imparted to the lower Chehalis Valley by the company's business led Mr. Benn, before mentioned, to lay out a town on the Chehalis and invite other lumbering establishments to locate in it by offering them a generous portion of his land. These offers were at once accepted, and the town of Aberdeen was making rapid strides before the Hoquiam Land Company was formed, which is a separate concern from the Northwestern Lumber Company which owns the Hoquiam mills.

It was organized in 1889 by John G. McMillan and J. L. Whitney. Lots were readily disposed of to residents, and newcomers were attracted to this location, which had a greater depth of water along its front and looked out on the fine expanse of the harbor. The town was a little more than a year old when I paid my respects to it with the purpose of verifying the reports of it which I had received, and had then about fifteen hundred inhabitants. I found the Northwestern Lumber Company to own thirteen hundred acres of fine timber, which would yield from two hundred thousand to five hundred thousand feet per acre. Their mill turned out from thirty-five thousand to one hundred thousand feet daily, which was used in building and street improvements with no need to export any. The company also carried on a general merchandising business amounting to two hundred and twenty thousand dollars per annum. A second milling establishment had just commenced operations. The town boasted an opera-house, gas- and water-works, a bank, a newspaper, the *Washingtonian*, and a board of trade. It was just completing a hotel of metropolitan size and elegance. The chief drawback appeared to be the lack of transportation, steamship and sailing lines having not yet arranged regular schedules, and the steamboat and railroad line to the Sound being inadequate to the needs of this and all the other communities in the Gray's Harbor country. Great improvements rapidly followed, the traveller of to-day finding increased facilities of all kinds, and a town of a growth which has culled

for several additions to the original town site. As a lesson in town-making Hoquiam might be studied with profit.

Although the original business men of Hoquiam took no part at first in founding cities, Aberdeen and Hoquiam had demonstrated the resources of Chehalis Valley and the importance of Gray's Harbor as an outlet to them.

Mr. Emerson was the possessor of a tract lying three miles west of Hoquiam, and directly facing the main channel, but not on it. It would require long wharves to reach out to deep water, but did not commerce build a Venice in the midst of the sea? and would it not more easily call into being a city which required only some expensive harbor improvements? He answered this question by forming the Gray's Harbor Company, composed chiefly of eastern capitalists who were seeking a location. That company put money to his land, constructed a forty-thousand-dollar wharf, cleared and improved the site of Gray's Harbor City, all of which was paid for out of the sale of lots in the first six months, and pointed out to railroads the short cut to the seaboard, which they at once proceeded to take.

The work of laying out the city began in the spring of 1889, at which time the ground was covered with a heavy growth of timber. By employing hundreds of laborers this was removed, streets opened and improved, and at the end of a year elegant buildings were going up where late the plummy fir and spruce tossed in the sea-breeze. It is an oft-quoted saying that "Rome was not made in a day;" but we do things better now, and a year or two suffices to establish a city. Two railroads are at this writing striving to reach Gray's Harbor before the close of 1890, and they will very nearly do it. There is no longer any doubt, if ever there was one, about the future of Gray's Harbor. Additions are being laid out, which with the additions to Hoquiam and Aberdeen will some time compel a consolidation. Already their several city governments are proposing to have one Chamber of Commerce.

The site of Gray's Harbor resembles that of Tacoma in being upon a high bluff with railroad tracks and wharves in front of it on the beach, and also in having a grand view. Mr. Emerson kindly explained to me the plan of the company to extend several of the streets out to the channel. This will be done by

piling and cribbing and filling in with the material taken up by dredgers. Between these "fills" will be channels kept open by dredging. One of the "fills" will be used for milling purposes, basins being provided for them made by confining the water by tide-gates. This will be an expensive but a very convenient arrangement, and, as the numerous streams coming into the Chehalis and the harbor will float the logs to the basins, the expense of railroads into the forest will be obviated. The other channels will furnish room for shipping in the most compact shape possible, where it will be safe from the most violent winds that blow on the Pacific.

One advantage of Gray's Harbor is an abundance of excellent water on the bluff, obtained without going to any great depth. Whenever extensive water-works are required, there are streams and lakes in the high lands bordering the Chehalis Valley, the water from which can be brought down at comparatively small cost.

A feature common to all new cities where the people are drawn together from older towns is the ease with which they conglomerate. A common interest levels for the time the usual distinctions. I found in Hoquiam and Gray's Harbor, however, sufficient of an intellectual society to form a class, and enjoyed its variety, for it was made up of all professions. Among the most interesting men one meets in a new country are surveyors and engineers. Their profession makes them accurate; they have more or less the poetical temperament, being close observers of nature; and they have had real adventures, which they tell with becoming modesty. I cannot swell the pages of this book by describing the people I have met, though I would like to do so, but the reader will get the benefit, if benefit it is esteemed, of some things I have learned from them, in the course of these chapters.

One of my excursions from Hoquiam was to a logging-camp several miles from town, the journey being performed in a small boat propelled by oars in the hands of the owner of the camp, who treated our party most politely, and by his exploits showed himself a thorough lumberman. Our boating ended, we walked a mile or more through the woods, over a very rough trail, really performing a portage around the dam constructed for

"chuting" logs into the stream below. Having been refreshed with an excellent dinner in a comfortable mess-house, we were taken to where the woodmen were felling trees, standing on tiny platforms made by inserting a short board in a cut in the tree, five, ten, or fifteen feet from the ground. I had supposed that this was necessary, either on account of the size of some trees at the butt, or because of the pitch contained in them; but our host assured me the great height at which some of the choppers or sawyers stood was simply an exhibition of bravado—the common ambition to excel one's neighbor in skill or daring.

In felling a tree the foreman takes pains to direct its fall so as not to injure any other valuable tree in its descent, and they do this to a nicety by inserting wedges on the side opposite to the direction in which it is to fall which give it the necessary tilt,—for so straight are these great firs and cedars that, frequently, they will stand erect after they have been cut to the centre all round, and wait for a breeze to sway them to a fall.

It was evident there was an immense waste, ten or twenty feet of a tree at the thickest part, and then the reckless destruction of all that are unfit for the finest lumber. I was regretting this to our host. "The timber grows as fast or faster than it is consumed," was the reply. Admitting that this is true where young timber is left undisturbed, the forest lands when cleared by axe and fire are put under cultivation, except on the mountains, and thus the amount must be rapidly lessening.

Having seen a few trees fall, we were shown the manner of hauling them to the stream, six or eight yokes of oxen being hitched to a single log. The lower side of the log has been peeled before being placed on the skid, which is well greased. The oxen are then driven by experienced men, who receive better wages than any but the foreman and cook. This latter exception made me smile, but I find that cooks are important personages in camps everywhere. These western lumbermen do not feed their men, as the Michigan lumbermen do, but give them a variety of fresh and canned foods.

Having watched the hauling of logs, and their skilful management to prevent them from slipping forward on the cattle, and their descent into the basin above the dam with a deep

dive, or a splash and a glide, we walked down to the dam to witness a "shoot" of the chute when the gate was raised. This operation requires quickness and nerve, and was superintended by our host. The water rushing out of the basin carries with it a great weight of logs, which must not be allowed to make a "jam" against the dam. The men are on the logs with pikes directing them so as to head them for the opening and send them endwise down the slide below the dam, when they take a header into the stream with a mighty splash, and go floating tumultuously down the agitated water to be arrested by a boom at the creek's mouth, and made into a raft for Gray's Harbor.

The wages paid to men in this camp is from forty dollars to sixty dollars, the foreman getting one hundred and forty. The price of logs is three dollars and fifty cents per thousand feet in the water. The price paid to the owner of the land is fifty cents per thousand. The average per acre is fifty thousand feet of fir and spruce. The cost of putting in a dam is from three thousand dollars to ten thousand dollars; the skidded road costs one thousand dollars per mile; the teams for hauling, one thousand dollars; the mess-house and dormitory, two hundred dollars or three hundred dollars. Nine or ten men at the wages named above, with their board, cost per month about six hundred dollars, and the supplies for the oxen eighty dollars. These figures make this camp cost for its first outfit, being very conveniently located, about five thousand dollars, and its expenses for a season of six months five thousand dollars more. Its profits depend, of course, on the amount gotten into the water ready for the mills. A good deal of money is disbursed in the towns of Washington, every winter, by loggers.

As I shall have occasion to speak again of the lumber interest, I will leave it here for the present and return to the subject of towns and settlements.

Facing the south channel, and almost directly opposite the city of Gray's Harbor is Gray's Harbor City, which has not yet become formidable as a rival to the towns on the north side. A little distance beyond or west of it is South Harbor, another small place, which has the advantage of being at a point where the south channel approaches closely to the shore with a cross-channel almost due north to the Gray's Harbor wharf. At

the mouth of Johns River is the Markham post-office, and still farther west is Bay City, at the head of South Bay. A milling establishment—Laidlow's—has just thought of starting a sale of town lots on the neck of land between South Bay and the ocean. Thus the success of one point stimulates ambition in others to compete with it.

About half-way between Markham and Bay City is the point selected by the Northern Pacific Railroad for a terminus on the harbor, and its name is Ocosta. This terminal city was founded on the first of May, 1890; therefore I was almost at its christening. Over three hundred lots were sold on this occasion, but the company have exhibited but little interest since, and some observers have expressed the opinion that it was the company's intention to extend its line to Shoalwater Bay, about fifteen miles south of Ocosta. But whether or not that is the company's present intention, it can do so whenever there is a motive for it.

The situation of Ocosta with reference to the channel is somewhat similar to that of Gray's Harbor; that is, long wharves will have to be built out to it, if not as long as those on the north side. It has a tide-flat in front, and the main part of the town plat on a level bench thirty-five to fifty feet above the flat. There is good anchorage in South Bay, and a belt of timber shelters the site of the town from the strong ocean winds which blow up and down the coast not more than four miles west of Ocosta. These are the main features of the new Northern Pacific Terminus.

[I have learned authentically, since writing the above, that the population of Ocosta now numbers (January 1, 1891) three hundred, and about fifty buildings have been erected. A wharf and warehouse have been built, and a saw-mill with a capacity of seventy-five thousand feet per diem, a sash- and door-factory about completed, and three shingle-mills have been added to the substantial improvements of the town. A bank has been doing business for two months. Two hotels entertain guests, and a third is in course of construction, while the land company and railroad company are planning one of those modern caravansaries which are the corner-stones of new western cities. Ocosta, like Hoquiam and Aberdeen, has resorted to planking

for improving its main business street. The railroad company's shops and round-house will be here, and trains will be running from Tacoma to Ocosta on the 1st of March, 1891. About the same time, if not sooner, trains will be running from Tacoma to the city of Gray's Harbor, over the Tacoma, Olympia and Gray's Harbor Railroad, or, as people here call it, "Hunt's road." The developments to follow on both sides of the harbor will probably far outdo the progress of the previous year.]

It is evident, from the superficial observations here recorded, that the State of Washington has a good possession in the valley of the Chehalis, from its eastern end, where it includes the coal-fields and lumber-tracts in the vicinity of Chehalis City and Centralia, to the Pacific Ocean. Its destiny will be given shape when the two railroads now nearing completion reach the harbor and have settled down to transportation business.

It may not be uninteresting to know that Hoquiam and Gray's Harbor gave Hunt a bonus of one hundred and sixty thousand dollars; Aberdeen, one hundred and thirty thousand dollars; and Montesano, twenty-five thousand dollars. That is not the way pioneers used to begin life.

The resources of this valley, which includes the whole of Chehalis, a corner of Thurston, and the western end of Lewis Counties, are prodigious. In the first place, the coal-fields at its eastern end embrace one hundred and fifty thousand acres. The quality and reputation of lignite which attached to the Chehalis coal-fields for a long time militated against their development, but enterprises of a few recent years have established the existence of a practically exhaustless body of clean bituminous coal in these fields, containing from ninety to ninety-five per cent. of carbon, in veins of a thickness of six feet, with a dip favorable to mining. Hence these railroads rivalling each other to cover this territory. And these coal-mines lie beneath a forest of merchantable timber. It will, no doubt, be a *casus belli* between the railroads,—the control of the transportation of coal and lumber from this favored section. But as the Pacific Ocean is only from eighty to one hundred and thirty miles from any of the coal-fields here referred to, Gray's Harbor has a great advantage over the Sound or Columbia River towns as a direct route to the sea, there being a saving in distance over the



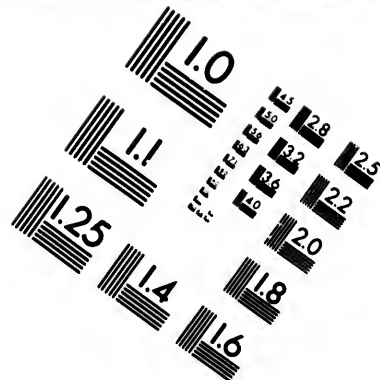
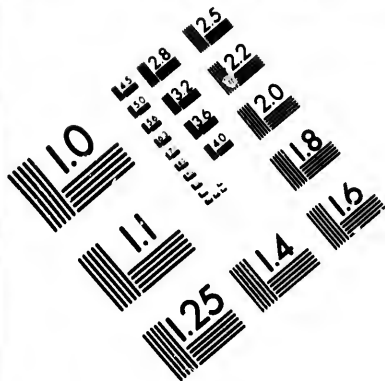
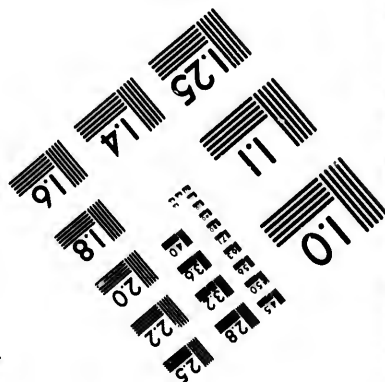
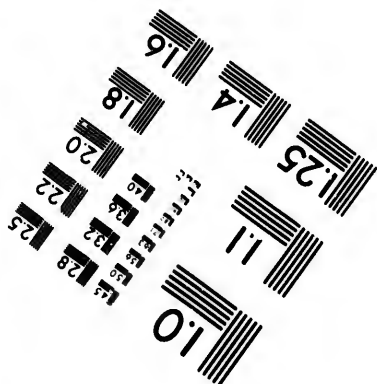
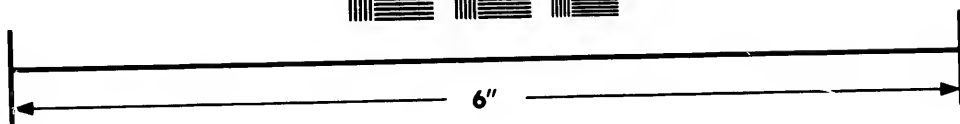
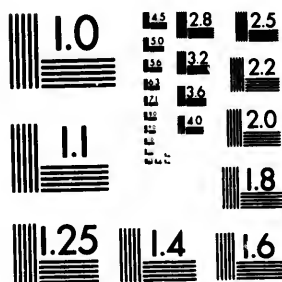


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former of several hundred miles, and over the latter of about eighty. It is claimed here that vessels loading or discharging in Gray's Harbor save seven hundred miles in going and returning to Puget Sound ports, from eight to ten days of time, and from six hundred dollars to one thousand dollars in towage,—only ten miles of towing being required to take a ship out of the harbor,—and that they decrease their rates of insurance by avoiding the stormy coast of Cape Flattery, at the entrance to the Strait of Fuca.

The arguments in favor of Gray's Harbor reach further, and say that wheat from East Washington once loaded onto cars could more cheaply roll right on to Gray's Harbor over the Northern Pacific or Hunt's road, and be transferred to vessels there, than to sail the additional distance from Tacoma out through the Straits. Certainly the dikes projected in front of the city of Gray's Harbor will afford admirable sites for grain-elevators, to be used in loading ships. With some comparatively cheap improvement upon the bar it is contended that this port is equal, if not greatly superior in its facilities for commerce, to any on the Northwest coast. And it seems as if nature should have provided such an outlet as this is claimed to be for the wealth within easy reach of it.

The timber which is tributary to the Chehalis Valley is not only that which covers so large an area in the valley proper, and its tributary valleys, which is estimated at ninety billions of feet, but there is an equal amount on the south and west of the Olympic Mountains which can only be brought out in this direction, and which is the largest and best timber in the State, unsurveyed and untouched by the axe of the logger. Great as are the well-known timber resources of Washington, it appears that more than a third of the whole must find its outlet at Gray's Harbor. A glance at the map shows a stream every few miles falling into Gray's Harbor or the Chehalis, which seem to have been designed for "driving" logs out of this immense forest. Many of these are navigable for considerable distances where not choked up with a "jam" of fallen timber, some of them having a depth of forty feet and over.

The largest of the streams emptying into tide-water are the Humpstulips, Hoquiam, Wishkah, and Wynooche, all on the

north, showing their sources to be in the Olympic Range. There are many lesser streams on the same side, and also many coming from highlands south of the mouth of the Chehalis. Above Montesano the Chehalis receives the Satsop from the Olympics, and Black River from the Cascades. The aggregate length of streams available for logging purposes is two thousand miles. Such figures stagger comprehension, standing on the shore of this broad, bright, but lonely bay, its townlets crowded for room in the edge of those "continuous woods" which are their dependence and their glory.

As to agriculture, its day has hardly begun. The lands of the Chehalis raise cereal and root crops, fruit, and hops equally well. There is a ready market in the towns for everything produced. The country near the coast, on account of its moist and cool climate, is an excellent one for grasses and dairying. The valleys of the streams named above are rich and fertile. In the Humptulips are about thirty townships of excellent land, little of which is occupied. Other valleys are almost unexplored.

The industries of the county are not yet shaped, if we except lumbering, ship-building, and fish-canning. The only one I heard spoken as about to be commenced was brickmaking, there being a quality of clay near the city of Gray's Harbor which it was believed would make a brick which could be vitrified, and which was desired for the construction of a grand hotel. I also heard it mentioned that the hemlock growing so abundantly near the coast offered inducements for tanneries to be located in this region.

There are banks of cod and halibut off the coast for deep-sea fishing; salmon ("Columbia River turkey," I have heard it called) in abundance in the harbor and rivers tributary, and trout in the mountain-streams. There are in the harbor porgies, tom-cods, rock-trout, flounders, herring, smelt, sardines, and salmon-trout, while the tide-flats abound in clams and soft-shell crabs.

Some idea of the commerce of the lower Chehalis Valley may be gathered from the fact that for one year, ending July 1, 1890, there was imported seventy thousand tons of merchandise. This trade was carried on with San Francisco and Portland. It remains to be seen what effect the completion of rail-

roads from the Sound will produce, and whether Gray's Harbor will not set up jobbing-houses of its own. In 1889 there was but one steamer a month from San Francisco; in 1890 there was one every twelve days. When the railroads are opened to travel, that will of course be too slow, with such marvellous quickness do affairs move in this wondrous wilderness.

CHAPTER XXI.

OLYMPIC GOSSIP.

THERE is a club-shaped piece of territory north of the Chehalis River and Gray's Harbor, fifty miles broad at its base and probably eighty at its northern end, which has the Pacific Ocean on the west, the Fuca Strait on the north, and Hood's Canal on the east, and is known as the Olympic Peninsula. It consists of a mass of mountains, highest and most broken on the north and east, the range following the strait and Hood's Canal, and sloping off in a chaos of lesser mountains towards the west and south.

It was a happy thought of the Englishman Meares, on July 4, 1788, to name the highest peak of the main range Mount Olympus, for sacred to the gods it has remained from the creation until the present year, 1890. All that was known of it during forty-five years of settlement on Puget Sound was confined to a few miles of border land on the three sides bounded by water. No government surveys were made except at a few points along the strait and a single one on the sea-coast, where a light-house was erected to warn off, not to attract, the curious. Two Indian reservations were located on the sea-side, but nobody on them knew anything about the interior,—not even the Indians. No "darkest Africa" could be more unknown. Imagination peopled it with giants or pigmies, according to the taste of the dreamer. Through it roamed the fiercest wild beasts, and in the solemn gloom of its forest-hidden caves was concealed treasure incalculable.

History tells us of numerous native tribes who a hundred years ago indulged in stratagems to board the unwary ship-master's vessel and massacre the crew, and who entertained dusky royalty with the exhibition of sawing off the heads of a dozen or two of slaves to show kingly prodigality. They gave the early settlers on Puget Sound a good deal of trouble, being very active pirates, and the opportunities for the invasion of settlements, or capture and murder of small parties in boats, being too convenient to be resisted.

The Makahs were perhaps the worst of these, whose reservation is on the extreme northwest corner of the peninsula. They are brave fellows, and dare to chase whales in their sea-canoes. When a whale is seen spouting the fact is reported to a medicine-man, who allots to each canoe to be engaged in the chase the requisite number of skilled oarsmen and a harpoon-thrower. This instrument is made of pieces of elkhorn, ornamented with carving, joined together in the shape of a V, and having a sharp steel like an awl at the point, to which is fastened a long and strong rope made from the sinews of a whale. When about to be thrown the harpoon is inserted in a slender shaft of tough yew wood, which drives it deep into the body of leviathan, where the barbs hold it.

The chase is never undertaken without the performance of religious ceremonies or necromancy, intended to give the harpooner the victory in the coming struggle. The medicine-man and the harpooner, blessed by him, occupy the leading canoe; then come the other members of the whaling fleet, followed by a reserve of two canoes. They cross out over the breakers with great skill, and put to sea to watch for the reappearance of their game.

A whale usually plays along near the surface for some little time, blowing at intervals, then throws himself out of the water and dives deep down, remaining below for a corresponding time, which the Indians from observation can calculate, as well as the place where he will again come to the surface. They take a position near this place and watch for the auspicious moment, which is when the whale "humps himself" to make a dive.

The harpooner, his terra-cotta-colored figure nicely poised in the bow of the canoe and harpoon raised above his head, waits

for the command to throw. It comes, "latah!" and the instrument descends with cruel force and precision into the whale's body, followed by others, and the oarsmen quickly back away to escape the commotion which the creature's huge tail creates in the water when it is wounded. Other lines are attached to the harpoon-lines, to which are fastened "floats" made of the stomachs of the hair-seal, filled with air, to prevent the canoes from being drawn under water.

In his agony the whale at first lashes the sea furiously, then starts off on a run, and drags the canoes. But with half a dozen harpoons in him he is doomed. Should night come on, or the sea be rough, the canoes are detached, and the whale left to die at his leisure, prevented from going to the bottom by the lines of floats attached to him. He may travel all night and all the following day, but not straight ahead, and is usually found in the morning, when if he shows game the boats are again fastened to the lines, and away they go once more, moving about in a circle of fifteen or twenty miles. When at last the whale succumbs, the carcass is towed ashore, the tide assisting to beach it. When this happens there is a race to be the first to touch the body, as thereby one becomes eligible to the office of chief harpooner, or *hoa-chin-i-ca-ha*.*

The medicine-man removes the whale's eyes, which he uses in his incantations; runners are sent out to collect the tribe, and the whale's blubber is cut up and divided among them. As much as one thousand or fifteen hundred gallons of oil are obtained from one whale. When all are present a "potlatch," or feast, is held, presided over by the "medicine," and the festivities close with libations of fire-water, poured, if not to the gods of Olympus, down the thirsty throats of these savages.

* This account of whale-chasing is merely a synopsis of a very interesting description by an eye-witness,—H. D. C.,—published in the *Oregonian*. On the occasion of his observations at Neah Bay, one of the pursuing boats containing seven Indians became separated from the fleet and was lost. There is a life-saving station at Neah Bay, which could, however, be of no use to a canoe in distress in the open sea. The neighborhood of Cape Flattery is the centre frequently of wild storms, and is often overhung with thick fogs. A long list of vessels lost about this part of the coast might be given, and yet the life-saving station there is very ill equipped and inefficient.

Whether by the dangers of whale-chasing, the decimation of wars, or the importation of foreign diseases, most of the Makahs have died off, and the places that knew them shall know them no more.

On the Quinault (pronounced Keen-nut) reservation are about four hundred and fifty men, women, and children, who occupy about one hundred and forty thousand acres. They are a degraded tribe, whom the agents appointed to instruct them have been unable to elevate to a comprehension of the ideas entertained by civilized people. Their houses are more comfortable than those of the tribes of the interior, being constructed of planks hewn from cedar or spruce, set up on end, and roofed with like material. The floor is of earth, and is a foot below the level of the ground. A raised platform, which serves for seat or bed, runs along the sides. Mats are used to sleep on. Several families occupy one house, and cook at a common fire in the centre, the smoke escaping from an opening in the roof. The women are simply slaves. They provide everything the family requires except game and fish, and make all the clothing for both sexes. Chastity is not in favor, the absence of it being more profitable. The food of the tribe consists, after game and fish, of roots, berries, water-fowl, eggs of wild fowl, and shell-fish. Meat is not much eaten, and at their feasts they drink bear-, seal-, and whale-oil, and are not particular about the condition of the whale-blubber, which they consume in every state of putridity.

When an attempt was made to establish a salmon-cannery at Quinault, it failed on account of the high price demanded by the natives for fish, they shrewdly deciding, no doubt, that it was not good policy to encourage the too rapid destruction of their food supply.

Whether from indolence or superstitious dread, these people were as wholly ignorant of the interior of the peninsula as the white intruders.

The names of the streams coming down from the mountains on the coast side are Menotelops, Moclips, Chepalis, Quinault, Raft, Queets, Ohalat, Bagachiel Killiwah, Solduek, Dick, Quillayute, Osette, and Waach. On the north, falling into the Strait of Fuca, are Oleho, Clallam, Lyre, Elwha, and Dungeness.

The most of these names, as will be seen, are aboriginal, while Lieutenant Meares is responsible for Dungeness. On the east, flowing into Hood's Canal, are the Quilcene, Leland, Sylopish, and Skokomish, and many smaller ones without names. Several of these rivers could be navigated with small steamers by simply removing accumulations of drift.

The laying out of towns on Gray's Harbor and exploration of its tributary rivers by "timber cruisers" awakened so great an interest in the Olympic Peninsula that, if any prospector or party of adventurers penetrated even a few miles beyond the heretofore known limits of exploration, the fact was quickly given to the public with as much *éclat* as if it had been indeed Darkest Africa, and these pathfinders all Livingstones and Stanleys.

Up to this time the most generally accepted theory of the country in the interior, according to one writer, was that it consisted of valleys sloping inward from the mountains to a great central basin. In support of this belief it was pointed out that, notwithstanding the country round about had abundant rain, and that clouds constantly hung over the mountain-tops, all the streams flowing towards the four points of the compass were too insignificant to drain the great area shut in by the mountains. (This was not true, as I have shown, concerning the south side.) This writer fancied a great interior lake, but could not account for its drainage except by imagining a subterranean outlet. He urged some adventurous persons to "acquire fame by unveiling the mystery which wraps the land encircled by the snow-capped range."

"Superstition," remarked Governor Semple, in his official report for 1888, "lends its aid to the natural obstacles in preserving the integrity of this grand wilderness. The Indians have traditions in regard to happenings therein, ages ago, which were so terrible that the memory of them has endured until this day with a vividness that controls the actions of men. In those remote times, say the aborigines, an open valley existed on the upper Winooskie, above the cañon, in the heart of the Olympic Range. This valley was wide and level, and the mountains hedged it in on every side. Its main extent was open land, matted with grass and sweet with flowers, while the

edge of the river and the foot of the hills were fringed with deciduous trees. Here peace was enshrined and the warriors of the different tribes congregated once a year, to engage in friendly rivalry in the games that were known to them, and to traffic with each other in such articles of commerce as they possessed. No account exists of any violation of the neutrality, but a great catastrophe occurred during the continuance of one of their festivals from which only a few of the assembled Indians escaped. According to the accounts of the Indians, the great Seateco, chief of all evil spirits, a giant who could trample whole war parties under his feet, and who could traverse the air, the water, and the land at will, whose stature was above the tallest fir-trees, whose voice was louder than the roar of the ocean, and whose aspect was more terrible than that of the fiercest wild beast, who came and went upon the wings of the wind, who could tear up the forest by the roots, heap the rocks into mountains, and change the course of rivers with his breath, became offended at them and caused the earth and waters to swallow them up—all but a few, who were spared that they might carry the story of his wrath to their tribes, and warn them that they were banished from the happy valley forever."

"The next person," says Semple, "to stand upon the scene of the ancient convulsion will be the all-conquering 'average man' of the Anglo-Saxon race, who will tear up the matted grass and the sweet flowers with his plow, and deprecate the proximity of the snow-clad peaks because they threaten his crops with early frosts and harbor the coyote that tears his sheep."

Such were the ideas entertained even by intelligent people as late as 1888, and hence "Olympic" and "Olympian" were words very appropriately applied to these mountains. The trader Meares knew as little of these mysterious heights as the Greeks of the summits of their Olympus. The loftiest one is eight thousand one hundred and fifty feet, while Mount Constance, the second highest, is seven thousand seven hundred and seventy feet above the sea.

A few prospectors had penetrated a little distance into the mountains from the settlements along the Strait, who gave glowing accounts of the possibilities of this region,—its im-

mense forests of fir, cedar, spruce, and hemlock, its numerous small but rich valleys, and its minerals, including coal, gold, iron, tin, valuable stone, and a variety of clays. The streams were swarming with speckled trout, and the forests with game. These rumors still further stimulated public curiosity and interest. I met at Gray's Harbor the first ladies to undertake a journey into the Olympics,—Mrs. John Soule and Mrs. John G. McMillan,—who, with their husbands, went up the coast by a trail as far as the government warehouse at Owyhut, and thence to the Quinault Reservation along the beach, crossing the rivers at their mouths, where they were most shallow. On the Chepalis one settler was found who had lived there for nine years. At the reservation they were entertained by the family of the agent, Captain Willoughby, who, with Mrs. Willoughby, related to them many Indian legends. But in these legends I see little to admire; they are exceedingly puerile and pointless, and not worth preserving.

From the reservation the party ascended the Quinault River by canoe having Indian boatmen. The time occupied in getting to the lake of that name, a distance of forty miles, was three days, many portages around "jams" having to be made. At their first camp, made at an Indian rancherie, there was set up before the house of the chief a figure-head of a wrecked vessel as a *totem*. At the lake they found strawberries—time, last of May, 1888—on the banks, and delicious trout in the waters. The valley of the lake was described to me as romantically beautiful. They found the lake to be of an oval shape, lying northeast by southwest, and about five by two and a half miles in extent, with a depth of from seventy to two hundred and twenty feet. The theory of its formation held by this party was that an avalanche had dammed the waters of the Quinault, which finally found their outlet by a depression to the southwest, through which they cut a channel toward the sea. The mountains on the sea-side are steep, and a ridge runs along the north, but the valley lies on the east side. If the theory of an avalanche were true, the story of the Indians' happy valley of long ago might have a shadow of foundation.

Having heard on the reservation that by going up the river beyond the lake, which could be done by the help of Indians, a

walk of seven miles from the head of canal navigation would bring them to the head of a river flowing into Hood's Canal, the party determined to win fame by crossing the Olympics by this route. It turned out, however, that the current of the upper river was too rapid to admit of being navigated, at least by its present mouth, and the old mouth into the lake half a mile to the south was found to be dammed by drifts. Small, delicious salmon were found in the lake, and the party remained for several days enjoying the mountains, the lake, the splendid forest, salmon, strawberries, and freedom. This visit to the Olympics was the occasion of the formation of Lake City Town Company, which proceeded to plot six hundred and forty acres on the south shore of the lake, where a summer-resort might very appropriately be located. It was even said that a railroad from the Strait to Gray's Harbor would be constructed at an early day, which would bring Lake City within an hour and a half of the Harbor,—namely, the Port Townsend and Quillayute. Quinault City, at the head of navigation on the Hamptulips River, was also projected about this time, "on a beautiful elevation, with half a mile of river front and a mill-site." So easy is it to project enterprises and to dream of future fulfilment in this wilderness!

I also met at Hoquiam Ex-Lieutenant-Governor Gilman, of Minnesota, and his son, S. C. Gilman, who had passed a winter in quietly exploring the Olympics. They found three hundred and fifty square miles of rich bottom-land along the streams, and described the soil between the mountains and the ocean as well adapted when cleared to grazing, fruit-raising, or general farming. There were few prairies, and those small ones, but they found float-coal, croppings of iron, and quartz containing gold, silver, copper, and tin. They entered the mountains from the south and experienced little difficulty, while, by report, those who attempted to enter from the north or east were met by many and severe obstacles. That this is true is confirmed by the report of an exploration conducted under the auspices of the army, as well as by the failure of several parties from the Sound to effect a crossing from the east side. The Gilmans encountered dangers and performed feats of daring which to an ordinary tourist like myself seemed extraordinary, but which

were as coldly recited as if it had been a usual thing to climb perpendicular walls, clinging like a limpet to its rock, or to promenade on a shelf six inches wide above a frightful abyss.

There was also another party which wintered in the Olympics and had not yet come out when I was at Hoquiam. This was an expedition organized by the *Seattle Press*, consisting of five men and an Indian guide, who deserted when he discovered the purpose of the explorers to penetrate to the interior of the peninsula. They started from Port Angeles, on the north, with mules, boats, provisions, and a thorough outfit, proceeding up the Elwha River. To recount their experiences would require more space than can be allowed to it in this volume. They were in the mountains from December 7 to May 21, and came out at Aberdeen in a disreputable plight, plus hair and beard, but minus those articles of clothing considered indispensable to propriety. Their report concerning the nature of the country and the minerals to be found in it agreed with that of the Gilmans, and they made many additions to the map of the country, naming peaks and lakes which hitherto had not been observed or named. Lake Crescent and Lake Sutherland are both near the Elwha River. Mount Brown is in that vicinity, Mount Seattle near the head of the Quinault River, while Mount Ferry, named after the first governor of the State, Mount Childs, Barnes, and Grady are elevations no longer without a "local habitation and a name."

Following the return of the *Press* expedition were half a dozen lesser efforts to learn the character of the Olympic Peninsula in all its parts, most of these being directed to the discovery of minerals, and all bringing in some specimens. A copper-mine discovered in Kitsap County east of and at the foot of the Olympic Range seemed to confirm the existence of copper higher up.

I have spoken of the Peninsula as unknown and unexplored. But it would ill become me to pass over other attempts made at a comparatively recent date to unveil the Olympian mystery. In 1881-82 Colonel Chambers, commanding at Fort Townsend, endeavored to construct a road from the fort into the mountains, the result of six months of toil being a trail to and across both branches of the Dungeness River, which was then abandoned

as impracticable, from the density of the forest and underbrush, and the equally great obstacles of windfalls, cañons, and precipices.

In 1885, Lieutenant J. P. O'Neil, being stationed at Fort Vancouver, was detailed by General Miles to make a reconnaissance of the "Jupiter Hills," and entered upon this duty with enthusiasm. After a month of rather perilous adventures in its execution, and losing one man, who strayed from the trail and perished, O'Neil was ordered to Fort Leavenworth, and the expedition returned to Vancouver. Concerning his part in it O'Neil remarked that "the travel was difficult, but the adventures, the beauty of the scenery, the magnificent hunting and fishing, amply repaid all hardships, and it was with regret that I left them before I had completed the work." He also said, "There must be great mineral wealth here, for gold has been found in the foot-hills, as has also coal. There are now two claims which have first class coal located near Hood's Canal. Iron ore is in some places most abundant and very pure. I also carried a specimen out which was pronounced by a learned man to be copper. The formation of these mountains seems to speak plainly of mineral wealth. . . . The day will come when the State of Washington will glory in their wealth and beauty."

In the month of July, 1890, General Gibbons sent out an expedition to make a thorough exploration of the Olympic Range, and again Lieutenant O'Neil was placed in command. Accompanying it were members of the Portland and the Washington Alpine clubs, and the expedition, which consisted of fifteen rank and file, started early in July from Union City, at the mouth of the Skokomish River, on Hood's Canal. They carried a box similar to those placed on the tops of the Oregon snow-peaks, containing a record book, to be deposited on the highest peak of the Olympics, the summit of Mount Olympus.

The trail lay by Lake Cushman, which is described as a paradise for anglers. Nestled among the foot-hills at an elevation of four hundred feet, it reflects in its placid bosom the overhanging crags and snow-peaks. The Skokomish River runs into and out of it, as the Quinault does on the other side of its lake. A trail led to some copper deposits several miles from the river, and from that point the only roads open to the explorers were the

elk-trails. In short, they had the same experience that all previous explorers had met with, travelling over "a succession of fine bottoms and precipitous mountain-sides, which in places approach the grandeur of a cañon, until they arrived at a real and impassable cañon where the stream rushed out between rocky walls one hundred feet in height." This experience was repeated on an ever-increasing scale of grandeur, the incidents of which the reader would find it wearisome to follow, until the summit of the range was attained, and the party descended the Quinault to the coast, and finally to Gray's Harbor, where they were welcomed with enthusiasm. I had the pleasure afterwards of hearing Lieutenant O'Neil deliver a lecture descriptive of his expedition, at the close of which he made the interesting statement that Mount Olympus has forty glaciers, and the surprising one that the Olympic Peninsula was good for nothing but a *National Park*. Whether the people of Washington will agree with him I know not, but I think it will take the strong arm of the government to keep them from the timber, minerals, and fish which it contains.

The last explorer of note who proposed to make the acquaintance of the Olympics is Lord Lonsdale, who was going to take the route *via* Port Townsend, when Mr. J. T. Duncan, of Gray's Harbor, met him at that place to persuade him to take the safer and easier route from the south. It cannot be said hereafter that the Olympics are *terra incognita*, but only that they are, for the most part, an inhospitable country which, having once seen, few would care to see again except at a distance, and at a distance they are the most beautiful of all the ranges in the Northwest,—a joy forever to the resident on either side of the Strait or the Sound.

As a country in which to hunt game there is nothing more formidable than black bear, wolves, deer, and elk, the latter of which are numerous and not at all shy.

CHAPTER XXII.

SHOALWATER BAY OR WILLAPA HARBOR?

WHILE I was at Hoquiam I discovered that there was an appearance of rivalry between the population of Gray's Harbor and the inhabitants of the region about Shoalwater Bay, fifteen miles south of that place. I was myself conscious of a prejudice against this bay on account of its name, although its history for the last hundred years did not justify the feeling. In fact, I think a part of my aversion to this harbor was that it did *not* furnish a reason for this want of confidence, by wrecking some vessel, thus showing its true character as indicated by its name,—for shams of any kind are hateful to me.

Called to question my authorities on this subject, I could not learn that this bay had ever betrayed its trust, but, on the contrary, a number of vessels which had been unable to get into the Columbia River, in former times, had found shelter and safety in Shoalwater Bay. The history of the harbor since the settlement of the country is about this: A vessel or two in 1849, having blundered into this port in looking for the Columbia in heavy weather, drew attention to the harbor and surrounding country. In 1850, C. J. W. Russell settled on the bay, and, finding the extensive shoals a natural oyster-bed, opened a trade in oysters with San Francisco. In 1851 the schooners "Sea-Serpent" and "Robert Bruce" were regularly employed in supplying the California market. The "Bruce" was unfortunately burned at her landing, which place was called Bruceport, as her owners were named the Bruce Company; hence, Bruceport is the oldest settlement on the bay. Another company were at the same time cutting a cargo of piles for the San Francisco market from the grand forests around the port, and in 1852 a number of immigrants settled on the streams emptying into it. A party had already projected the laying out of a town on the bay, when their leader died. The first saw-mill was erected in 1852-53, near the mouth of North River, by David K. Weldon, one of this company.

In 1853-54 there were two hundred men on Shoalwater Bay and its estuaries who lived by oystering, and these natural beds furnished all the fresh oysters consumed on the coast until 1859, when planting was begun. An unusual frost in 1861-62 destroyed nearly all the oysters in the bay; but in 1874 one hundred and twenty thousand baskets were shipped from here. The oystermen of Shoalwater Bay and Puget Sound inlets have to contend with the imported eastern mollusk since the opening of transcontinental railroads, but the small native oyster remains a favorite for its delicacy of flavor.

From what I have said it will appear that this part of the Washington coast, although deserving well of the outside world, received little attention from it for many years, the rich valley surrounding it being sparsely settled, and even the wealth of its forests remaining almost untouched.

The entrance to Shoalwater Bay is thirty-five miles north of the Columbia River entrance, although its south end reaches to within four miles of that great river. This thirty miles of water—actually shoal—south of the entrance is what gives the bay its name, and it is separated from the ocean by a long spit of an average width of two miles. Inside the bay are no mud-flats such as are seen in Gray's Harbor, but the channel is more tortuous.

The north headland of the bay, called Toke Point, after a Chinook chief who had his home here, is a jutting headland reaching out into the harbor for a distance of seven miles in a curving neck which protects a small bay called North Cove. From this cove the harbor extends eight miles east to the mouth of the Willapa (pronounced with a broad *a*, and accent on the second syllable) and up this estuary for some distance to a point twenty miles inside the bar. The mean depth of water on the bar is said to be over twenty-six feet, while inside and all the way to the head of deep water in the Willapa the channel carries from thirty-five to sixty feet. The harbor is perfectly landlocked and safe from the sou'westers which blow in the winter months.

Twenty miles from the ocean, on the south bank of the Willapa River, and three miles from its mouth, is the town of South Bend, first settled in 1881, and having an active growth,

backed by a rich farming country forty miles long by three miles in breadth, and a great body of fine timber. A large saw-mill, in addition to the one already there, will be put in operation soon, together with other mills and business enterprises.

South Bend is but forty miles west of the main line of the Northern Pacific (Portland Branch), at Chehalis City, and the difference in the elevation of the two places is one hundred and fifty feet. This makes railroad construction easy, and in fact a branch to South Bend is already being built by the N. P. company which will be completed early in 1891, or about as soon as their line to Ocosta is opened, under the name of Yakima and Pacific Coast Railroad. This will be a boon to the inhabitants of the Willapa Valley, who have hitherto been compelled to depend upon a chance vessel, or a small propeller from Hoquiam to a landing on the south spit, whence a beach-wagon conveyed passengers to North Cove—a very boisterous route in rough weather. Or if communication with the Columbia River was sought, again a chance vessel or tug carried travellers out to sea and across the bar of the Columbia; or more recently to Sealand on the beach near Baker's Bay, whence a local railroad completes the journey to the Columbia *via* the sea-side resorts described in a former chapter. When the Chehalis road is finished one can come from Portland or Tacoma in four or five hours by rail. Whereas South Bend was a hamlet of perhaps twenty houses until this prospect opened up a future, it is now an incorporated city which is spending large sums in street improvements, hotels, and business houses. A newspaper, the *South Bend Enterprise*, represents the interests of the town and Willapa Valley. Like Aberdeen, the principal streets of South Bend are built upon piling to raise them out of the reach of the tides.

On the north bank of the Willapa River, at its confluence with the harbor, on a level and open tract of land containing about three square miles, another town has been laid out, with broad avenues fronting on deep water, called North Pacific City. It has not yet received much attention or been advertised after the manner of new cities, from which I draw the inference that the railroad powers are holding it until they are prepared to give it a good send-off. If I were the son of a prophet I should

say that it is the intention of the powers just referred to, not only to bring the Yakima and Pacific Coast Railroad here, but also to extend their Gray's Harbor line down to the same place. So the strife for ascendancy between the Gray's Harbor and Shoalwater Bay towns is not without foundation in reason.

Within a distance of fifty miles on the coast are three competing points, Astoria, and the leading city, whichever that may prove to be, on each of the two harbors north of the Columbia. It must be a surprise to the merchants in the interior, who have always controlled the commerce of these two States, to discover at this late day that trade-centres are not permanent, but locate themselves according to natural advantages which are fixed, other things being equal. The whole of West Washington is so rich in resources that it now depends upon the capacity of any considerable portion of it to sustain a more dense population to give superior power to a particular city, although for a time it may serve as a distributing point to a wide area of only partially occupied territory.

Within a short distance of Shoalwater Bay is a range of hills in which rises the Nasel River, a wild stream which in twenty miles accomplishes a good deal of that kind of motion which the water does that "comes down at Ladore." It is a favorite region with hunters from the seaside resorts south of the bay, the game being the same as that found in the Olympics, and more easily reached.

One of the attractions of Shoalwater Bay is the life-saving station on North Cove. The crew is composed of a captain and six men, who not only thoroughly understand their work, but are kept in training by drill. There is no hour of the day or night when the guard is broken, each man being on watch four hours of the twenty-four. When a wreck is discovered the patrol burns a signal which by percussion emits a red light that is visible a long distance, and then gives his warning to the crew in the boat-house by firing a small cannon kept ready at the light-house on the point.

At the sound of the cannon the men spring to their places, and the captain, trumpet in hand, takes command. Only last December the "Grace Roberts," a large bark from San Francisco, was driven ashore fifteen miles south of the station, one

fiercely tempestuous day just at nightfall, and was not seen until morning, when the guard's keen vision espied it through the mist, and for an instant only. The crew was at once put in marching order, but, the distance being too great for rapid communication, the captain secured the use of a tug in the bay to convey the life-saving apparatus to a point opposite the wreck, and distant four miles, the life-boat being towed through a tumultuous sea with the crew in their places. On disembarking, horses were hired, which dragged the beach-wagon and apparatus on a run across the sand spit to the beach where lay the "Grace Roberts," about four hundred yards from shore, broadside on, and full of water, her bulwarks and housing washed away, and the crew lashed in the rigging, while the spray from every inrolling wave was drenching and benumbing them. In two hours from the time the wreck was discovered a line had been shot on board, but so exhausted were the sailors that it was with difficulty they succeeded in hauling a hawser on board, by means of which and the life-buoy attached to it nine lives were saved. Just as the last man—the captain—was lifted, half frozen, out of the car, up came the crew from the life-saving station I have before mentioned, at Cape Disappointment, having made a run of twenty miles, hauling their beach-wagon by means of horses. These incidents show great efficiency in the service at these two stations. Captain John Brown, of Toke Point, lost, in rescuing a crew, a son who had already won a medal by saving lives. It is certainly the severest service and the most humane of our public beneficent institutions, as well as one of the least rewarded.

To return to the nomenclature of this region,—it has been decided by the residents that Shoalwater Bay is a misnomer, and, the government being of the same opinion, the name has recently been changed on the government charts to Willapa Harbor, by which appellation it will hereafter appear on the map of Washington.

CHAPTER XXIII.

THE CITY OF DESTINY.

RETURNING over the route by which we came to Kamilche and Olympia, only touching at the capital long enough to take on passengers for down the Sound, we find the same fair picture of blue water, wooded headlands, distant mountains, and summer skies which we enjoyed on the previous trip. Steilacoom is the first place of any importance we come to, and is really in a beautiful location on a high gravelly prairie, diversified with groves of fine timber, gemmed here and there with small clear lakes bordered by deciduous trees. It is said there is no finer view of the Cascade snow-peaks, from Rainier to Hood, than is to be seen here, while the Olympics are also in full view across the Sound.

The harbor at Steilacoom is good, and there is plenty of water-power in Steilacoom Creek which comes in at this place, some of which is already utilized for milling purposes, the head of the creek being in a lake four miles distant and two hundred feet higher. About a mile east of the harbor is the site of old Fort Steilacoom, the buildings of which were turned over to the Territory for an insane hospital. The territorial penitentiary on McNeil Island, opposite Steilacoom, is a fine building, and standing so prominently on these lonely shores reminds one of Hawthorne: "The founders of a new colony, whatever Utopia of virtue and happiness they might originally project, have invariably recognized it among their earliest practical necessities, to allot a portion of the virgin soil as a cemetery, and another as a site for a prison."

Steilacoom has long been a quiet and dull town of a few hundred inhabitants,—for it is one of the oldest in Washington, having been founded in 1850 by Lafayette Balch, who owned a brig and brought a cargo of goods to this port, where he built a house and laid out a town. Since the admission of the State, and even before, Steilacoom had started on a new career of progress, and, being now connected with Tacoma, Olympia, and

other points by rail, is becoming a popular resort, owing to its fine situation and the delightful drives in its vicinity.

About five miles below Steilacoom the steamer enters "The Narrows," a passage six miles long and one mile wide, through which the water runs with great force at the ebb and flow of the tide. This strait is the only passage between Puget Sound proper and Admiralty Inlet. Along it the government has several reservations for defensive or other purposes. The steamer route down the Sound is another narrow water-way directly north of the Narrows, named by Vancouver Colvo's Passage; but to reach Tacoma we turn Point Defiance on our right, leaving Gig Harbor on our left, and take a southeast course into Commencement Bay, at the south end of Admiralty Inlet, which is separated from Colvo's Passage by Vashon Island and for about twelve miles. The bay is five or six miles long by about two and a half wide, and is well protected by Vashon Island. We steam along past old Tacoma, a milling town, and, finding some friends, are carried off to make acquaintance with the City of Destiny at our leisure.

To begin at the beginning, the old town of Tacoma was founded by Morton M. McCarver, a Kentuckian, an immigrant of 1843 to Oregon, from Iowa, where he laid out the town of Burlington, but, being of a restless and adventurous turn of mind, migrated to the Pacific Coast, where he figured in Oregon, and afterwards in California, legislation. In 1868 he went to Puget Sound with the intention of locating, in his own opinion, the terminus of the Northern Pacific Railroad. He made a good guess, as it subsequently proved. The land which he, with two associates, purchased belonged to Job Carr. Here he erected a residence, and induced Hanson and Ackerson to locate a saw-mill on the point where the old town stands. When the railroad company in 1873 came looking for their terminus, he was not in their way; he gave them two hundred or three hundred acres, and helped them to acquire several thousand more. But they put their terminus where Tacoma City now stands, and he died two years later. If he could have lived until now the disappointment would have been softened to him, for the old and new towns are practically one.

I find a good deal said about the name Tacoma, which is

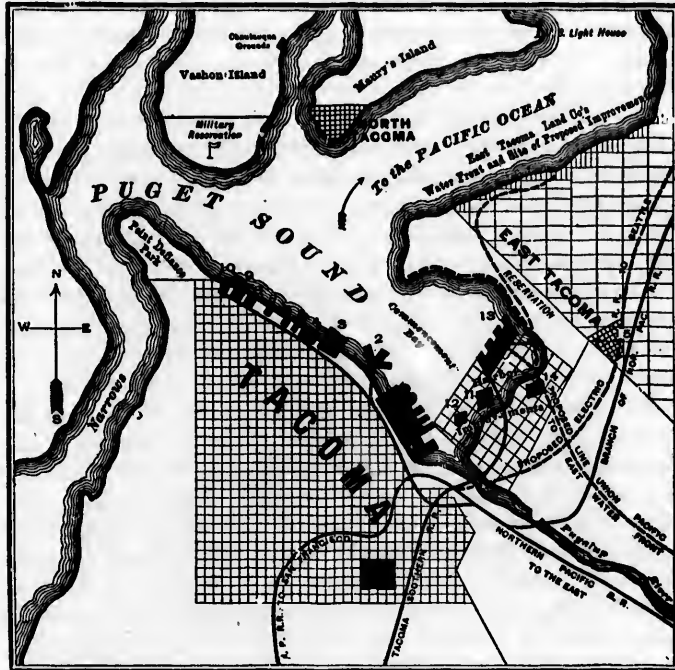
variously spelled with a *k* in place of the *c*, or with an *h* at the end. It is generally believed to be an Indian word. The first time it appears in literature is in Theodore Winthrop's "Canoe and Saddle," where he professes to have been told that the Indian name of Mount Rainier was Tacoma; but the word is not found in the Indian tongue, and probably, as in the case of Jonathan Carver with the word "Origan," he partly misunderstood and partly invented. It is a very good word, however, with as much right to be as other arbitrary names, and was chosen, I have been told, by Mr. Ackerson as the name of McCarver's town, and the railroad people, with very good taste, everything considered, called their town the same, and soon there will be no difference between the old and the new.

The first thing that struck me about Tacoma was its appearance of not being an accidental town. It was evidently designed. No one could stand on these sloping heights and observe the scene carefully without seeing its intention. The natural features are quickly enumerated. The elevated plateau on which the city is built, the mouth of the rich Puyallup Valley, producing enormously in coal as well as in lumber and agricultural products, with tide lands worth millions lying just on the right of the city front, with the Narrows on the west where there could be no other town, and a country back of it suited to the eye and to homebuilding rather than to farming, while the whole great inland sea opens its water-ways about it, all plainly say, "Here was destined to be a great commercial metropolis."

These were the natural gifts to the City of Destiny. But look how men have taken advantage of them. Look at the harbor, the railways, the Sound and ocean docks, coal-bunkers, wheat-elevators, mills, dry-dock, canneries, shingle-mills, brick-yards, Ryan Smelter, and Great Pacific Mills along the front, and the St. Paul and Tacoma Lumber Company's milling plant and factory, Commencement Bay Improvement Company's ocean docks, warehouses, and manufacturing centre, and other large mills being erected at the east end of the bay. These things did not come there like the accretions on an oyster-shell: they were put there by design of men of brain and foresight, and the end has justified the beginning.

The Puyallup Indian Reservation comes down to Commence-

ment Bay, but already there is an East Tacoma laid out on it, fronting the harbor, and the East Tacoma Land Company's



MAP OF TACOMA.

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|---------------------------|---|
| 1. Sound and ocean docks. | 10. Pacific Mills. |
| 2. Coal-bunkers. | 11. St. Paul and Tacoma Lumber Company's milling plant. |
| 3. Wheat-elevators. | 12. Wheeler & Osgood's sash and door factory. |
| 4. Tacoma mills. | 13. Commencement Bay Improvement Company's ocean docks, warehousing and manufacturing centre. |
| 5. Steamship dry-dock. | 14. Site of Hart Brothers' mills. |
| 6. Fish-canneries. | |
| 7. Shingle-mills. | |
| 8. Brick-yards. | |
| 9. Ryan smelter. | |
| | 15. Original plat of East Tacoma. |

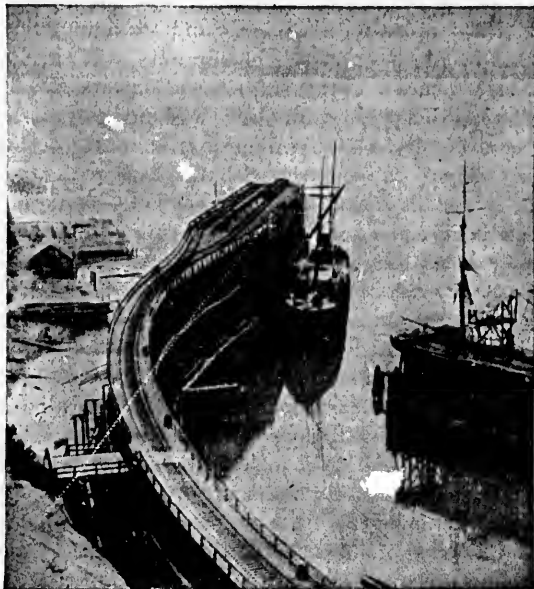
water front and site of proposed improvements, facing Admiralty Inlet, is the projected seat of the terminal improvements of the Union Pacific Railroad when it shall need them.

Directly north of the city is North Tacoma, on Maury's Island, which is not quite an island although it bears that name, an inlet called Quartermaster Bay running across the southeast portion of Vashon Island, and nearly cutting off this insular fragment. I am not at present able to see why North Tacoma exists, but have no doubt the projector of this town has an object in view.

The evident intent visible along the water-front is equally recognizable in the plan of the city, with its wide avenues, handsome business houses, tasteful dwellings, and excellent street-railway service. Nothing has been left to chance, but as one takes in the whole view its design is as conspicuous as the city itself, which being set on a hill cannot be hid. At the head of the bay the slope of the ground is such as to offer facilities for railroad, manufacturing, and other business improvements, and there we find them. Further along towards the west and under the high bluff are the wharves, to which ships can sail.

The authors of the design of Tacoma are to be found in the Tacoma Land Company, a corporation formed of certain of the preferred stockholders of the Northern Pacific Railroad after the selection of Tacoma for a terminus. This company purchased three thousand acres already secured by the railroad company, and thirteen thousand more. The railroad company secured a majority of the stock of the land company, and reserved enough ground for its terminal facilities, which comprise many miles of track in the yards, freight and wheat warehouses, coal-bunkers, freight and passenger dépôts and offices. The land company, besides laying off and improving the town-site, has looked after its embellishment, healthfulness, and convenience in many ways. A reservation was made of thirty acres in the midst of the city for a public park, which has been partially improved by the city government. Tacoma is, in fact, unusually well provided with pleasure-grounds. The six hundred acres reserved by the United States Government at Point Defiance has been recently dedicated to the city for a public park, and the city council had secured a lease of two school sections adjoining the city on the south and on the northwest (which lands could not be purchased before the admission of the State), to be devoted to the public use as parks. Taking these

reserves in connection with several smaller ones, and with the beautiful park-like country extending south of Tacoma to and beyond Steilacoom, it might be thought that for so busy a town its preparations for play were too elaborate, if it were not perceived that they are in keeping with everything else about us.



WHERE SHIPS ARE LOADED.

What surprises me more, if possible, than anything else is the extent of the Tacoman suburbs. You take a street car on Pacific Avenue and run out to the eastern end of the city. It seems a long way, but when you get there you take another line which goes somewhere, and find it takes you half a dozen miles out into the country, or into the woods, for the half-cleared land is laid out in lots and built up all along the line with comfortable houses. Then you come back and try another line which branches off into the Puyallup Valley, running straight through the thick woods for several miles, and designed to go to the town of Puyallup, nine miles east from Tacoma.

You are told that it is the intention to give this still uncleared country a chance to supply not only Tacoma, but other cities, with small fruits and garden products as well as to afford facilities for rapid transit to those desiring to establish suburban homes. It is the intention to adopt a time-schedule for the accommodation of business men and clerks whose interests are in the city as well as for the eight- and ten-hour workingmen. Trains will be run to carry school-children to the city and back at the proper hours, and theatre-trains as demanded. Think of it, ye metropolitan dwellers in your two-hundred-year-old cities, who after a day down-town sink into your cushioned-seats for an hour's ride to the suburbs with a sigh of contentment that your lot is cast in the midst of civilization,—think how close upon your heels come some of these Western cities which have not yet seen their second decade!

Next day I explore the west end of the city, and ride by electric railway seven miles in that direction. It is the same thing. Lots are staked out all the way, and here and there a house is going up. The ground along the edge of the plain which tops the bluff has some defects in the way of ravines which cut into it and will have to be filled or bridged, but in a scenic point of view these deep steep gorges are worth looking at. Narrow, with tall trees and a variety of shrubbery growing up their sides, they stretch away down, down, until the brain whirls in following the descent to the line of the Sound. But how lovingly the eye rests on that tranquil sea with its hither shore, the "white wings" floating above, the energetic steam-boat defiantly crossing their track, the asthmatic tug pulling at something it has picked up at some little port down the Sound, and a few oar-boats rippling the water near shore. The air comes fresh from the northwest with an odor of the sea in it, a little cool, as if it had touched in passing the silvery snow-line of the Olympics. There are but few persons in the car, for it is an early hour of the morning to be going out of town.

"I should be perfectly satisfied to live here. I have always wished to have a home where I could look on a view like this," says a lady to her husband.

"I shouldn't be satisfied," replied her consort, with contempt in his tone. "Look at these town-lots staked off out here in

the woods. Do you suppose any but a fool would buy them? Tacoma is not going to grow much more, but Seattle probably will. I am going to Seattle."

A smile crept over my face, I suppose, for the lady turned to me to get my opinion.

"Of one thing I can assure you," I said, evasively, "you will find this same beautiful view of the Sound at Seattle—it is everywhere here—and your husband will find the woods around Seattle laid out in town-lots."

Then she told me they were from Helena, Montana, which explained her ignorance of this country; they had only arrived on the last train from the mountains.

We went to the end of the uncompleted road and walked about in the woods while the car ran off a little way to a mill on a side track. How very new and unfinished it all is! But I must be careful about putting it down in my book as being unfinished, or by the time it gets to the reader the public will not be able to recognize it. And when people are trying to do so much, and are rather proud of succeeding so well, one must not lessen the wind in their sails by so much as a pin's prick.

The Ryan smelter is in this neighborhood, and the railroad will run to it shortly. It is said to be the largest on the Pacific Coast, and cost nearly half a million, being built by a syndicate in St. Paul. It will smelt gold, silver, lead, and copper ores; and its capacity will be five hundred and sixty tons daily, employing one thousand men. It is expected to smelt Alaskan ores, silver ores from South America brought as ballast in vessels, and ores from the mines of the Okanogan country east of the Cascades, as soon as transportation for them can be obtained.

But to return to street and suburban railways: the system is only about one year old, and yet here is another twelve-mile road to American Lake just opened (it runs to Steilacoom now, and is going on to Nisqually City, more than half-way to Olympia). This is the popular resort for pleasure-seekers. The drive to it, over the level prairie carpeted with a short fine grass and wild flowers, is a charming one. The lake itself is only about three miles long and of irregular width, with some pretty wooded islands in it. A steam-launch, sail- and row-boats have

been placed upon the lake, with rustic seats and tables around the margin, a band-stand, and other attractions. Gravelly Lake is a small associate of American, besides which there are several others within a few miles, and a speed-track in the neighborhood. A fine view of Mount Rainier from this locality is one of its features.

American Lake was so named by Lieutenant Wilkes, who celebrated the Fourth of July on its borders in 1841, and was confirmed by the settlement on its border of a Methodist mission party in 1842, during the occupancy of the Hudson's Bay Company, the Rev. J. P. Richmond being the settler. It is always interesting to know even a little about the origin of things.

Nisqually City (very recently platted for sale) is situated about where the old fort stood, which once represented as much as there was of civilization in all this region,—and a one-sided civilization at that. The fort was very nearly taken by the Nisqually Indians, at which time an American settler was shot down at its gate, which event was the occasion of the holding of the first court north of the Columbia River by an Oregon judge. Two Indians were hung for the murder, and after that there was peace for a time.

All these points to which run suburban railroads, and indeed all points to which the Northern Pacific main line runs, are counted as the "suburbs" of Tacoma and tributary to it. It is the policy of this railroad company to build up one large city, with a good many minor ones to support it. I should myself have noticed this had not a former president of the road given utterance to such a statement. For some time, he says, these new towns do not benefit the central city, but in due course the best business ability and most capital will seek it, for people will go where they find superior advantages for whatever business they prefer to follow. It is then this crop of suburban towns yields a large profit. From which it seems that not only Tacoma itself, but many other places are designed by the same brains.

I ask myself is there any reasonable objection to these methods? There would not be—for these new places have important help in starting—if no false inducements were held

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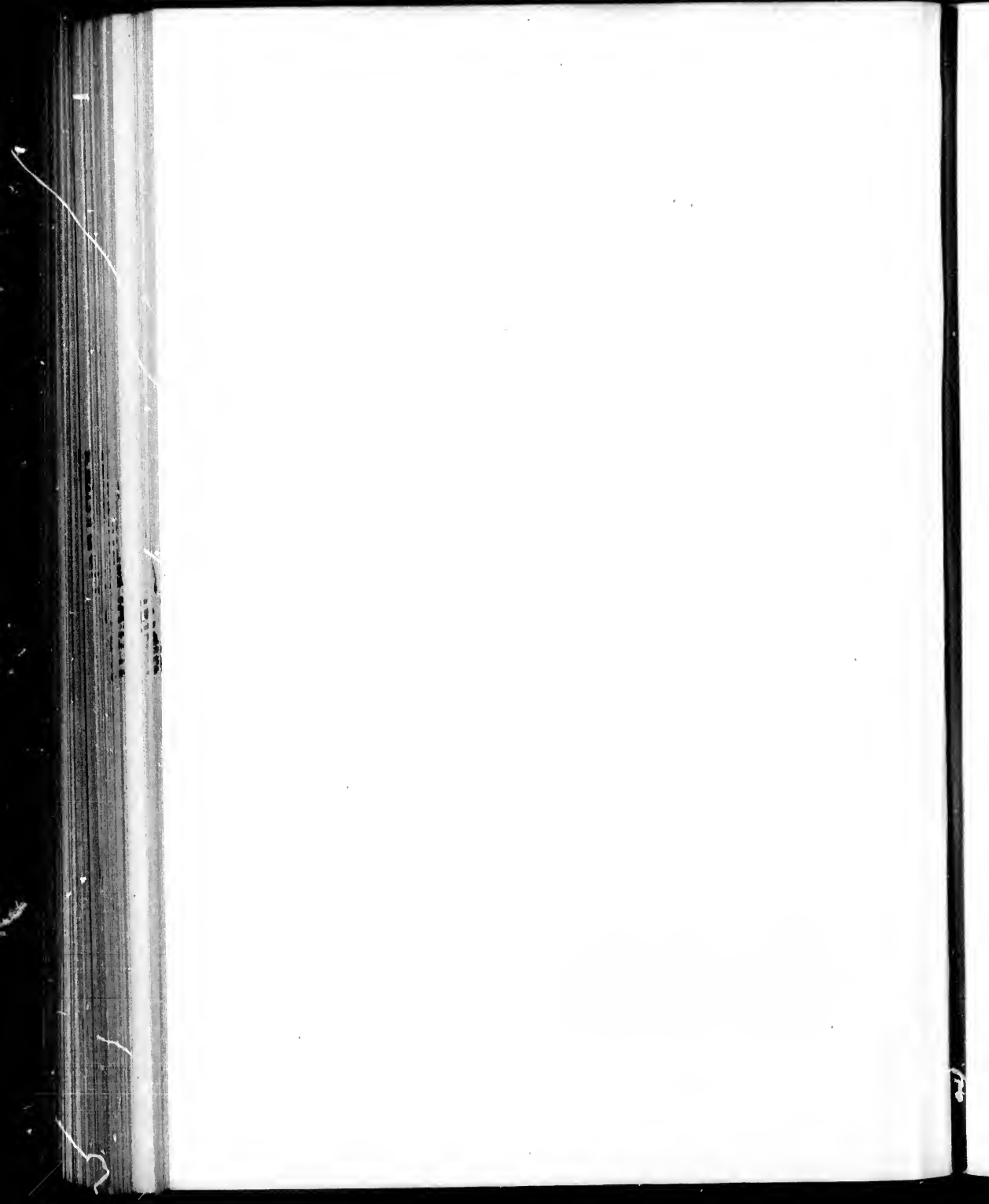
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NORTHERN PACIFIC RAILROAD YARDS, TACOMA

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out. Where there are several hundred people together they should find something to do to make business, and they will if they have energy and a little capital. But there are instances, I find, of grievous disappointment, where land companies with nothing to back them have induced people to purchase their property by misrepresenting its advantages, and leaving them in the lurch when their lots were disposed of. Should a railroad company be wilfully guilty of such falsehood, an earthquake ought to swallow it up. All that the central town would gain in that case would be, possibly, some discontented laborers, driven to it by distress. In the majority of Northern Pacific towns there is some real merit, and their avowed policy benefits the country by filling it up and connecting the settlements with a market. Therefore I am not inimical to railroad "monopoly" in this country, which would be a half-century behind the times without their aid; nor do I blame any community for resenting an abuse of power. Let them try to hold the scales even.

It is the large number of towns laid out wherever any real or pretended reason can be put forward for offering it which bewilders and sometimes distresses the disinterested observer. Suppose we glance at a few of these, beginning with Detroit, situated on an isthmus at the head of Case Inlet and the lower arm of Hood's Canal. It belongs to the Detroit Land and Improvement Company, composed of Portland, Seattle, and Spokane capitalists, who recently purchased five thousand acres of fine timber-land, and proceeded to lay out a city, grade streets, build a large hotel, erect water-works, and advertise. There is no doubt of the merits of the location as to timber, water, or harborage. A good milling-town might be built here, and railroads be induced to come. Indeed, plans are already on foot for connecting Tacoma by a line twenty-eight miles long across Kitsap County to Gig Harbor opposite Point Defiance, for extending such a line to Gray's Harbor, and another to Port Orchard. The Union Pacific is expected to come here from Centralia on its way to Port Orchard, Port Gamble, and to a point opposite Port Townsend, thus tapping the United States Navy Yard recently located at Port Orchard, and one of the other great milling establishments of the Sound, as well as the Straits of

Fuca. These are visible advantages which cannot be gainsaid.

But not twenty miles away, where Hood's Canal makes its great bend, is Union City, under the management of the Oregon Improvement Company. This is not a new town, having had an existence for several years, but its pretensions are similar to those of Detroit. The Port Townsend and Southern will come here without doubt, and the Union Pacific also. Lots are selling at from one hundred to one thousand dollars. If you demur to the latter price for lots lately carved out of the forest, you will be told that it has cost something to do the carving, and that you get certain improvements in addition which you have no right to expect in a new country, all of which is true.

Then, again, there is Puget City, situated a little more than half-way from Tacoma to Olympia in a straight line, on the east shore of the Sound. It is advertised by the Puget City Company as possessing a beautiful situation, besides which no commerce from any of the seven inlets at the head of Puget Sound can reach the lower Sound "without passing before this rising young metropolis." Its "unexcelled deep water facilities and the railroad, Union and Northern Pacific," are among its advantages; and "the song of the saw-mill is heard all day long," building being active.

And here is Des Moines, twelve miles from Tacoma, and about an equal distance from Seattle. It was laid out in 1889 by the Des Moines Improvement Company, of Tacoma, who erected a saw-mill, the output of which, twenty thousand feet per diem, was applied to the erection of business houses and residences. A brick-yard, a pottery-factory, shingle-mill, and other industries were at once inaugurated, and the work went bravely on until the company's means were exhausted. Now, I understand, the population, which consisted principally of the company's employees, is daily diminishing, and that those who remain are in want.

Perhaps these reverses came from bad management, for there is nothing to be said against the country that does not apply to almost every portion of the Puget Sound region,—namely, that it requires labor and capital for its development; and what new

country does not? We say, glibly, that there are too many towns for the population, and too large a part of the population in towns; therefore, let us place the people all on farms, each settler to work out his own salvation. The result would be a generation spent in lonely toil, and no market provided for the products of farming. Is not the modern way of letting capital do the work of development, of building up cities to furnish a thousand employments for the one of agriculture, and of furnishing buyers of the farm productions of the country at good prices, a better one? *Quien sabe?*

But, let us get back to Tacoma and her other tributary territory, indulging in some reminiscences by the way. At a meeting of the board of directors of the Northern Pacific Railroad Company held September 10, 1873, Judge R. D. Rice, of Maine, vice-president, and Captain J. C. Ainsworth, of Portland, Oregon, managing director of the Pacific Coast, commissioners to examine the eastern shore line of Puget Sound, throughout its entire extent, for a suitable terminus, made a report, in accordance with which the company passed a resolution to locate and construct its main road to the southerly side of Commencement Bay, "and within the limits of the city of Tacoma," from which it would appear that the fact of Tacoma's existence had been already determined, as indeed it was in the month of June prior to this report. Some transactions in real estate had taken place previous to the failure of Jay Cooke & Co., and continued to take place in a doubting way, and without any excitement.

When the railroad had recovered from this failure, and was straining every nerve under Villard's management to make connection with Portland, and thence to reach the Sound by this branch and avoid the expenditure of many millions in crossing the Cascades, came the second—Villard's—failure, ten years after the first. Public confidence was unsettled, not only by these financial difficulties, but by fears that the management would not, after all, cross the mountains, or, if it did, that it might make the terminus at Seattle. Thus fourteen years slipped away, during which the Tacoma Land Company laid out the first streets and made considerable improvements, C. B. Wright, of Philadelphia, being very active in directing these. Under his management the Hotel Tacoma was completed in 1884. He

built a handsome church, and endowed the Annie Wright Seminary for girls, and Washington College for boys, with fifty thousand dollars each.

Gas- and water-works were erected, wharves built, and with these things the value of real estate increased. But it again declined, and from 1884 to 1887, while there was a doubt of the final settlement of the question of terminus, there was a continual depression. But when on the 1st of July, 1887, the road was opened to Tacoma the reaction was like the rebound of a bent bow. Sales of real estate were quadrupled in six months, and in another twelve months had quadrupled again, after which they increased by about four million dollars annually. In 1887 the population was about nine thousand; in 1889, thirty thousand; in 1890, forty thousand one hundred and sixty-five, and Pierce County, until recently sparsely settled, contained fifty thousand and sixty-five inhabitants.

Without stopping to inquire what brought all these people together here in so short a space, or whence they came, let us consider what they have done. They have covered the land as far as the view extends and for some distance back from the bay with tasteful homes on cleanly, sidewalked, and sewered streets. To do this at the rate of thousands of houses a year implies an enormous amount of material and an incalculable amount of labor in putting it in shape. The city's expenses for street improvements in 1889 were three hundred and fifty-three thousand seven hundred and eighteen dollars and ninety-six cents.

In its infancy the city was compelled to import all kinds of manufactures with the exception of lumber, coal, wheat, hops, and hides, but the tide is turning, and already there are machine-shops, locomotive-works, iron- and brass-foundries, furniture-factories, sewer-pipe, tile, and pottery works, brick-yards, flour-mills, shingle-mills, sash- and door-factories, with many minor industries, the number of which is daily increasing.

Tacoma's public school property is valued at two hundred thousand dollars. A Methodist university is being erected, which has been endowed by a gift of seventy-five thousand dollars from citizens of Tacoma. The Pacific Lutheran University is to be here. There is also a business college, a Catholic

academy, the Tacoma Academy (Protestant), Tacoma Kindergarten, and other private schools.

Of churches there are twenty-three, divided among the various sects as follows: Presbyterian, Protestant Episcopal, Congregational, Baptist, and Lutheran, three each; Methodist, four; Unitarian, Free Evangelical, Christian, and Catholic, one each, having their own edifices; while other organizations are not yet provided for.

Of charitable societies there are a number. The Fannie C. Paddock Hospital was first established when Tacoma was a small town by Bishop Paddock, of this city, in memory of his wife. With the growth of the town it has been enlarged by frequent contributions until it is at present a noble institution. The Tacoma Hospital is a private one. The Seamen's Friend Society, the White Shield Society, Humane Society and Union Relief Association, and Young Men's Christian Association, all do good work. There are besides these the usual secret benevolent societies with a large membership.

The last want to be recognized is the intellectual or literary need, because, forsooth, it scarcely exists during the rush and whirl of the wheels of rapid material progress, but, as leisure comes and quietude, it makes itself felt. Tacoma has no public library commensurate with its means, although the Young Men's Christian Association Library and the Tacoma Mercantile Library Association supply the place of one to a considerable extent, or rather they fill their places well while they leave room for the other. The Young Men's Christian Association has a handsome building, and does a good work.

Of newspapers Tacoma has three dailies, the *Tacoma Daily Ledger*, an eight-page morning paper; the *Globe*, also a morning sheet; and the *News*, an afternoon daily. The *Sunday Times* is an illustrated eight-page journal, giving the society news of the week; besides which the *Baptist Sentinel*, *Northwest Horticultural and Stock Journal*, and the *Real Estate Journal* are weeklies. Of monthlies there are the *Real Estate and Investment Journal*, the *Bulletin*, and *Washington Magazine*, a literary venture. A *Daily Hotel Reporter* and the *Puget Sound Guide* are weekly publications to inform the public of changes occurring in the facilities for travel and hotel accommodations.

The Puget Sound Printing Company is an institution of Tacoma.

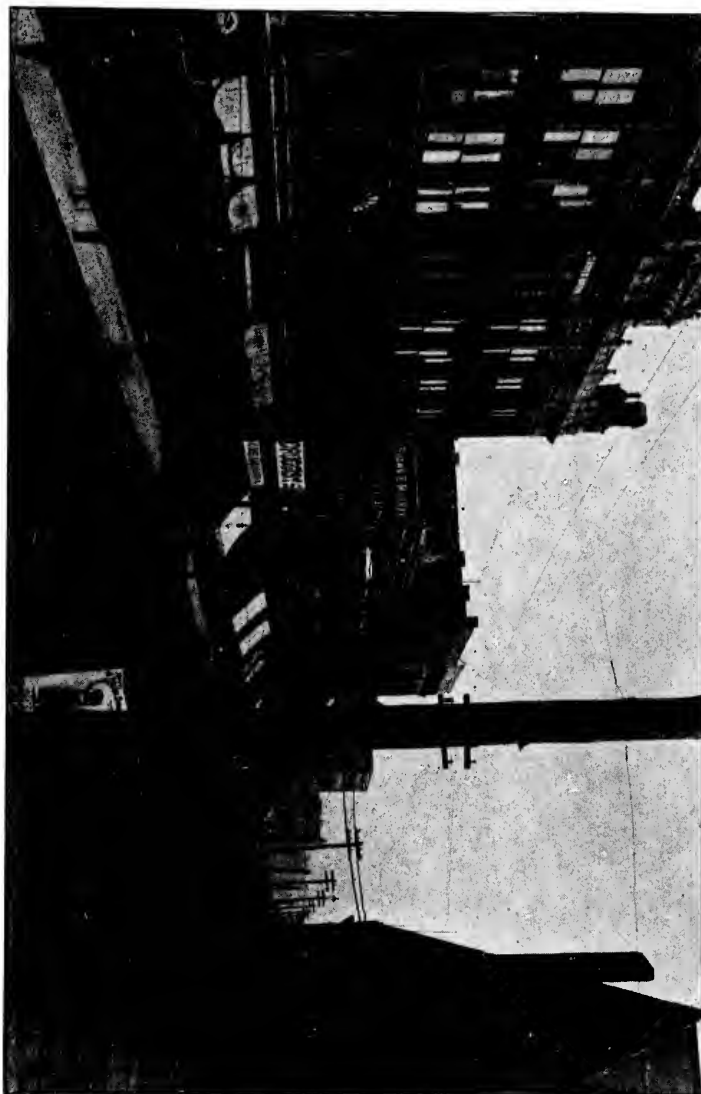
The most conspicuous public buildings in Tacoma are the Northern Pacific Headquarters, the Hotel Tacoma, Hotel Rochester, Tacoma Theatre, Fannie Paddock Hospital (new), Annie Wright Seminary, St. Luke's Church, New Presbyterian Church, Swedish Lutheran Church, the Germania Hall, and Chamber of Commerce. But just at this day and hour the Tacoma Land Company have under consideration the plans for a new hotel to surpass the "Tacoma," and to cost half a million. They are also looking for the source of a future water-supply, the result of which will be something fine in the way of water-works. Every morning's paper tell us of some projected improvement involving a great expenditure of money.

All this is nothing when compared with—let us say Chicago; but it is pretty well for Tacoma, whose real growth began four years ago. The money to do these things, we suggest, was drawn from the East. Yes, from the Eastern United States largely, but also from the Orient, from Great Britain, from South America, and from nearer home.

Take an example of the introduction of capital from St. Paul. The St. Paul and Tacoma Lumber Company purchased from the land department of the Northern Pacific Railroad Company a tract of timbered land comprising the odd sections in fourteen townships lying southeast of Tacoma and south of Wilkeson and Orting in the Puyallup Valley, comprising eighty thousand acres covered with a heavy growth of fir, cedar, and spruce, estimated to amount to three billion feet. One of the conditions of the sale to the St. Paul and Tacoma Lumber Company of this immense tract of valuable timber was the construction by them of a railroad of standard gauge and equipment from the town of Orting, on the line of the Northern Pacific, in a southerly course to the Nisqually River, and thence eastward into the coal fields of the Cascade Mountains, to serve the double purpose of bringing out timber and coal and opening up the country to settlement. The St. Paul company also bound itself to cut a certain amount of timber per year on these lands, which should be shipped to Tacoma, where they were to build mills with a capacity of one hundred

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OPERA-HOUSE CORNER, C STREET, TACOMA.





million feet annually. Forty acres were purchased at the head of Commencement Bay, and costly improvements made, thereby setting the example of utilizing the tide-flats for business purposes, an example which was quickly followed by other companies. The St. Paul mill now furnishes employment to four hundred men, besides three hundred in the logging-camps and as many more on contract work in the city. It manufactures about five million feet of lumber per month, nearly half of which is sold in Tacoma, the other half going east by rail or being shipped by vessels for a sea-voyage.

The Commencement Bay Land and Improvement Company is a local one, which, seeing the value of the flats in the east end of the Bay, have purchased and are constructing upon them wharves, warehouses, and manufactories,—so quickly does one act of development inaugurate a second.

But I had begun to say that not all the money expended here in building up a model city comes from the East, and these improvements in the harbor remind me to go back to my theme. It is, after all, only by taking account of Tacoma's exports that we begin to understand how the money is to come back which is expended here.

Lumber has always been and must remain one of the principal articles of export from Puget Sound ports. The St. Paul and Tacoma, Pacific Mill, Tacoma Mill (at old town), and the Gig Harbor Mill, together manufacture two hundred million feet of lumber annually, the exported portion of which output is valued at nearly nine hundred thousand dollars. The export of coal from this port is yet in its infancy, but in 1888, during a coal famine in California owing to an avoidance of the port of San Francisco by vessels which usually bring coal in ballast, there were shipped from Tacoma seventy-eight cargoes, or two hundred and sixty-eight thousand tons, of coal, valued at one million four hundred and seventy-four thousand dollars. Fifty of these cargoes were Carbon Hill coal, which mine is the property of the Southern Pacific Railroad of California, while the South Prairie Mines in the Puyallup Valley and the Bucoda Mines of Thurston County furnished the remainder, with the exception of one cargo of Durham coal.

The Roslyn Mines, on the line of the Northern Pacific, which

furnish fuel for this road, have not exported coal until the past year, when the output from them was one hundred and sixty thousand tons, and since the improvement in the facilities for handling coal on the water front; but whether exported or consumed at home, when the demand increases with the population, this contributes to the wealth of Tacoma.

The export from Tacoma of shingles by the train-load to the East is a new item of commerce which has already become important. The old-fashioned shingle which was made with a drawing-knife and shaving-horse was some years ago superseded by the portable shingle-mill, and the making of shingles, instead of being a haphazard, rainy-day occupation for the settler or lumberman, became a manufacture employing a good deal of capital.

There were about eighty-five of these mills in West Washington, some of which had no regular agencies or market for their manufactures. In 1889 a combination of forty of them was effected by the organization of the North Pacific Consolidated Shingle Company, with a capital invested in its various mills of one million dollars.

The shingles are made from red cedar, which neither shrinks nor warps and is exceedingly durable, and are graded into "extra" and "standard" lots. Special sizes and fancy butts are furnished as ordered. One sees many of these used for siding, on Tacoma houses, with a very pretty effect, the lower edges being rounded. They are only used on the second story and on houses of the cottage order and of fanciful designs.

The Washington shingle is absolutely perfect, being cut from timber without a knot or flaw, and of regulation size. Hence, with their other good qualities they are much desired by builders. The North Pacific Consolidated Company shipped in 1889—its first year of business—fifteen hundred car-loads, valued at four hundred and ten thousand dollars. The first train left Tacoma on the 12th of August, with colors flying and amid the cheering of spectators. It reached Chicago on the 21st. Denver alone took five hundred car-loads, the other two-thirds being taken in the Middle States,—New York and New England. Special cars, it is thought, will have to be provided for them, and the demand is already greater than the supply.

The only mills which manufacture flour for export are located at Tacoma, one already turning out two hundred barrels daily, and another with a capacity of six hundred barrels about to be erected.

The value of wheat shipped from Tacoma in 1889 was estimated to exceed six million dollars, and it was believed that this amount would be more than doubled in 1890, which it has been, without doubt, but, owing to the overproduction of East Washington this year, and the confusion ensuing upon the crowded condition of warehouses, and lack of vessels to take it away, the wheat export is still an unknown quantity.

Few in number as are the exports of Tacoma, they are the same as those of the older Puget Sound towns. The time is hastening, but has not yet arrived, when manufactures shall be carried on upon a scale to exceed the local demand or even to reach it. In the mean time imports are large. The only cargoes going East besides lumber, shingles, and coal are ship-loads of tea from the Orient, five of which in 1888 aggregated eleven million eight hundred and ninety-six thousand six hundred and eighty pounds.

The various small industries of the city employ an aggregate capital of over five million dollars, and employ more than three thousand persons.

The commercial banks of Tacoma are nine in number, with two savings-banks, six of the commercial banks being national and three private. The aggregate capital of the nine is one million one hundred and ninety thousand dollars, and of the two, one hundred and thirty thousand dollars. The deposits of seven of the nine amounted in September, 1889, to four million one hundred and ten thousand and thirteen dollars, an increase of over a million in three months. The city's finances are reported in a sound condition, and its debt small for the amount of territory covered, showing good management.

The Chamber of Commerce of Tacoma was organized in February, 1884, its first president being General J. W. Sprague; vice-presidents, J. M. Buckley and W. J. Thompson; treasurer, Byron Barlow; secretary, Edmund Rice. It has played an important part in the development of the city and its most important industries. Its first building was erected several years

ago on Pacific Avenue and Twelfth Street; but there is a new and elegant building going up on Pacific Avenue and Seventh Street better suited to the tastes and necessities of this august body. It is six stories in height, built of stone, with carvings and niches for statuary, and surmounted by a clock-tower one hundred and ninety-five feet above the ground. The interior is designed to correspond with the outside, and the "chamber" alone will seat, with its galleries, one thousand persons.

Tacoma has a wholesale as well as an active retail trade, nearly all lines of goods being represented. I am told that a conservative estimate of its wholesale business in 1889 would be from eight million to ten million dollars aside from those productions sold wholesale already mentioned, and this trade has but very recently been attempted.

Groceries, always an important branch of trade, are sold wholesale by a number of houses, three of which are confined exclusively to this business. The largest of these is the Tacoma Grocery Company, organized near the close of 1888, Charles E. Hale, president, which sold goods to the amount of one million dollars the first year.

Paints, oils, and glass sell enormously in Tacoma, besides which hardware and farming implements is another good jobbing trade in a new country, and Tacoma has several houses which sell from seventy-five thousand dollars' to two hundred thousand dollars' worth of goods annually. Farm-produce is also jobbed at the rate of from seventy-five thousand dollars to two hundred and fifty thousand dollars yearly. Dairy products, canned goods, dried fruit, grain, and flour, each constitute a wholesale business for several firms. One house deals exclusively in tea, coffee, and spices, with sales amounting to fifty thousand dollars per annum; and besides, some of the retail firms do a business of ten thousand dollars a year in special lines of goods.

The Tacoma Mill Company sells two hundred and fifty thousand dollars' worth of general merchandise every year, at jobbing rates; the Skagit River Railway and Logging Company, a Tacoma corporation, as much; and the St. Paul and Tacoma Lumber Company, three hundred thousand dollars annually.

One jobbing house in Tacoma sells one million dollars' worth of dry-goods and clothing every year, and carries a stock worth

a quarter of a million. Furniture and house-furnishing goods may be purchased wholesale in Tacoma, and of every description, from the most elegant to the plainest, from two or three furniture companies.

The Tacoma Trading Company deals in building-material, coal, hay, grain, and lime, has a capital of fifty thousand dollars, and sells three hundred and fifty thousand dollars' worth of goods to dealers in Washington and British Columbia. The Yakima-Tacoma Trading Company is in the same business. When I say that drugs, liquors, books, boots and shoes, leather, carriages, and dressed meats for logging-camps are sold wholesale in this young city, I have nearly covered the ground occupied by jobbers in any city; and I have perhaps wearied the reader to show him how these western towns commence life,—near the top of the ladder, instead of at the bottom.

Let us now take a ride to old Tacoma, and explore a little further into the already almost forgotten beginnings of things. This is a really pretty site for a *settlement*, being near the water's edge, with a view of the bay in front, and sheltering hills at the back. It has a rural air quite in contrast to the ambitious look of the newer city. I have the curiosity to call on Mrs. McCarver, who occupies a modest home in the place where her husband died. We talk a little about him, and what local historians have said of him, and then I go to see the famous bell-tower of St. Peter's little pioneer church round the corner. The church is plain to dreariness, and the tower is simply a cedar-tree sawed off fifty feet from the ground and wreathed around with ivy. A bell is hung above it in a frame-work, which is topped with a roof like an extinguisher, surmounted by a cross. It is a pretty conceit, and the only object at all picturesque in the sleepy old place.

I breathe more freely when I regain the heights of the new city, and rest my gaze on the roofs of Pacific Avenue where I know brainy men are planning more railroads, a steamship line to China, and other ways to control the trade of the Occident and the Orient. My eyes wander further eastward, over the head of the bay, the Puyallup flats, the Indian reservation, and the distant mountains, to Mount Rainier itself, where they rest

while I question whether I should yield to a local whim and call the grand old peak Mount Tacoma. Rainier it has been for a hundred years. It does not belong to one part of the Sound



OLD TACOMA'S BELL-TOWER.

country more than another, and all other communities except this one honor the old "lord of the admiralty." Olympia and Seattle cry out against the change, and, since Tacoma does not hold any realty on the majestic mountain, the majority must prevail,—must it not?

If you desire to get away from Tacoma, you have the Northern Pacific Railroad to carry you east, south, or north by rail, and steamboats to any part of the Sound. The lines controlled by railroads are the Union Pacific (O. R. and N.) boats, which ply between Tacoma, Olympia, and Kamilleche; between Tacoma, Seattle, Port Townsend, and Victoria; and between Tacoma and the towns on Bellingham Bay, calling at Seattle.

The Canadian Pacific Railroad runs a fine boat between Tacoma and Vancouver, British Columbia, calling at Seattle,

Port Townsend, Anacortes, Fairhaven, Sehome, and Whatcom. The Pacific Navigation Company, a Tacoma corporation, runs its steamers from Tacoma to Whatcom, stopping at Seattle, Utsalady, Anacortes, Samish, Fairhaven, and Sehome; and also on other routes coastwise, and among the islands in the San Juan Archipelago.

The Whatcom, Sehome, and Fairhaven Company has a fleet of seven boats which run on the several routes between Tacoma and Whatcom; besides which there are forty other steamboats, including tugs, which ply on the Sound in and out of Tacoma and to every place where business is.

But as I wished to see the country tributary to Tacoma, namely, the Puyallup Valley, I took the train for Seattle which runs up the Valley as far as the town of Puyallup, where the Seattle branch comes in.

I have it from Hon. Elwood Evans, who came to Washington in 1853 with Governor I. I. Stevens, and who has ever been a careful observer and student of Northwest history, that the meaning of the Indian word Puyallup is shadow or gloom. They attached it to the river from the obscurity of its waters, which ran darkling between banks overhung with the densest of forest shrubbery, and shadowed by tall trees which covered the Valley everywhere except where there occurred those singular small prairies referred to in my remarks on the Chehalis Valley. These prairies were early fixed upon by settlers, and still bear the names of pioneers who as early as 1855 had extended their improvements from Commencement Bay to South Prairie.

Then fell the blow which has so often fallen upon frontier communities, and the gloom which hung over the valleys on the east side of Puget Sound was not only that of the forest, but that which had made a "dark and bloody ground" of almost every State in its turn, from Massachusetts to Washington. In 1856, to satisfy the Indians, the reservation first allowed them by Governor Stevens was enlarged, and extended up the river on both sides until it embraced a dozen claims of settlers who were already driven from them by massacre or flight. Not a family dared return to the Valley until 1859, when a few ventured again to reside upon their former claims or take new ones.

One of these few was J. P. Stewart, who took for his claim the land on which the town of Puyallup now stands, and in 1861 the post-office of Franklin was established there. Such was the beginning.

Puyallup, which name seems to have superseded Franklin, is situated on the south side of the river, and just beyond the Indian reservation. It is a town of two thousand inhabitants, neatly built, with a good hotel and a general air of thrift. Everything is on one level at Puyallup, and for a change from the diversity my eyes have lately beheld, I am pleased with it.

This Valley was once an arm of the Sound, as is plainly evident from the nature and direction of the water-courses on the east of Admiralty Inlet. Look at the map. There is the Puyallup River coming down from Mount Rainier, and falling quite abruptly into the Valley. There is White River coming down from another peak on the north of Nachess Pass, a counterpart of the Puyallup, only half a dozen miles from it, and connected with it by the Stuck, a sluggish stream that flows through marshy ground north or south indifferently, according to the state of the two rivers. Two or three miles north of the Stuck junction with the White comes in Green River, a branch heading on the north side of the Stampede Pass. About twelve miles north of Green River Junction the White River unites with the Dwamish, which comes out of Lake Washington and flows northwest into the Sound at Seattle. But the Dwamish is only another stretch of Cedar River, which comes down from the mountains also and flows into Lake Washington, to flow out again by the same mouth and become the Dwamish.

Lake Washington, twenty miles long, is connected with Sammamish Lake, six miles east of it, by Sammamish River, which resembles the Stuck for sluggishness, but which has seven smaller streams coming into it from the north and east. Besides, Lake Washington is connected with the Sound through Union Lake and a natural outlet into Salmon Bay. Green Lake is also connected with Lake Washington, and there are a dozen smaller ones between Puyallup River and the larger lake, which is in the centre apparently of a basin once occupied by the waters of the Sound. This is the coal basin whence both Tacoma and Seattle derive their present and prospective wealth;

but only the southern portion of it is immediately tributary to Tacoma.

The soil of the Puyallup Valley is in general an alluvial deposit of great depth. About Puyallup it is sandy, and especially adapted to hops, which is the chief production of the fields in this vicinity. Nothing could be prettier than these hop-fields about harvest time, and few crops are so satisfactory as to income. There were raised this year between Tacoma and Seattle, including one hop-farm at Snoqualmie, forty thousand bales of two hundred pounds each, or eight million pounds. As the price was very good this year, the money realized, above the cost of raising the crop, was one million six hundred and eighty thousand dollars. About ten thousand bales were raised in other parts of the State, which brings the year's returns on this one product of the valleys about the Sound up to two million dollars. I might say here, also, that the hop-crop of Oregon this year netted about one million dollars. And yet the extent of territory covered by hop-farms is comparatively small. The acre value of hops in a good year is about three hundred and fifty dollars; this year it was more, on account of a poor crop abroad. The Northern Pacific carried its first solid hop-train from the Puyallup in September, 1890. It consisted of twenty-five cars carrying fifteen thousand pounds each, or one hundred and eighty-seven tons. They were shipped to Baltimore to go to London. I hear it said that hop-vines are to be used in making paper and twine. If this is so, there need be no waste on the off years.

It is a great feature in favor of Puyallup that its transportation facilities are so good with the Northern Pacific, a transcontinental road, at its doors, a road to Seattle and Tacoma, and its special local road to the latter, making it a suburb of that city. The Valley is prolific of vegetables and small fruits, as it must be of orchard fruits when they come into bearing more generally. Apples, pears, peaches, prunes, and apricots are said to yield large crops. Thus, with so favorable a soil and climate, and a market within seven miles by rail, the farmers of this favored region should become rich.

Continuing up the Valley, Alderton is the next station we come to, a small place, but with the same general and natural

advantages enjoyed by its neighbors, and just beyond is Meeker, the junction of the Seattle branch. Lime-Kiln is what its name implies, and then we have Orting,—“the Queen of the Puyallup Valley,”—“an agricultural, business, and railroad centre.” It is quite that, unless appearances deceive us. I have already spoken of the railroad being built by the St. Paul and Tacoma Lumber Company south from Orting. A few miles beyond are roads branching off from the main line of the Northern Pacific to Carbondale and Wilkeson. All these roads bring business to Orting, and so do the logging-camps and the farms round about. It has, besides, a saw-mill, chair-factory, and railroad shops, and, in short, seems likely to take care of its future, although but an infant in years.

At the head of the Valley is Wilkeson, where the first coal-mines of the Northern Pacific were opened. I have spoken in a general manner of the coal deposits of Washington, but will quote a paragraph or two from W. H. Ruffner, LL.D., on the Puyallup Mines: “There are, however, only three collieries at work in this group. One is called the Carbonado Mines, which are on Carbon River. Three miles north, a little east, are the famous Wilkeson Mines; and two miles northwest of Wilkeson are the South Prairie Mines, on South Prairie Creek.

* * * * *

“There are some differences in the coal at the three mines. That at South Prairie was sold chiefly for making gas. The best of the Wilkeson coal is made into coke, and is in demand beyond the supply. The price is seven dollars a ton at the ovens. The entire product of the Carbonado Mines is said to go to the Central Pacific Railway.”

Ruffner's opinion of this group of mines is rather unfavorable, on the whole. “To all appearance the amount of coal here is not large, and the beds are sadly faulted, and pitch deep into the ground.” It is comforting to know that, so large an area as the whole eastern shore of the Sound and the Chehalis Valley being underlaid with coal, there will be some left when this group fails.

Wilkeson is a pretty nook at the very extremity of the Valley, where I fared well and had a pleasant chat with the superintendent of the mine, after which I returned to Puyallup to take the train for Seattle.

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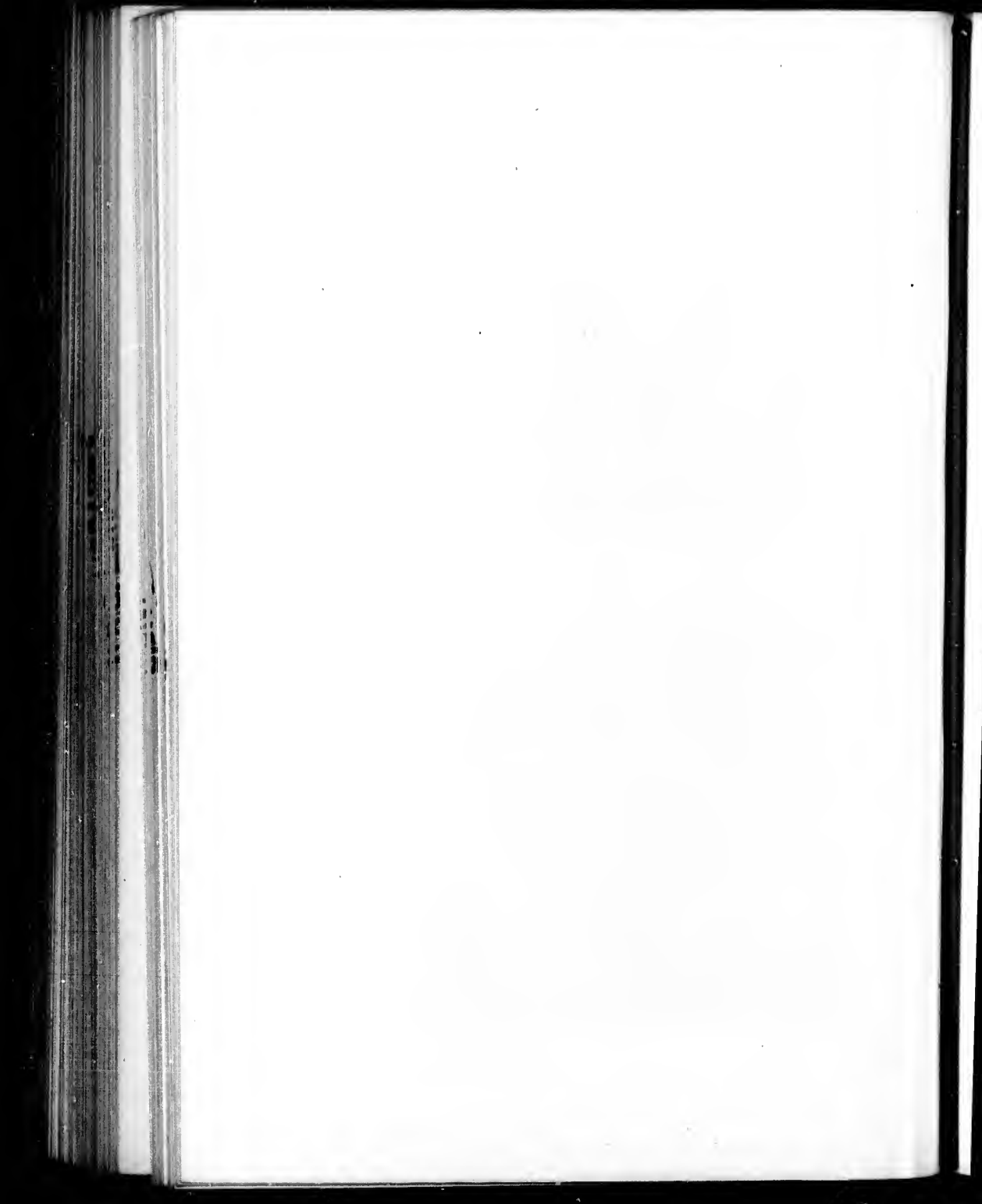
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SEATTLE WATER-FRONT.





CHAPTER XXIV.

THE QUEEN CITY AND ITS DEPENDENCIES.

THERE is little difference in the aspect of the country as we proceed north through the basin described in the foregoing chapter. Sumner, named after the statesman Charles Sumner, is a small and pretty town in the midst of hop-fields. Slaughter, a little further on, is in a rich agricultural region, and appears to be prosperous. It is named after Lieutenant W. A. Slaughter, who was killed in this vicinity by Indians during the war of 1855. Kent is a place of considerable importance, about one hour's travel from Tacoma. There are fine woods all along, and hills in sight on one side or the other, showing that the valleys of the streams are narrow as they are rich. A little distance beyond Kent is Orillia, also in a good farming country.

Black River, full in spring-time, winds among meadows valuable for large hay-crops. Hyde Park is a suburb of Seattle, and seems given up to brickmaking at present, brick being in demand since the great fire which swept Seattle on the 6th of June, 1889. From Hyde Park to the city is a continuous suburban town. Indeed, the continuous settlements from the Puyallup to Elliot Bay struck me with surprise, knowing how recently towns began to appear upon the maps of this thickly-wooded region.

A dozen years ago I was in Seattle, and thought it the ugliest of places,—thought, in fact, that it would be impossible to redeem it from ugliness. The hills, rising sharply from the waterfront, which was narrow and disfigured with rude structures, were roughly terraced with streets running parallel to the bay, and which were cut at right angles by other streets, steep and by no means smooth, seemed to present hopeless obstacles to the development of beauty. Long before the summit of the ridge was reached the uncleared forest began, hemming in the town between water and woods. Along the business front was a mass of sawdust, the accumulation of many years, in which

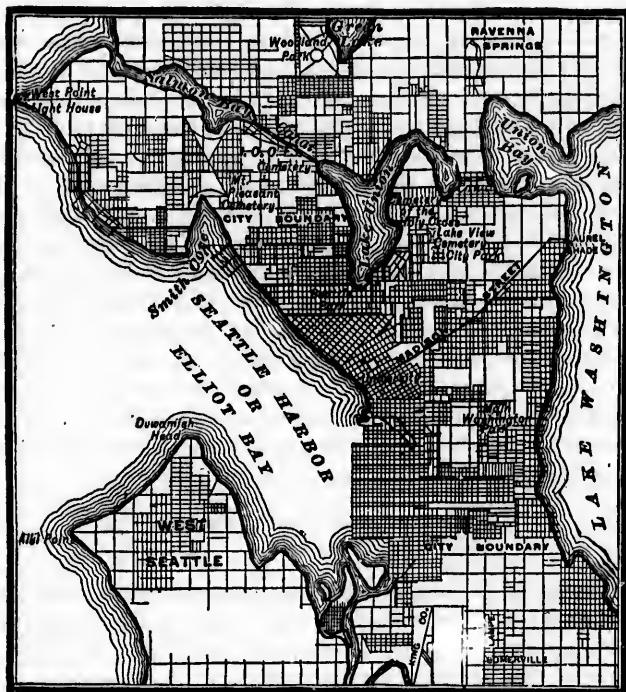
the pedestrian's feet sank, and which the tides kept water-soaked, the only attractive feature of the place being some wonderfully large, broad-leaved maple-trees, growing down at the south end of the water-front with their roots in the bay, and which, alas! are no longer to be seen. In truth, there was little in the Seattle of 1890 to remind one of what had been.

What I saw, in place of the former town, was a city of fine proportions spread over a smooth slope, and extending not only to the summit of the hills, but out of sight beyond, with lines of cable and electric cars traversing the streets in every direction, a solid front of docks and wharves where shipping lay, or came and went with the hours, and which had altogether the most metropolitan look of any city in the Northwest.

Seattle is not, like Tacoma, a new town. It was founded in 1852, by D. S. Maynard, C. D. Boren, A. A. Denny, and W. N. Bell, who took claims side by side on the shore of the bay. Henry L. Yesler was admitted to the company the same year, and built the mill whose sawdust helped to fill in the city's front, as aforesaid. It was to Yesler's saw-mill more than anything that the town was indebted for its growth, this being the first mill to establish a lumber trade with San Francisco. Its mess-house was a place of general rendezvous for travellers up and down the Sound for more than one decade. Around its rude but hospitable board, and about its ample hearth piled high with blazing fir-slabs, were recounted the many strange adventures which befell the numerous guests, including volunteer Indian fighters, naval officers, judges of the courts, and shipmasters.

The founders of Seattle belonged to that class of men born to follow the beckoning of the star of empire in its westward orbit. Talk about Columbus discovering a new world! What was his voyage to the months of dreary marching across the continent, the setting out from Portland, then a cluster of rude cabins, in a sailing-vessel for the Sound, and the disembarkation upon an uninhabited shore, in the midst of a November storm, of women, children, and household goods! When they were landed, after many hours of labor, "the women sat down and cried," says one of their chroniclers. Alas, how often women's tears bedew the earth which brings forth plentifully of its riches

The place where the pioneers of Seattle first landed was on the west side of the peninsula which encloses Elliot Bay, and



MAP OF SEATTLE AND HARBOR.

this point they called by the Indian word *Alki*, which signifies "by and by." Here was laid out a town, called New York; but a chief of the Duamish tribe of Indians informing them during the winter of a pass in the mountains to the east, and other matters of interest, they decided to remove to the mainland, and, in acknowledgment of the services of this chief, named the future city after him—Seattle. Among the West Washington tribes was a superstition that if the name of a dead

person were spoken the spirit would be disturbed. This superstition afforded Seattle a pretext for demanding pay while yet alive for the discomfort the frequent sound of his name would cause him after death, and thereafter he became a pensioner on the bounty of the Seattleites.

The New York of Alki Point, like all the many namesakes of the great metropolis, came to nothing, and was forgotten until very recently speculators bought up the land and laid out West Seattle, since which period many improvements have been made, with a railroad connecting the peninsula with the city on the mainland. The growth of Seattle was slow so long as there were no railroads in the country, and the commerce of the Sound was confined chiefly to an export trade with Cali' via in lumber and coal, with some cargoes of lumber to n ports. In 1870 the whole exports of Puget Sound in foreign and American vessels amounted to four hundred and forty thousand nine hundred and fifteen dollars, the largest part of which was in lumber. The imports from foreign countries were light, amounting to only thirty-three thousand one hundred and five dollars. Ship-building added something to the business of the Sound, but the spell of loneliness which brooded over these silent shores had not then been broken, except by

"The first low wash of waves, where soon
Should roll a human sea."

Then came the promise of a transcontinental railroad, and then the road itself. Presto, change! Up went business houses and dwellings, with improvements of every kind. In 1880 the population of this twenty-eight-year-old town was three thousand five hundred; in 1888, one year after the railroad had crossed the Cascades, it was twenty thousand; in 1889, when over seven million dollars' worth of property was destroyed by fire, it was twenty-seven thousand; and in 1890 it is, according to the census, forty-one thousand four hundred and sixty-four. No wonder that to repair the damages by fire, and to provide shelter for so rapid an influx of people, the streets are obstructed with lumber, brick, stone, and iron, while many tent-cloth houses are yet to be seen. Order is, however, in the main restored, and, as I have said, the city has a metropolitan aspect, particularly when

viewed from the bay, which belongs to no other town on the Sound.

Seattle, like all towns in their formative periods, was, and still is, a combination of the new and beautiful with the decaying and grotesque, although the great conflagration was of service in wiping out much of the latter, as well as in introducing even more largely the former. As it stands to day it contains hundreds of buildings which would be a credit to any city in the United States for grand proportions and grace of outline. The Hotel Rainier and Hotel Denny are built upon the heights, with magnificent views on every side, themselves constituting a part of that pleasing *tout ensemble* presented from the approach by water.

Like Tacoma, Seattle has extended its suburbs in all directions. It is a saying that the two cities meet half-way, in spite of their confessed rivalry. North, the street railways carry you to Queen Anne Town, the fashionable quarter; Gilman's Addition, the terminal centre of three railroads; Ballard, another addition just being put on the market, on Salmon Bay; Bay View Addition, on Salmon Bay; Kilbourne's Division, on Green Lake; Tremont, on Lake Washington. East, to Bryn Mawr Park, on the west shore of this lake; Boston Heights, on the summit of the elevation between Elliot Bay and Lake Washington, to Green's addition, and Summit addition, and I do not know how many more. A ferry carries you to West Seattle, where a company with half a million is making improvements, as before mentioned.

In none of these places do you find the view lacking in interest, whether you are thinking of the wonders of nature or the works of men: both are here worthy of attention. West Seattle sits upon a high sandy point, which having once attained, you have water on every side except the southern, a city on the east. Port Blakely mills, the largest in the world, the smoke of whose burning sawdust ascendeth forever, and serves as a beacon on the Sound, is a little north of west; and Port Orchard, the newly-selected site of the United States navy yard, is a little south of west.

But transferring yourself to Seattle, and taking a cable-car to Boston Heights, here again you have a water-view on both sides

of you, but how different! The city is at your feet, to and from whose busy wharves all sorts of water-craft are darting and departing, while the west shore of the bay, Port Blakely and other headlands receding melt into a dim distance bounded by the Olympic Mountains. On the other hand, Lake Washington lies just at the foot of the eastern slope, with green islands and wooded shores, and Mount Rainier, towering in white, eternal majesty above this summer landscape.

The lakes about Seattle, to which I have before referred, never ceased to be interesting to me from their evident physical history; at the same time they are very pretty from a scenic stand-point, with sloping shores admirably adapted to villa sites, for which they are being rapidly seized upon. Lake Union is small, with a number of settlements almost surrounding it. There are three asthmatic little steamers running from the railway approach to Fremont, Edgewater, Latona, and Green Lake, on its borders. Pleasure-boats are to let, and a dancing-hall furnishes the foreign population the opportunity of the waltz on Sundays.

A small canal, which it has been Seattle's ambition to have enlarged by the government into a ship-canal, connects Lakes Washington and Union with the Sound. Had Congress seen fit to undertake this not very expensive work, a naval station might very well have been located here where vessels could lie in fresh water, and doubtless the work will yet be performed for the benefit of commerce, vessels lying in the Sound waters becoming heavily encrusted with barnacles. The *teredo* is very destructive to any wood immersed in the Sound, and to the supports of wharves, which frequently succumb to its ravages; hence the value of a fresh-water harbor. Port Orchard has several streams running into it which may suffice to cure this evil, but Lake Washington would have been more certain to be free from it.

The falls of the Snoqualmie (Indian Snoqualimich) River having frequently been mentioned to me as highly attractive, I resolved to devote a day to an excursion along the line of the Seattle, Lake Shore and Eastern Railroad, whose western end is in Seattle and its eastern end in Spokane, with a considerable hiatus between. I found the following stations along the road

in a distance of about forty miles: Boulevard, Ballard Junction, Ballard, Ross, Fremont, Edgewater, Latona, Ravenna Park, Yesler Junction, Keith, Pontiac (a brickmaking settlement), Maple Leaf (a lumbering establishment), Terrence, Wayne, Bothell, Snohomish Junction, York, Redmond, Peterson, Eaglewood, Monovon, Gilman, Preston, Falls City, Snoqualmie Falls, Snoqualmie, and South Bend,—or a station every mile and one-third of the way,—which would lead one to expect a populous country. The road is, however, constructed for the most part through an uncleared region, the whole population being at these several recently-opened settlements.

Bothell is the location of the Huron Lumber Company. Inglewood is on the border of Sammamish or Squawk Lake, a beautiful sheet of water in which there are standing submerged trees, showing subsidence of this part of the coal-basin. Monovon, also on this lake, is a picturesque place, which with the water and the hills has quite a Swiss aspect. Gilman, close up to the mountains, is a raw, unpainted settlement, whose promise of future improvement lies in a large hop-field.

The Valley is evidently very rich in soil. I noted some wonderfully high maple-trees curiously swathed in yellow moss, and alder-trees of great growth and beauty, their white and gray bark mottled with splashes of light green, showing clearly out from the gloom of the unbroken forest.

The train obligingly stops at the falls to give travellers an opportunity to alight and enjoy a five-minute view of the cataract. This is a very delightful five minutes, which I prolonged into a half-hour by walking back from the next station before the train returned. The height of the fall is two hundred and sixty-eight feet. The stream descends on either side of a dividing island of rock, as at Niagara. On the east side of the rock it is projected in two separate strands, which gyrate at the start and twist together as steam comes out of a locomotive-pipe. The effect is to throw the water into garlands of foam which, falling upon one another and being projected a long distance out, appear heaped up rather than falling. On the west side the water, dashed into foam, descends in two other streams—one fan-shaped—which, uniting half-way down, turn and join the main stream in one mass of feathery foam. The mist blown

over to the east side of the chasm gives a fine rainbow. The condensation forms numerous rills on the face of the almost perpendicular walls, which descend like threads of silver over the vividly green masses. There are rapids above and below the fall, and higher up the stream another cataract one hundred and twenty feet in height, the Indian name of which is Topan. In short, the Snoqualmie is a mountain stream above here, with a rapid current and jagged bed, and abounds in good fishing, as the woods do in game.

At Snoqualmie Station, where we dined, is a comfortable and pleasantly-situated summer hotel. Here the Hop-Growers' Association owns eleven hundred acres, three hundred and ten of which is in hops this season. The production of this farm is from eighteen hundred to two thousand pounds per acre. Fruit and root crops are successfully cultivated at Snoqualmie, giving evidence of what may be expected from the Valley in the future. I met a lady and her daughter going down to Seattle to witness the graduation of a daughter and a sister from some institution in the city, and who lived on a farm higher up the Valley, with which they appeared to be well satisfied.

I returned to the city in time to note from my hotel windows a charming evening scene: the Bay dotted with sail-boats, steamers coming and going, a fine veil of mist overhanging the Sound, the sun setting in a sea of golden cloud, from which flakes of gold fell off and floated away along the horizon. The level rays of departing day bring out the headland opposite with every building outlined, the surface of the Sound resembling for roughness a Canton crêpe in pale blue, creased with the wakes of various water-craft, completed the first effect; then suddenly the heavens were flushed with a rosy radiance which was reflected from the placid water beneath, as if the day should kiss the earth good-night and blush in doing it. I thought about the Montana lady I had met in Tacoma, and hoped she was enjoying the picture as she was capable of doing.

The subject which absorbs most of the business brain of the Northwest, whether it be in Tacoma, Seattle, or some of the ocean ports, is how to obtain control of the trade of the Orient. A glance at the map shows us that so far as location is con-

cerned there is little difference. Seattle is a couple of hours nearer to the Straits than Tacoma. But Tacoma, if time becomes an object, can make a short cut through Gray's Harbor, and so also could Seattle. Therefore, supposing the latter to have secured what Tacoma has, a direct transcontinental railroad, the chances are so nearly even as to make the most sagacious decline to venture a prediction.

Merchants will tell you in a general way that the trade of China amounts to one hundred and thirty million dollars annually, that it is only in its infancy, and that it is principally in the hands of Great Britain, but that the Pacific Coast of the United States must compete so strongly for it as to divert it to itself. They will tell you that in twenty-five years China will have a trade hundreds of millions greater than at present, because the empire will then be thrown open by railroads and rapid transportation generally to commercial operations. The Chinese will consume American wheat (which they are beginning to do now), wares, and manufactures. Besides this market for our productions, there are also to be considered the fifty-seven millions of people who inhabit those parts of Asia which approach this continent more nearly, as Japan, Manchooia, Mongolia, and Siberia. To supply these people from Europe by the present route and means of travel and transportation requires, we are told, caravans numbering thirty-six thousand camels and bullocks and one hundred thousand horses.

This state of affairs cannot be permitted to continue in this the nineteenth century! and the question is seriously asked, "Who is to have control of this vast trade?" and as seriously answered, America. Why? Because America has the capital, material, energy, and pluck to obtain it. That point conceded, the next one of importance is that of distance, and Seattle is nine thousand six hundred and fifty miles nearer to the Amoor River than Liverpool. It is twelve hundred miles nearer Singapore, three thousand five hundred nearer Canton, six thousand nearer Shanghai, and eight thousand miles nearer Vladivostok than is Liverpool.

But that is not all. Seattle is five hundred miles nearer Vladivostok than San Francisco is, three hundred and fifty nearer Shanghai, three hundred nearer Canton, and three hun-

dred nearer Singapore. It has also slightly the advantage over Portland in some of these distances, and very slightly over Tacoma. It has nothing, then, to fear in the matter of distance except from some port upon the coast either of Washington or British Columbia. And here comes in the consideration of latitude and productions, which are in favor of Washington.

These are weighty topics to discuss in a railway or drawing-room conversation, yet one hears them everywhere. And they are stirring themes, too, when we remember that Jefferson and Benton discussed them in the early part of the century, and the nation has been moving westward on the chosen line ever since. Just what point will secure the prize of pre-eminence is not for me to prophesy. Besides, the country is so vast and so rich in resources that there is room for all to grow and prosper. So let us leave the future to reveal itself, and comment upon Seattle as it now is.

The volume of jobbing trade for Seattle in 1889 is variously estimated at from seventeen million dollars to twenty million dollars. The confusion in business incident to the fire prevents a closer estimate. Seattle merchants carry large stocks of all kinds of merchandise, although the tendency now is to separate wholesale and retail business, and to segregate merchandise into special lines. Retail trade is not dependent, as in other States, upon the coming in of certain crops. June furnishes a heavy hay crop and garden stuff. The immense wheat crop begins to move in August; hops in September; potatoes in October; fruit in its proper seasons, from June to October; lumber and coal at all times; and cattle and dairy products during most of the year.

Manufactures are quite numerous in Seattle, but are still lacking in many things. Previous to the fire it had ten saw-mills, whose plants cost four million dollars, and tributary to it, within a radius of thirty-five miles, seven great milling establishments. It had ship-yards; several sash- and door-factories; shingle-, barrel-, and furniture-factories; brick-yards and tile-factories; carriage-factories; four breweries; foundries, brass and iron, and boiler-works; soda-works; and fifty other kinds of manufactures. The capital employed in factories in 1882 was \$6,285,000, and the value of production \$10,467,488. It is mentioned in the press of Seattle that there is room for a large

tannery and boot- and shoe-factory; for a woodenware- and willowware-factory; for powder works; for two flouring mills, and for wholesale houses dealing in men's furnishing goods, in hats, in paints, oils, glass, drugs, stationery, millinery, and general machinery, as specialties. This gives a better idea of the condition of trade than an enumeration of business firms. Seattle has eleven banks,—not as many as Tacoma by two or Portland by five,—with an aggregate capital of about four million dollars and deposits amounting to nearly six million dollars.

The coal-mines of King County which are tributary to Seattle are the Franklin, Black Diamond, Cedar Mountain, Newcastle, Gilman, and Durham. Their total output for 1889 was three hundred and ninety-one thousand one hundred and eighty-three tons. There was a suspension of production for a couple of months while the coal-bunkers destroyed in the fire were being rebuilt, which lessened the amount. The present facilities will enable the companies to receive and discharge two million tons a year.

It is in contemplation to erect iron- and steel-works at Kirkland, on Lake Washington, which will employ one thousand men, a company having already been formed for that purpose, with a capital of two million five hundred thousand dollars. The ore is to be obtained from the Denny Mines in the vicinity. The manufacture of railroad material will be carried on in connection with the iron-works.

From these items, putting that and that together, it is safe to say that Seattle is no bubble which a pin-prick will cause to collapse, and that a century hence it will be here with added area, wealth, dignity, and history.

Speaking of history reminds me to give a leaf out of Seattle's past. It is not about the siege of the town by the Dwamish and other Indians in 1856, when a stockade was built with Mr. Yesler's lumber to protect the settlement, and when Captain Gansevoort, of the United States ship-of-war, which was fortunately in the harbor, came to their relief, together with the territorial authorities, but concerns a period about ten years later.

The want of Washington during the territorial times was women; excepting the families of the original pioneers, few had come to settle here, the majority of men who had drifted

to Puget Sound from the Fraser River Mines, or by sea, being unmarried. This condition of society resulted in the union of Indian women with white men, and the degradation of the latter. It was suggested to Governor Pickering that it would be a philanthropic action to furnish the white bachelor population of Washington with wives from among the widows and daughters of soldiers killed in the war of the rebellion. The man selected or permitted to take charge of the enterprise was Asa S. Mercer, of Seattle, who, armed with a certificate of character, repaired to Washington, D.C., with the intention of appealing for aid to President Lincoln, but arrived on the day of his assassination, which seemed to put an end to the undertaking.

However, he then formed an immigration scheme of his own and secured contracts with one hundred and fifty young women, and as many families, to take them to Washington and guarantee them employment at good wages, on the payment to him in advance of a certain amount of passage-money. He made terms with a steamship company, and, instead of notifying all those who had contracted with him, set sail for Puget Sound with half the number, leaving the remainder to their vain regrets. For this violation of trust he was sued in the Superior Court of New York, which decided it had no jurisdiction, and his victims were left without redress. As for the seventy-five young women who reached this coast, an Immigrant Aid Society had been organized to provide homes and employment for them, and they disappeared like morning dew before the sun, being too few to create much of a change in Washington society or morals.

In this city, where such a movement was possible twenty-five years ago, there are now forty-three church organizations,—and we all know that churches consist chiefly of women,—with over eight thousand communicants. Sermons are preached in the English, German, Swedish, Norwegian, Danish, and Welsh languages, and sixteen denominations are represented. Half a million dollars is to be expended this year in fifteen new church edifices.

Seattle has four daily and several weekly newspapers, of which the *Post-Intelligencer* and the *Seattle Press* are the principal ones. The State University is located here, and in the heart of the city. Its endowment being inadequate to its needs, a movement is on foot to sell the ground, and with the proceeds

erect better buildings farther from the centre of the town, and with the remainder enlarge the endowment. There is a large Chautauqua circle here, and the society owns property on Vashon Island, near Tacoma, where it holds its annual meeting. A Young Men's Secretarial Institute also owns twenty acres adjoining the Chautauqua-plot, which is about establishing a training-school and gymnasium, with ball-ground, boating-club, and a variety of physical-development accessories.

This institute consists in the first place of the secretaries of the Young Men's Christian Associations throughout the Northwest, and the stock is sold only to active members of the associations. They will have twenty-five thousand dollars with which to make improvements in 1891. The two organizations promise to be helpful to each other, and together will make Vashon Island a popular summer resort. The institute has already published among its rules that "boiled shirts" are not admissible; polished shoes only admissible on Sundays; no study to be allowed in afternoons; the hours of sleep to extend from ten o'clock in the evening to seven in the morning. The last of these four rules may wisely balance the effect of the first three.

The common schools of Seattle are of a high order, and the city has erected handsome structures for their accommodation. The city supports an Orphans' Home and three hospitals, Providence Hospital being the largest on the Pacific Coast. The charitable orders are numerous, as in other cities.

The tourist has a choice in departing from Seattle of steamboat or railway service. The railroads going out of the city are the Puget Sound Shore line to Puyallup, where it connects with the Northern Pacific, and through that road with the Union Pacific, or O. R. and N. Railroad, and the Southern Pacific, or Oregon and California Railroad. The Seattle, Lake Shore and Eastern Railroad I have already referred to. This is an extensive system, only partially completed. The Snoqualmie branch on which I travelled opens up coal and iron fields in that region, and is eighty miles in length. Another branch, one hundred and twenty miles in length, known as the Seattle and West Coast Railroad, will connect with the Canadian Pacific, making Seattle one of its terminals. When completed the main line will cross

the Cascades by Cady's Pass, at the head of the Skokomish or north fork of the Snoqualmie River, and join the eastern division west of Spokane. The Columbia and Puget Sound Railroad is a narrow-gauge line connecting Seattle with the Newcastle, Cedar River, and Green River coal-fields, by a system of branches aggregating sixty miles, and sustains an enormous traffic. Its ultimate destination is the Columbia River at Wallula. Of lines projected but not built, the Seattle Southern is to run from West Seattle direct to Portland, to connect with the Southern Pacific system. Thus the Queen City looks to being the terminus of three, if not five, transcontinental roads.

It seems the intention to make West Seattle terminal ground for several roads, the initiative being given in the organization of a West Seattle Terminal and Elevator Company, which is to build on trestles across the bay at its southern end, and erect wheat-elevators on the bluff shore. The height of the elevator above the floor of the warehouse, which is one hundred and twenty by five hundred and thirteen feet ground area, is one hundred and twenty feet. It will have a capacity of seventy thousand bushels, and the warehouse of one million. A ship-dock twelve hundred feet long will be constructed, with over five thousand feet of side-tracks and other facilities for receiving and discharging grain, the whole to cost two hundred and fifty thousand dollars.

A belt-line railroad around Lake Washington is reported projected, to be built by the Lake Shore and Eastern and Northern Pacific. The Northern Pacific, it will be observed, is at the bottom of most of the greatest enterprises in the Evergreen State. The Union Pacific would willingly enter into competition, but circumstances have not been favorable in the Puget Sound region, where it is confined to the control of the leased steam-boats of the Oregon Railway and Navigation Company, but will construct in the near future a line from Tacoma to Olympia and Gray's Harbor, and, if we may believe rumor, several other lines. But it is not for me to say what railroad companies *will* do; there is more certainty about what they have done, a part of their policy being to puzzle the public about their intentions until they have secured whatever portion of "the earth" seems to promise the largest harvest. Railroads are tricky things.

It is only on great water-ways like the Columbia or the Sound that one feels the bounty, the beauty, and the peace of the free gifts of God. Such a highway is always at the door of these mediterranean cities. Upon it may float a palace or a plunger. Let us take something intermediate and visit some of Seattle's outlying territories.

The first of these may be said to come under the head of saw-mills, and to give an idea of the importance of these to the State of Washington, let me borrow some figures from the *Post-Intelligencer* for January 1, 1890, showing the number of feet of lumber cut in the State for the previous year.

MILLS.	Lumber.	Lath.	Pickets.
Port Discovery	32,537,459	13,774,800	1,071,470
Washington, Hadlock, Port Townsend	24,800,737	7,482,000	307,855
Port Blakely	62,092,701	11,387,100	629,038
Port Gamble	42,138,399	10,280,617	181,180
Port Ludlow	25,040,695	6,158,076	63,667
Puget, Utsalady	20,781,721	7,897,247	65,534
Tacoma, Tacoma	53,578,168	18,156,250	221,910
St. Paul and Tacoma	36,000,000	3,750,000	300,000
Gig Harbor	14,722,971	6,038,420	98,820
Port Madison	25,400,000	8,128,000	300,000
Pacific, Tacoma	40,000,000	12,000,000	
Local, in Tacoma	94,500,000	12,000,000	
Local, in Seattle	140,500,000	18,000,000	
On Bellingham Bay	35,000,000	5,000,000	
Other Local, Puget Sound	37,000,000	3,000,000	
Total Puget Sound	684,182,851	143,052,510	8,209,476

OTHER SECTIONS.

	Lumber.
Five Gray's Harbor mills	98,500,000 feet.
Two Shouwater Bay mills	35,000,000 "
Six Columbia River mills	76,000,000 "
Nine mills between Columbia River and the Sound	81,000,000 "
Eleven other mills	92,000,000 "
	382,500,000 "
Puget Sound mills	684,182,851 "
	1,066,682,851 "

About seven million feet was dressed lumber. The value of this product for this one year was \$12,800,284. The larger mills own a fleet of vessels, but aside from these hundreds of vessels come here to load. Statistics from eight Puget Sound mills show that four hundred and two cargoes sailed from their docks in 1889. Port Madison and Pacific mills furnished no list of vessels, but they probably loaded another hundred. These cargoes go to the ports of California, Mexico, Central America, Hawaii, Peru, Chili, Australia, Brazil, China, and Great Britain. The Port Blakely mill filled one order from Cardiff, England, for one million feet in timbers sixteen by sixteen inches square and sixty-one feet long, and twenty-four inches square and ninety feet long. The value of this cargo was seventeen thousand dollars.

Let us, then, go to see Port Blakely. It lies ten miles west of Seattle on the southern end of Bainbridge Island, and is owned by Captain W. H. Renton and associates. Most of the great milling establishments of Puget Sound were founded about 1852-53, when the devastating fires of San Francisco's early history suggested the need of lumber manufacture. Renton was one of the many sea-captains—chiefly Maine men—who saw their ideal haven in Puget Sound. It is related that in 1851 Dr. Samuel Merritt, of San Francisco, sent a vessel, of which he was owner, to these northern waters for ice. When the vessel returned, the captain surprised the doctor by saying as soon as they met, "Why, doctor, water don't freeze in Puget Sound!" This was a revelation, and many a sea-going man from the coast of New England, looking at the waters which never froze and the limitless forests, determined to stick his stake there.

And so it fell out that, in 1853, Captain Renton joined C. C. Terry on Alki Point in erecting a mill, which they afterwards removed to Port Orchard, and subsequently sold. Renton then went to Port Blakely, and with a partner named Howard erected in 1864 an establishment costing eighty thousand dollars, and which would cut fifty thousand feet a day. In 1880 its capacity was increased to two hundred thousand feet per diem of twelve hours. It now cuts three hundred thousand, and could add another one hundred thousand, having a great number of saws,

and a three-thousand horse-power. Captain Renton resides here, and employs two hundred and fifty men, many of whom have families. Their homes constitute a pretty village, with a public hall and reading-room. Education and amusement are encouraged to make pleasant the lives of the workers.

And surely they need it. I never behold great manufactories like this without resentment towards the vandalism of progress. What a creature is man! What dreadful machinery he invents to rend in pieces, to pull down, to drag along, to dig up, and to build up—a fortune for himself! The forces of nature move silently and majestically, but man's inventions harrow your nerves and confound your understanding. They whizz, bang, whistle, roar, shriek, clang, rattle, pound; they break, crush, tear; they are violent; they wound and weary your spirit. Yet here is Captain Renton, who has spent a long life with the scream of machinery in his ears, and he is the kind friend of all who serve him, himself deprived of his sight by an accident which might any day befall them.

About eight miles farther down the Sound, on the north end of Bainbridge Island, is Port Madison, an inlet so narrow that our steamer is compelled to back out without turning around. The village lies on a smooth hill-side, made picturesque by some large trees of broad-leaved maple.

Twenty miles or more north, and just at the entrance of Hood's Canal, is Port Ludlow. This establishment, with one at Utsalady on Camano Island, opposite Crescent Harbor, and another at Port Gamble, seven miles inside the canal, belongs to the Puget Mill Company. The village at Port Gamble is called by the pretty Indian name of Teekalet.

The Washington Mill Company is located at Hadlock, at the head of Port Townsend Bay. The last of these great mills, all of which contribute to the business of Seattle in some measure, is on Port Discovery, well up towards the foot-hills of the Olympic Range, and near the foot of Mount Constance. There is a road across the peninsula between Port Discovery and Port Townsend. Squim Bay is another inlet, three to five miles west of Port Discovery, and the government has reservations on each side of the entrance, as it has at all these harbors. On many of them are light-houses which shine gratefully across the waters

as our steamer glides through the dusk of a summer night, and brings us back by morning to Seattle.

The real country tributary to the Queen City lies to the north on the east shore of the Sound. The first river falling into the Sound north of Seattle is the Snohomish, formed by the junction of the Snoqualmie and the Skykomish Rivers, about twenty-five miles northwest of Snoqualmie Falls. The tourist can take the Seattle, Lake Shore and Eastern Railroad, and by a branch reach Snohomish City in about an hour and a half, or can take a steamboat to that place.

There is little to catch the eye of the traveller in the region traversed by the railroad. It is a scene of newly-opened forest with new settlements, such as we have seen so frequently, and must continue to see wherever we go in the lower Sound country except on some of the islands. This is the case because the chief and most profitable pursuits of the people hitherto have been logging for the great mills, growing hay and vegetables on the rich bottom-lands, bee-culture, and cattle-raising. More recently they have taken to lumbering, and a good many mills have been erected in Snohomish Valley. Snohomish City is a town of three thousand inhabitants, located near the head of navigation by steamboat on the river. It is well situated on the north bank, with several hotels, three churches, a scientific society and museum, a fifteen-thousand-dollar school-house, two dozen stores, a more than average number of professional men even for a county-seat, and other signs of an intelligent population. Here and in the vicinity are half a dozen large saw-mills, five shingle-mills, three sash-, door-, blind-, and moulding-factories, and many logging-camps. The export trade of Snohomish River is of the value of two million dollars annually, while the local trade between farmers, loggers, other people, and the merchants exceeds that sum. It is estimated that the improvements of 1890 will be of the value of one million dollars, and will include a court-house and a theatre. The Snohomish Agricultural Society and Turf Club will make a speed-track near Lake Blackman, for the exhibition of blooded horses; from all of which it is evident that the people of Snohomish are progressive.

Machias is a new town located on the Pillchuck, a branch of

the Snohomish, at the point of contact of the Seattle, Lake Shore and Eastern, and near Lake Stevens, a beautiful sheet of water. Lumbering is the great industry at present, but I hear a good deal about mines of coal and of silver in the neighborhood.

Cathart, Lowell, and Marysville are milling-towns on the river below Snohomish. The river is crooked and not wide, with low banks which must be overflowed in some seasons. It parts into several channels five or six miles from Port Gardiner, into which it flows by three mouths. On the north side of the entrance is the Tulalip Indian reservation, including thirty-eight square miles of excellent land. On the south side of Port Gardiner is Muckilteo, a fish-canning establishment.

I have not taken pains to collect any information about the salmon fisheries of the Sound, which are in their general features the same as those of the Columbia. But the variety of food fishes in the Sound is much greater than in the great freshwater river. Halibut and codfish are plentiful, as well as smaller fish, such as smelt and herring, but the business of packing them has not seemed to attract capital. The only company I heard of was one on Scow Bay, Port Townsend, and they were professional fishermen from Massachusetts who had recently set up this establishment. They experimented by sending a refrigerator car to New York packed with halibut on ice, and, finding it practicable, went into the business. Oysters are successfully grown in the Sound, and clams of half a dozen varieties are native. Lobsters have been planted by the government, as also carp and shad. This by way of parenthesis.

Twelve or fifteen miles north of the Snohomish, the Stillaquamish River enters that part of the Sound called Port Susan by Vancouver. It was somewhere about here, perhaps on the south shore of Port Gardner, that on the king's birthday, June 4, 1792, Vancouver took formal possession of this region for his Majesty,—hence the name "Possession Sound," given to the eastern arm of this wonderful sea, which is no sound at all.

Edmunds is the seaport town of Snohomish County, and only four years old. It boasts many advantages.

On the Stillaquamish is one town—Stanwood—of considerable consequence as a milling and trading centre for that valley. Marysville is also a thriving place. Centreville is older, but

does less business. The Stillaguamish, like the Snohomish, has three mouths, two opening into Port Susan, and one into a nameless portion of the Sound connected with Port Susan by a passage not more than half a mile in width. A project is on foot to connect Utsalady with the mainland railroads by a line to the mouth of the Stillaguamish, bridging this passage.

The rivers on this side of the Sound, especially these northern rivers, have all this delta feature. They have rushed down from the mountains for ages, bearing the soil formed from the rocks and vegetable mould, which the tides have beaten back again until wide areas of the richest marsh-land have been formed. In seasons of flood the river has washed out several channels by which to get to deep water through this impediment. These marsh lands when diked are the most productive in the State, if not in the world, but in the amplitude of other resources their value is not yet fully appreciated.

Speaking of other resources, the reader is referred for one of the most important, but undeveloped, to the chapter on geology and mineralogy. All that is there said of the country immediately north of the Stillaguamish is undoubtedly true here. The east shore of the Sound from Bellingham Bay to Nisqually River is rich in minerals,—coal, iron, silver, marble, building-stone, asbestos, tin, and ores of other metals. But there are not yet hands enough in the State, however willing, to uncover this wealth. Sulttan, on a branch of the Skykomish, is in a rich silver-bearing district.

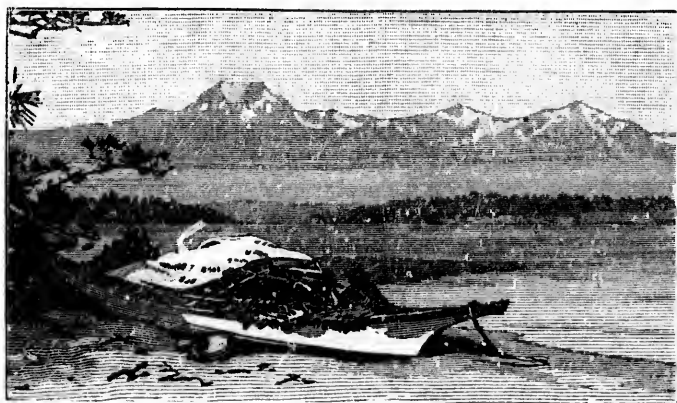
When I speak of this country as tributary to Seattle, it is as dependent upon the larger market of a commercial metropolis for supplies. The same might be said of the whole northern part of West Washington, a condition of things which is not likely to be perpetuated when its grand resources begin in earnest to be developed.

Pointing our steamer's brow southward, we again enter the main body of the Sound, Admiralty Inlet, and rounding Whidbey Island proceed to Port Townsend.

CHAPTER XXV.

ABOUT THE KEY CITY AND VICINITY.

PORT TOWNSHEND—that is the way Vancouver spelled it—is situated on the Quimper Peninsula between Port Townsend and Port Discovery Bays. It does not face the Fuca Sea to the north, nor even Admiralty Inlet, but is situated on the bay,



IN THE STRAITS.

facing south, a fact which bewilders the tourist, whose head is already turned with the effort to keep his course on these wandering waters. Let no one begin a journey on the Sound without a map in his hand,—a good one, like that published by Eastwick, Morris & Co., of Seattle,—for you learn nothing from the ordinary maps of the actual shape of land or sea.

The Quimper Peninsula has a general width of about four miles, although only two miles wide at its eastern end, being shaped like a sickle with its point towards the east broken off, leaving not one but two points at the end. The northern one, on which there is a light-house, is called Point Wilson, and the

southern one Point Hudson. It is under the lee of the latter that the city is located. There is a strip of low-lying land along the front where the business of the town is centred, and rising abruptly back of it is a high bluff, level and bare, on which the residence portion of the city is laid off, which is much exposed to winds from all quarters.

This is one of the oldest towns in Washington, having been founded in 1851 by L. B. Hastings, F. W. Pettygrove, C. C. Bachelder, and A. A. Plummer. It was soon made the port of entry for this district, which it still remains, and which gives it the *sobriquet* of Key City. For many years there was a military post on the west shore of the bay, two and a half miles distant. The customs office, trade with the people at the fort and the scattered population along the shore of the Strait of Fuca, as well as of the more thickly inhabited Whidbey and Camano Islands, with some local lumbering and ship-building enterprises, kept the Port Townsend people fairly prosperous during the period from 1852 to 1888, and not only that, in an oyster-like content, but with a wide-awake, intelligent, courteous, and modish spirit. They had enough, they were able to wait, they cultivated social habits, and enjoyed the beauties of their situation. For one could not reasonably ask to be shown anything finer than can be seen from the bluffs at Port Townsend. To the northeast is Mount Baker, with its ragged double peak fretting the heavens. In the southeast is Mount Rainier; on the west, Mount Olympus; on the east, Whidbey Island, the garden of Puget Sound, and across the Strait the San Juan group, in the Fuca Sea.

It is claimed, and I have no doubt with truth, that the climate of this locality is superior to other parts of the Sound country, the average annual rainfall being sixteen or seventeen inches against from forty to sixty at Olympia. The southerly winds which prevail during winter, and bring copious rains to West Washington when they reach the Strait, seem to be met by the warm-air current from the Japanese gulf-stream and the rain-clouds carried away eastward, for there is much less precipitation on Quimper Peninsula and the islands in the Fuca Sea than elsewhere. My attention was called to the fact that the flowering shrubs of three degrees farther south reappeared on the

bluffs about Port Townsend. Even the city of Victoria, on Vancouver Island, enjoys this exemption from surplus moisture, which at the mouth of the Strait is excessive. The superior mildness of the climate of this locality and the archipelago still farther north is to be attributed to the warmed water of the gulf-stream which flows inland with the tides, warming the air above it.

Port Townsend has a population of about seven thousand, a good part of which has been gained in the two years just passed. The recent sudden impulse given to the growth of the city was the effect of the inception of the Port Townsend and Southern Railroad, a local enterprise which was to connect it with Portland, and thus with two transcontinental roads from there, as well as with the Northern Pacific somewhere south of Olympia, which would give it a third overland route. The enterprise was soon taken in hand by the Oregon Improvement Company, a syndicate which is closely allied to the Union Pacific and the leased Oregon Railway and Navigation Companies.

Over one million dollars was expended in 1889 in the construction of new business buildings. The government also began work on a new custom-house, to cost two hundred and fifty thousand dollars. A fine hotel, the "Eisenbeis," was erected, three miles of street railway built, a company formed to supply the city with water, and several new manufactories started. Besides all this, half a dozen "additions" were made to the old town. Truly, the power of railroads, or even the prospect of one, to give life to business, is marvellous.

Besides the lumber-mills before mentioned as being in the vicinity of Port Townsend, there are the Puget Sound Iron-Works at Chimacum, or Irondale, near the head of the bay, which turned out in 1889 three hundred and fifty thousand dollars' worth of pig-iron, employing in the mines, the woods, and the works six hundred men.

The rival, but hitherto an unsuccessful one, of Port Townsend is Port Angeles, on the south shore of Fuca Strait, and west about thirty miles. It has a good harbor, and there is no natural reason why it should not be the port of entry instead of Townsend. When, in 1861, Victor Smith was appointed col-

lector, he became one of a town company at Port Angeles, and after a good deal of quarrelling with other officials and the proprietors of Port Townsend, finally succeeded in removing the office to the new site, being sustained by the authorities at Washington, D.C., in his action. But now behold the punishment which follows naughty deeds. In his absence, and during the winter rains of 1863, a land-slide occurred in the hills back of Port Angeles, damming up a stream already swollen, which, after the restrained waters had formed a lake, broke through the obstruction and precipitated such a flood upon the town as destroyed it and cost several lives. Smith, however, continued to keep the office at Port Angeles until 1865, when he perished by the foundering of the "Brother Jonathan," near Crescent City, California, after which the custom-house was restored to Port Townsend, and the lots of the Port of the Angels went back into acreage, so remaining until within a year or two, when it was new-created by the Port Angeles Land Company and the Union Pacific Railroad.

That Port Angeles has merit as a site for a city is admitted. General McClellan, when he was surveying for a route for the Northern Pacific in 1853-54, said of it that it was the "first attempt of nature on this coast to form a good harbor," and in a recent petition of the shipmasters of the Pacific Coast to the Treasury Department, indorsed by the Chamber of Commerce of San Francisco, asking for a sub-port of entry at Port Angeles, the reasons given were that the harbor was easy of access and in the direct route of vessels bound up or down the Strait of Fuca, that it was the first harbor on the American side after entering the Strait from the ocean, and that it was protected from all winds, had good holding-ground, ample room, and no rocks or shoals. On this presentation the prayer was granted, and at the same time that Seattle and Tacoma were made sub-ports of entry, Port Angeles opened her books. It means much to vessels for that place, which otherwise would have to go sixty miles to Port Townsend to enter.

A coal-field has been discovered within a few miles of Port Angeles; the country back of it is good, and there appears no reason, if people come here, why they should not prosper. The best harbor, situated, too, nearest the sea, ought to go for some-

thing. The city of Victoria, B.C., is directly opposite, twenty miles distant.

The coast lying east of Port Townsend, as far as the Elwha River, has long been settled, donation claims being taken under the Oregon Land Law on these remote shores in 1852 and 1853; New Dungeness, Squim Bay, and Protection Island in front of Port Discovery having been among the earliest settlements in the northern part of Washington, the pioneers still clinging fondly to their first choice.

Whidbey Island also, so much admired by both Vancouver and Wilkes, was quickly appropriated by the immigrants from the Western States, whose descendants inherit the lands won by indescribable hardships and danger. The first permanent settlers were the Ebey family, in 1854. I. N. Ebey was a man of unusual ability and cultivation for his time and environments. He was the second collector of customs on Puget Sound, for which distinction he paid with his life, being murdered in his own house by the Northern Indians, or Hydahs, who landed on the island in the night, and, to avenge some loss of their tribe, cut off Ebey's head and carried it away. The family escaped in the darkness, and with them a Mr. and Mrs. Corliss, who afterwards went to Southern California to live, on a sheep rancho, where they were murdered in their house by unknown persons, supposed to be Mexicans. Mrs. Corliss was a daughter of Peter Judson, the first settler at Tacoma, whose family escaped the Indian massacres of 1855-56. Yet her fate pursued her to her death in a far-off home where no danger was apprehended.

Whidbey Island contains about one hundred and fifty square miles, about six thousand acres of which is excellent prairie-land, requiring no clearing, an agreeable climate, a favorable position in the Sound, and many charms of scenery, from which characteristics it obtained the title of Garden of Puget Sound. Coupeville, on Penn's Cove, is the only town of any importance, but an effort is being made to build up a place named Whidbey City, and another which has beatified the bold navigator Juan de Fuca, and called itself the city of *San de Fuca*. This ambitious townlet, under the patronage of its before-unheard-of saint, promises to expend two million dollars in cutting a ship-canal across the mile and a half of land between Penn's Cove

and the Strait, and in railroad building. Steamers could, in case the canal was constructed, pass out of the east channels into the Strait without going as far north as Deception Pass, it is true, but it is doubtful if sailing-vessels would care to face the wind which would be blowing on shore just at this point a good portion of the year.

Camano Island, with Whidbey, constitute Island County. They are separated by Saratoga Passage, which in the nautical parlance of the Sound is known as "the inside passage" in going to Bellingham Bay or Victoria. To get into the Fuca Sea by this route we must run through Deception Pass, between Whidbey and Fidalgo Islands. So desirous was I of viewing the reputed wonders of this passage that I spent most of a night in looking for them, being rewarded towards daylight by the actual scene. The pass is only about six miles long, being from a quarter to half a mile in width, with rocky shores rising abruptly from the water, the rounded tops of which have a time-worn appearance, and out of the crevices of which grow evergreen trees of a size very inferior to those along the mainland shores. Through this rocky funnel the wind carouses, and the tide runs with a swiftness which sometimes holds a steamer stationary. The very force which seems dangerous is a protection, the flood running up the side of the channel and its reflex action carrying the steamer back to mid-passage. So with great whistling of the wind, rushing of water, and rattling of cargo, we were carried safely through into smooth water in the Fuca Sea.

CHAPTER XXVI.

THE SAN JUAN ARCHIPELAGO AND CITY OF THE SEA.

BEING in the Fuca Sea, let us have a talk about it and its archipelago. Fidalgo, Guemes, Cypress, and Lummi Islands lie east of Rosario Strait, and belong to counties on the mainland, as Skagit (pronounced Skadgit) and Whatcom, while San Juan,

Orcas, Lopez, Shaw, Blakely, Decatur, and numerous smaller islands constitute the county of San Juan and the San Juan Archipelago.

The island of that name contains about fifty square miles, and is famous for its limestone quarries and lime-kilns. It is also famous as the seat of the San Juan war during the contention between England and the United States concerning the ownership of these islands, England holding that Rosario Strait was the main channel, while the United States held that the Canal de Haro was such.



AMONG THE ISLANDS.

A goose has been credited with saving Rome. A pig it was that saved the San Juan group, for when collector Ebey, in 1854, appeared on the island and proceeded to confiscate a British pig or two on the refusal of the owner to pay import duties on a band of sheep from Vancouver Island, the British unicorn exalted its horn and asserted its claim to the archipelago. So serious did the dispute become that General Harney, commanding the Department of the Columbia, placed a force on the island of San Juan to hold it at all hazards, and a post was maintained there until the settlement of the controversy by

arbitration, in 1872, when Emperor William of Germany decided in favor of the claim of the United States.

One should enter the Fuca Sea by the Strait of Fuca, fifteen miles wide and sixty in length. At this gateway of the Pacific stand, what it requires the help of our imagination to make out, the Pillars of Hercules, of Vancouver. As we advance, Vancouver Island is on our left, its general surface rather rounded and smooth, crowned with forest in the interior, its shores indented with lovely bays and coves of a most inviting appearance. On the right is the mainland, with the Olympic Range lifting its silvered summits and noble peaks. In front, rising from the Cascade Range, is Mount Baker, with half a dozen lesser peaks grouped about it.

Advancing still farther, we pass by the southern end of the San Juan group, which scarcely shows an opening between the islands, and find ourselves almost abreast Deception Pass. Let us turn to the north, where we have not yet been, and make for Anacortes, where we desire to go, because we have heard wonderful things of Anacortes. A half-dozen miles takes us to Ship Harbor, or Guemes Canal, and half a dozen more to the City of the Sea.

Fidalgo Island has all those eccentricities of shape which characterize this group. Stretching north from Deception Pass seven miles to Guemes Canal, with a width varying from three to six miles, it is flanked on the west by two small islands, and cut into on the east by an inlet about three miles long from north to south, forming, with Padilla Bay, a narrow peninsula pointing north, while about nine square miles of its area are contained in another peninsula pointing south, and separated from the main island by Similk Bay, which meets Deception Pass on the southeast. This portion of the island is an Indian reservation, and is divided from the mainland only by Swinomish Slough, a narrow and shallow but navigable channel between Padilla Bay and that unnamed portion of the Sound before referred to, north of Port Susan, and into which empties the Skagit River by several mouths.

Near the centre of Fidalgo Island is Mount Erie, twelve hundred and fifty feet in height, while several small lakes add to its scenic attractions. To say that the view from the summit of

Mount Erie is entrancing would be strictly correct, however trite the expression. Behold how, far away south, the "Jupiter Hills" seem to bathe their feet in the waters of the Strait, surpassingly beautiful in outline, delicately colored, tipped and rimmed with shining lines and crests of snow—a marvel of aerial effect—a poet's dream—a vision of the air! Turn from this exquisite sublimity to the half a hundred islands of the archipelago, on the west and north, each with its peculiar shape to distinguish it, its miniature bays, capes, and promontories, its bits of prairie or forest-crowned ridges, but always picturesque. Turn towards the east and see again Mount Baker and the great masses of forest that extend from the summits of the Cascades to the shores of the Sound, marking where the Skagit winds its devious way to its outlet, and fail to dream of the future which awaits this region! Do we need to hear that the Skagit valley is fertile, or that its foot-hills are full of coal, iron, and other valuable minerals? From what we have seen of other parts of West Washington, we know this without being told. But of course we *are* told so by everybody, as if the discovery were a new one.

Let us talk a little about the Skagit River region while it is in mind. Although this river is the largest which empties into Puget Sound, the remoteness of the country from the beaten track of commerce caused it to be overlooked for settlement in the earlier history of the Sound. Its channel was obstructed by frequent "jams" of drift, which prevented navigation for more than a few miles. But in 1869 J. S. Conner located on a rocky bluff at the southern end of Swinomish Slough, and commenced diking and cultivating the tide-marsh-land on the delta at the mouth of the Skagit. So successful was he that others soon gathered about him, and he laid out a town which he called La Conner, after his wife, Louisa Agnes Conner, which was until quite recently the only one in this region. It has now five hundred inhabitants and a good trade, a body of land ten miles long by three and a half in width being reclaimed by diking and converted into farms where from one hundred to one hundred and fifty bushels of oats to the acre is the annual product. This tract is known as the Swinomish Flats. South of it is another tract of five thousand acres, also redeemed, but

from fresh-water overflow, at no great expense. This is the Beaver Marsh, and is just as productive as the first named. Both of these tracts have navigable sloughs through them, which enable the farmers to ship their crops from the banks. Wheat and barley are grown on these lands, but the quality as well as quantity of the oat crop renders this more profitable. Hay, fruits, and vegetables make large returns. Olympia Marsh is another reclaimed tract north of a ridge separating it from Swinomish Flats, and has a small settlement on the ridge, called Bay View, which possesses a growing lumber-trade. At the north end of Swinomish Slough is an island seven hundred and fifty acres in extent, also wholly reclaimed.

On the low ground towards the mouths of the Skagit spruce-trees grow and the earth is wet, but these lands also when reclaimed yield well, while ten miles up the river the valley when cleared is perfectly well adapted to general farming. The timber of the valley is red cedar and Douglas fir, the most valuable in the State for milling purposes. The jams of drift have been removed, and in their places are sometimes jams of saw-logs.

Logging-camps were the first settlements on the river, but there are now several incipient towns. The first, Skagit City, is at the point where the river divides into the several channels forming the delta, and is of little importance. Mount Vernon is the county-seat, and was the principal town in the county before the rise of Anacortes, with which it was recently brought into connection by railroad. Sedro, at the crossing of the Fairhaven and Southern Railway, is simply a railroad station whose future is undetermined, although if it makes good use of its natural resources, as well as transportation advantages, it ought to become a business centre. Lyman is prettily situated on the river, with a deep-water frontage, a saw-mill, a general merchandise establishment, a good school-house, and other signs of prosperity. It is also on the line of the Seattle and Northern Railroad from Sedro to Anacortes.

Above Lyman a short distance is Hamilton, named after its proprietor, William Hamilton, and famous for having a large orchard bearing excellent fruit, and for being opposite the iron mountain mentioned in another chapter and called Mount

Columbia. This mountain is said to be filled with coal on one side and with iron on the other. It is covered with heavy timber, which is being removed to facilitate the opening of the mines, and a town site is being cleared, which will be required when the mines are opened.

The river flows with a twelve-miles-an-hour current at this distance from the Sound; thirty-five miles inland the passage grows narrower and the scenery more striking. Birdview is a pretty spot, where a water-fall twenty-five feet in width comes plunging down from a height, and runs the machinery of a saw-mill. Above this point the fall in the river increases, and it takes the steamer half an hour to pass through a rocky defile three hundred feet in width, but of no great length.

Not far beyond this pass, Baker River, a large stream, enters the Skagit from the south, seeming scarcely to augment its volume. Its valley is heavily timbered, and, if rumor is correct, the hills which border it are stored with coal, iron, and marble.

On the north bank of the Skagit, eight miles beyond the junction of Baker River, is Sauk City, at the mouth of Sauk River, a stream which comes down from Mount Baker through a very rugged country. Sauk Mountain, close to the river, is six thousand feet in height. Beyond this point navigation becomes difficult, even in high water, and at Cascade we turn about to descend.

The Seattle and Northern Railroad, which is chartered to build from Anacortes to Spokane, with a branch to Seattle, and which has already completed a connection with the Seattle, Lake Shore and Eastern, is surveying its line east of the head of navigation, making for the Skagit Pass. Until transportation is afforded by railway, little development will take place in the mining region beyond.

It is curious to note, that, whereas we set out with the impression that our route lay through "twilight woods" almost perpetually, we found quite a number of good farms and comfortable farm-houses in the Skagit Valley as far as we proceeded, so rapidly does achievement follow upon attempt in this rich and favored region. I will be quite honest, and say, what I think to be the truth, that the very newness of the country helps the beginner here, by the absence of close competition.

By and by, when everybody has found his place and settled down to stay, the home market of the producer will not be as good as it now is nor the prices so high. But by then he will have placed himself in comfort, and need not worry over market prices.

I am reminded by being at the mouth of the Sauk of a very interesting talk I had with a gentleman at Olympia—Mr. F. W. Brown—before coming here. From him I learned that the scenery on the Sauk, towards its head, is of the wildest description. Jets of lava, poured out in former ages from Mount Baker, thrust themselves up through the main ridge of the Cascades where it is nine thousand feet above the sea. The Sauk River is precipitated over frequent falls and rapids. A park—Suiatl, pronounced Soo-i-at—is surrounded by basaltic needles of great height, and in it is found the red snow seen only in a few localities on the globe. Huge blocks of granite occur in this region, and in one place a pillar of it five thousand feet in height. But the most curious discovery made was of a cañon coming down Mount Baker to within half a mile of the Skagit River, formed by hot lava cutting its way through sand and limestone, and turning the sides of the cañon thus formed to obsidian. This volcanic glass is blue and green in color, and very brittle. There is a field here for the scientist and the tourist, which is waiting only until railroads make it reasonably easy to approach.

To return to the archipelago. In cruising about among these islands one is irresistibly reminded of Homer. Here might have been enacted the scenes of the *Odyssey*. There is the same idyllic simplicity, and even the same occupations of the people, who in the San Juan group are often of Canadian or North-of-Europe stock. These islands are indeed preferable to the

“Isles of Greece

Where burning Sappho loved and sung,”

on account of the forestry upon them.

The San Juan group numbers thirty or more islands, large and small, containing together two hundred and fifty square miles. The greatest elevation is two hundred and fifty feet, excluding Mount Dallas, on San Juan, which is ten hundred

and eighty feet, and Mount Constitution, on Orcas, which is two thousand five hundred feet in height. San Juan, since the days when the American collector had the unpleasant episode with the swineherd, has enjoyed a profitable trade in lime, of which thirty-eight thousand barrels are annually exported. There are forty-two thousand eight hundred and ninety-six acres of improved land in the group; but stock-raising rather than farming is the business of the inhabitants.

Orcas Island is the most modernized of the group, having, as well as San Juan, several lime companies, all doing a good business; a lumber company, two brick-yards, and other manufactories. A few years ago hotels and summer boarding-houses were erected on this island, with the purpose of attracting visitors and building up towns. But since the railroad era dawned upon the Sound, the Orcas Island people have taken to fruit-growing, which promises to be a great business on these isles. They have organized a Fruit-Growers' Association; and, since I know by actual test that the fruit of all the northwest part of Washington is superior in flavor, I hereby desire to advertise the fact for the benefit of all whom it may concern. The head-quarters of the Orcas Fruit-Growers' Association is at East Sound. Under the auspices of this society fruits will be packed and shipped in the most careful manner, and guaranteed to purchasers. The secretary also will undertake to find tracts of from ten to twenty acres, suitable for fruit-raising, for those who desire to enter into this æsthetic branch of agricultural life.

Summer apples raised here bring, at the wharf, eighty-five cents to one dollar per box holding about half a bushel. Winter apples bring from one dollar and twenty-five cents to one dollar and seventy-five cents, and keeping apples for spring market still higher. Pears bring from one dollar and fifty cents to two dollars per box. Apricots bring eight and a half cents per pound, prunes for the drying-house three and a half cents per pound. Strawberries and blackberries sell for ten cents a pound. The most luscious peaches are grown among the mountains of the islands. Cherries produce wonderful crops, and so with melons and vegetables. Why should not one love to publish this Arcadian region to the world? Poets not yet born will sing of

it, and when a thousand years from now orators shall seek to embellish their speech, it will not be by reference to Greece, but to these far western isles, the new Atlantis discovered by a Greek navigator.

Like the Greeks, these islanders have fish in plenty, and fish will always be counted among their resources. Twenty tons of halibut have been taken in one day by a single boat. Game is still plentiful in the hills, while the bays and sloughs swarm with ducks, geese, and brant. The farm productions sent to market, besides fruit, are chiefly mutton, hay, oats, cheese, and butter.

Talking about fish and fowl reminds me of the comical habits of that absurd bird the crow, whose numbers on the beach anywhere from the Columbia to the British boundary are immense. They swarm on these island beaches when the tide is out, and fish for clams. Seizing their game, they mount high in the air and drop the bivalve upon the rocks to break the shell, when they proceed to make a meal off the contents. When pigs running wild root for clams, the crows roost on their backs until a clam is turned up, and, just as the shell is cracked by the pig, will dart down, seize the mollusk, and retire to devour it.

The importance of this archipelago to the State of Washington is suggested by the above observations. Lying at the head of the Strait of Fuca, the only maritime entrance to the great inland sea improperly called a sound, it is upon a naval dépôt in this vicinity that the defence of the interior depends. The United States, having weakly yielded the island of Vancouver to the British government, must maintain offensive and defensive establishments at least equal to those of Great Britain, and sufficient to guard the Sound coasts against intrusion by any foreign power.

It is interesting to know that the man who first gave signs of comprehending the significance of the archipelago at the head of the Fuca Strait was by birth a British subject, by education an American, and by name Amos Bowman. He had been a reporter for the *New York Tribune* during the civil war, had studied medicine and engineering, had assisted in surveying the boundary between California and Nevada, and been reporter for

the California Legislature, before he finally went to Munich to complete his engineering studies. While in Europe he reported the news of the Franco-Prussian war for the *New York Tribune*, travelling extensively in Russia, Sweden, and Norway before returning to California, where he married Miss Annie Cortes, a lady perfectly suited to afford companionship to a mind so broadly cultured.

In 1876 Mr. Bowman explored on the line of the Canadian Pacific, becoming thereby well acquainted with the country on both sides of the international boundary, and asked Mrs. Bowman to select some spot in the Fucan Archipelago where she would consent to establish a home. This she did, and Mr. Bowman purchased a quarter section of land on the northeast corner of Fidalgo Island, built a house to reside in and a trading-house,—for the exchequer had to be looked after,—asked the Post-office Department to establish an office for the Island at his place, and to call it Anacortes, which prayer was granted, and then set about unfolding his views.

The manner of doing this was exceedingly painstaking, and required the courage of conviction. There were but few inhabitants on the island, and seldom any visitors to it, yet Mr. Bowman published a newspaper. He made and published elaborate maps, showing the position of Fidalgo Island to the whole world, demonstrating the relation of Anacortes to transcontinental and oceanic travel and traffic, showing that it was the shortest, quickest, and least expensive route between Great Britain and Asia, *via* New York, the Great Lakes, Chicago, Duluth, Spokane Falls to Anacortes and the Strait of Fuca. He represented clearly the local advantages of Anacortes over any port on the Sound by careful measurement and lucid illustration. These maps—large, colored, and with full explanations—were sent free or as "prizes" to subscribers and newspaper exchanges. By and by they began to awaken attention, and about ten years from the time Mr. Bowman settled upon Fidalgo Island he was receiving propositions from railroad companies which sought to make Anacortes a terminal point. In January, 1890, there were not twenty inhabitants in this place; in February, when the Oregon Improvement Company advertised that it would sell lots, there were three thousand people on the

ground. The Seattle and Northern Railroad was immediately built to the coal-mines of the Skagit Valley at Hamilton. The Union Pacific graded a few miles, and transferred its rights to the Northern Pacific, which for the present uses the track of the Seattle, Lake Shore and Eastern from Sedro to Seattle, giving Anacortes connection with Queen City before the end of the first year of its history as a town. The Seattle, Lake Shore and Eastern Road will be extended to a connection with the Canadian Pacific in a few months, giving Anacortes as well as Seattle a terminus, which, with the Seattle and Northern, connecting with the Great Northern at Spokane, will give the City of the Sea three transcontinental roads almost from the first. These, with first-class steamers running to all points on the Sound, to Victoria, and to San Francisco, leave the traveller free to go where he lists, the world being literally "all before him where to choose."

Of the local advantages of Anacortes, one is that all the rivers of that part of Washington east of the Fuca Sea and Strait have their valleys opening towards Fidalgo Island, hence their products should naturally centre here. These are the Snohomish, Stillaguamish, Skagit, Samish, and Nooksahk. The Samish—the smallest of them all, running into the south end of Bellingham Bay—furnished from six logging-camps last year ten million six hundred and thirty thousand feet of lumber to the mills of Puget Sound, which was but a small percentage of the lumber production from the camps in this region. One camp on the Skagit marketed in one year nine million feet, the price ranging from six dollars and fifty cents to seven dollars per thousand. There is wealth for you. Then follow all other kinds of wealth, —mineral, agricultural, manufacturing,—and the market for these is all the world, because the shipping of all the world comes here.

Again, Anacortes places great stress upon the superiority of Ship Harbor. The tidal currents in the channel in front of the city are about three knots an hour,—never four,—whereas the tidal currents of New York and San Francisco are ~~six~~ knots. In the inner harbors of Fidalgo and Padilla Bays the currents are very gentle, and these bays have deep-water branches ultimately to be converted into slip harbors, the best of all,

with unlimited room. Swinomish Slough, which is navigable for large vessels only at high tide, is to be deepened, when it will afford a passage from the south into Padilla Bay.

Sailing-masters find the prevailing winds of the country to be from the southeast and northwest. Both are fair winds into Ship Harbor and out of it. Ships require no towing, but sail up to their docks unaided, and such is the depth of water that the largest vessel afloat need not fear to do so.

The present permanent population of Anacortes is two thousand two hundred and fifty. At the end of the first year it had cleared two thousand acres of forest, graded and planked ten miles of streets, completed a system of water-works, built three saw-mills, a sash- and door-factory, an iron-foundry and machine-shop, blacksmith- and wagon-shops, a steam-laundry, a ship yard, eleven miles of electric-railway (almost completed), four railroad dépôts, four hotels, five handsome brick blocks, and expended altogether in building improvements over half a million dollars, besides another quarter of a million in wharves and warehouses. It has two newspaper establishments and good public schools. Banks and other moneyed institutions are on the ground doing a good business.

Such is Anacortes, the Venice of the Pacific. I shall often throw down my pen to dream of that matchless sea, over which she elects to preside and over which I floated in June days, taking mental photographs which cannot fade, in company with the kindest of entertainers.

CHAPTER XXVII.

FAIRHAVEN AND BELLINGHAM BAY.

LEAVING Anacortes early in the afternoon by a fine steamer, I had a delightful voyage to Fairhaven, another new town on Bellingham Bay. Of Bellingham Bay, as a coal-mining port in years past, I had often heard, the first coal ever mined in Washington coming from here. The discovery was made by William Pattle, a British subject, in 1852, who spoke of it to Henry

Roeder and Russell V. Peabody, whom he met at Olympia. Roeder was of German birth but brought up in the United States, while Peabody was from Ohio. They had been in California together, and now determined, after hearing Pattle's account of the country, to go to Bellingham Bay, and erect a saw-mill, which they did, on Whatcom Creek. They also took donation claims, on one of which coal was found in 1854, sixty-five tons of which were sent to San Francisco to be tested, and found merchantable. From that time until the Seattle Mines were opened this was the only coal mined in Washington. About 1869 the mine caught fire and was flooded, since which time it has lain idle.

The town of Whatcom was laid off on Roeder's land while the Fraser River mining excitement was at white heat in 1857, and at one time contained ten thousand people, but an order of Governor Douglas turning traffic to Victoria caused it to be deserted, and all the better buildings to be removed to that place, which acquired thereby a very American growth and appearance for an English town. A single brick house remained, which was converted to county purposes.

Whatcom remained uninhabited, except by its owners and the coal company, until 1870, when the Northern Pacific, looking for a terminus, purchased all the land which could be obtained fronting on the bay,—however, not including Whatcom.

In 1882, a Kansas colony numbering six hundred fixing upon this locality, the owners of the town-site agreed to donate a half-interest in the town if the colony would settle there, but subsequently refused to make good their contract, when the colonists laid off a town for themselves called New Whatcom, or Bellingham, while others settled at Sehome, between the two.

The population of the three places continued to be insignificant until 1889, when Fairhaven was taken in hand by a company of which Mr. Nelson Bennet, the contractor who constructed the Northern Pacific's great tunnel through the Cascade Mountains, was president, and C. X. Larrabee, of Montana, vice-president.

I cannot refrain from quoting from a monograph published by the Fairhaven Chamber of Commerce, describing the methods pursued in founding new cities, and particularly Fairhaven :

"Miners were sent into the mountains to search for coal and iron-ore and veins of silver, lead, and gold-bearing ores. Engineers with barometers strapped to their backs were ordered into the highlands to search for railroad routes. Timber examiners were ordered to examine the forests that stand between the rugged flanks of the Cascade Range and the waters of Puget Sound to estimate the probable amount of marketable lumber they contained. Other men were sent to watch the sweep of the tides through narrow passages and to examine harbors. Presently gaunt men, toil-worn and haggard, and who carried burdens on their backs, emerged from the forests and stood on steamboat-landings. This man carried silver-ore, that man iron-ore, and yonder was a man who was blackened with coal-dust, and the sack that hung heavily over his back contained coking coal. That group of worn, tired-eyed men with intelligent faces were engineers from mountain-passes. Farther down stood men the pockets of whose canvas jackets bulged with notebooks that were stuffed with information relative to the value of the timber and the character of the soil of several counties. From out of forests, floating down rivers in canoes, from off the rapid tide-water, out of mountain-passes, from the plains east of the Cascade Range, from probable town-sites, men hurried to Tacoma and to Nelson Bennett's office. The information was gathered. It was attentively studied, laboriously compared, and thoroughly digested. Maps were drawn and the resources of the region examined were marked on them. Slowly the evidence was sifted. This point was rejected because of the harbor, that because the land directly tributary was not arable when cleared, and another because it was too far from coal and iron. It was finally decided that the new city should be built on the shores of Bellingham Bay. When this conclusion was arrived at, to act followed instantly. An extensive tract of land was bought for a large sum. A city was laid out. Engineers located a railroad that extends from Fairhaven to New Westminster in British Columbia, and from Fairhaven to a point far east of the Cascade Mountains. Hundreds of men began to fell trees and to shovel dirt along the railroad line. Other men cleared the timber off of the town-site and burned it. Streets were graded and town-lots offered for sale. Steel rails, locomotives,

and cars were bought, and in two months from the time the first blow was struck at Fairhaven, which was in May, 1889, trains of cars were running into and out of the town."

That is the story in a nutshell, of the founding of cities by the intelligence of this age.

Bellingham Bay does not differ greatly in appearance from the bay at Seattle. In front of Fairhaven, which is about seventeen miles due north, and a little east of Anacortes, is a narrow peninsula similar to that on which West Seattle is situated, which is occupied as a reservation by the Lummi Indians, and Lummi Island, extending a few miles south of the peninsula. The town-site slopes down handsomely to the bay, presenting an attractive view to the passenger on the incoming steamer, which is enhanced by the character of the buildings already completed and in course of erection, some of which are surprisingly ornate for the size and age of the town.

Mount Baker, with its broken cone, and family of lesser peaks about it, lies almost directly east from Fairhaven, and is a noble object with its ten thousand eight hundred and ten feet of height overtopping the darkly-mantled Cascade Range. The scenic attractions of Fairhaven and the other Bellingham Bay towns are fully as great as any of the cities farther on Puget Sound, and its natural resources appeared to me to be almost identical with those of Anacortes, except in the matter of distance from the Strait and length of water-front. Vessels require no towing to the wharves of either. The same valleys are tributary to both, the same iron, coal, and marble deposits, the same timber, and the same fisheries. It rains a little more at Fairhaven than at the head of the Strait, but only about half as much as at Olympia, and the temperature is perhaps a trifle less mild, though flowers bloom every month of the year in the open air.

The Nooksahk River empties into the north end of Bellingham Bay, and therefore is more directly tributary to the towns upon it than elsewhere. The valley of this river is very extensive, stretching from British Columbia to Whatcom, south, and embracing a scope of country fifty miles in width due east of Bellingham Bay. The timber being removed, the soil produces everything entrusted to it in marvellous abundance,—as, for in-

stance, one hundred ruta-bagas of best average size, raised near Lynden, on the Nooksahk, weighed two thousand pounds. It is excellently adapted to fruit and hops, as well as grass, grain, and vegetables.

The mineral resources of the Nooksahk are yet undeveloped, but are understood to be iron, coal, copper, lead, and silver. There is abundance of water-power. The country is generally level and not rocky, with soft, pure spring-water in abundance. All this is, of course, very valuable, and is for him who comes and takes it.

There are many interesting resorts about Fairhaven. Lake Whatcom, two and a half miles east of Bellingham Bay, is an irregularly-shaped lake, eleven miles long by one and a half in width, of cold clear water over one thousand feet in depth in the centre. Its shores slope gently, and towards the east merge in the mountains five thousand feet above. A summer hotel is erected at Silver Beach, on the north end of the lake, with a boat-house and other encouragements to visitors. On its west bank is the pretty new town of Genera, and on its waters the steamer of that name, which carries pleasure-seekers from one end to the other. In its waters trout are abundant. It is said that within a stone's throw of the lake gold, silver, coal, and fire-clay have been found *in situ*, and, if true, the best feature of the lake for a pleasure-resort, its seclusion, will be destroyed. The outlet of this lake is Whatcom Creek, which runs into the bay.

On the shore of Lummi Island is Smugglers' Cove, a tiny harbor with a spring and water-fall, overhung by beetling crags and lofty firs, but, best of all, with a legend belonging to it, of a smuggler who took hiding here from the revenue officers, but being pursued climbed up the dizzy precipice and was never heard of more. The rest of the story is left to the imagination of the hearer.

One of the curiosities of Lummi Island is the Devil's Slide, a vein of nearly white sandstone of a shaly formation, one hundred feet in width and thirteen hundred feet in height, which lies on the side of a mountain at an inclination which causes every detached scale to slide down into the bay. As scales are detached every few minutes, the query is, when will

this disintegration, which has been going on time out of mind, cease, and the vein be exhausted?

On Eliza Island, in the bay, is a chicken-hatchery, which turns out one thousand per week during the season. Vendori Island, a high, rocky, and picturesque splinter of earth set in the waters just where it produces the most beautiful effect against the sky and the far-off shore line, is a sheep rancho.

Chuckanut Bay, on the east shore of the greater bay, three miles south of Fairhaven, is the site of the famous sandstone quarry, upon which all the cities of the coast have at times had to draw for building-stone. It is in the side of a precipice, and the people who live about the quarry are almost as isolated by their elevation as the cliff-dwellers of Arizona.

Sehome and Whatecom are so near together, and so near to Fairhaven, that all are in effect one city, although under different municipal governments. Whatecom is the county-seat, and has a fine court-house. The streets are full of busy people, and the town has a substantial and respectable air, as becomes its age, though, truth to say, this appearance has been but recently put on. Sehome has two large hotels,—the "Sehome" and the "Grand Central."

Fairhaven, although so young, has four thousand and thirty-one inhabitants. Its finest hotel is the "Fairhaven," built of brick and stone, well situated, with a fine view of the harbor. It has an excellent system of water-works, four banks, two newspapers, electric-light service, telegraph and telephone communication, three churches completed, and others building, good schools, saw-mills, brick-yards, and factories. It has a railroad being built to connect with the Westminster Southern, and through that with the Cana in Pacific at Blaine (Fairhaven and Northern, opened in February, 1891). The Fairhaven and Southern is also being constructed, which is making for the coal-mines in the Skagit Valley, crossing the river at Sedro, proceeding south to Seattle to connect with the Northern Pacific, and also building east up the Skagit to the coal, marble, granite, and silver-mines in that direction, and ultimately to go to Spokane.

Fort Bellingham, a stone fort, built in 1856 by Captain Pickett, who became a general in the Confederate army, is situated about

three miles from Whatcom, on the shore of the bay. There are several settlements, of small importance at present, on the Nooksahk River: Lummi, at the mouth; Ferndale, just above the Lummi River, the northern outlet of the Nooksahk; Nooksahk post-office; and Lynden, on the line of the Fairhaven and Northern, a growing town in a rich agricultural region. Yeager and Licking are small places in the valley, where the people can purchase necessary articles and get their mail.

On the coast, and within two miles of the international boundary, is Semahimoo, on the west side of Drayton Harbor; and on the east side, touching the line, is the new city of Blaine, the twin of a town of the same name on the British Columbia side. The twin towns act together in the most friendly manner, and are assuming considerable importance as the terminus of the Westminster Southern Railroad and starting-point of a line being surveyed to Lynden, Whatcom, and Spokane Falls. But being pressed for time, I abandoned my intention of proceeding as far north as Blaine and Westminster, and, taking steamer again at Fairhaven, returned to Seattle.

As one floats for a hundred miles upon these placid waters, always in sight of beauty and of positive if undeveloped wealth, it is impossible not to see that there is a great deal in the claims put forth by the people of this northwest coast concerning its relation to the commerce of the world. Already Alaska is demanding recognition of its commerce and mines. A few years ago one steamer a month sufficed for its trade; now it requires one every week. Railroads are projected, and will be built, to connect the Pacific States with Asia, across Behring's Strait. Already commercial men are watching and waiting for the completion of the Nicaragua Canal to shape by it new lines of transportation.

The Pacific front of our republic, extending from ocean to ocean, is to play a great part in the world's history, and it is well for the founders to study the situation. The great effort of to-day is to economize time and obliterate space. The hand that from this new West reaches out farthest towards the oldest East will grasp the prize. Why should not these thoughts suggest what these waters will in time resemble, when palaces shall be reflected in their margins, and the white-winged mes-

sengers of commerce shall glide continually from point to point of these now fir-clad slopes, laden with the precious cargoes of the Orient, making this northern sea a second Bosphorus for beauty and magnificence?

CHAPTER XXVIII.

GLIMPSES OF THE INLAND EMPIRE.

THE Northern Pacific, which transports you to Pasco or Wallula Junction, according to your destination, whether it be Spokane or Walla Walla, first has to elevate you two thousand eight hundred and eighty-five feet to the great tunnel one thousand and ninety-five feet lower than the summit of Stampede Pass.

The scenery along Green River is wild in the extreme, making one "pity the sorrows of the poor old man"—who of course was a young one—who engineered the line of this road. To the terrible grandeur of the scenery are added here and there glimpses of a milder form of beauty, but the general impression given by the western slope of the mountains is that the ascent is very abrupt. After passing the great tunnel, the change in the appearance of the mountains is the same which we notice in passing through the gap of the Columbia,—the disappearance of the firs, the longer slopes of the ridges, and the substitution of pine timber for the fir, which gradually disappears.

The Stampede tunnel is two miles in length. It cost a great deal of brain-work, as well as manual labor and money. A portion of it is lined with cement, to prevent the disintegration of the earth above, by the action of the air. Few people, I fancy, in passing through it realize that they are one thousand feet underground.

Just north of the Stampede Pass the Yakima River has its source in three small lakes,—Kitchelas, Kalichass, and Cle-ee-lum, and the railroad follows down this stream to its entrance into the Columbia. The valley of the Yakima is rather a great basin than a valley, bounded by the Cascade Mountains on the west,

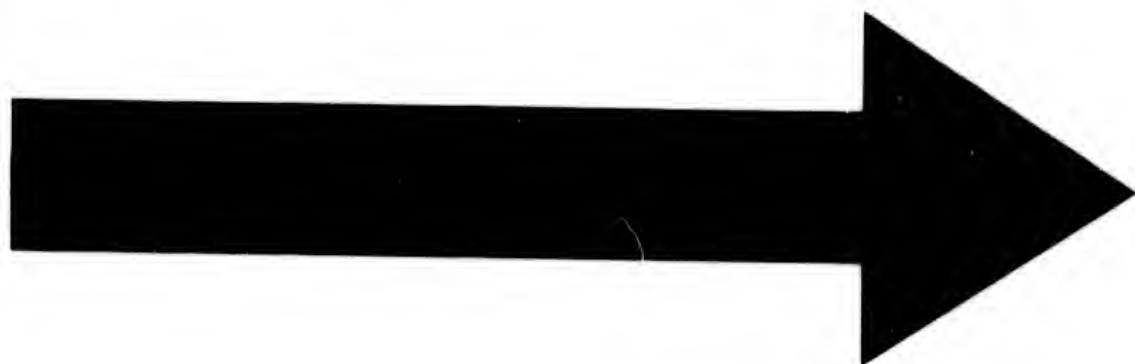
the Wenatche River on the north, and the Columbia River on the south and east, containing several smaller valleys on the west side, namely, the Wenass, Nachess, Atahnam, Pisco, Topunish, and Klickitat, with numerous small streams debouching into the Columbia.

The soil of the Yakima basin is a uniform light sandy loam, with more or less alkali in it. Near the mountains there is more clay and loam, which retains moisture much longer than the soil of the plains, and the river bottoms are largely alluvial deposits. The country comes under the general head of "arid land," although as a natural stock country it is unsurpassed, the cattle ranging upon it, instead of coming out in the spring with lank sides and rough coats, being as round and glossy as if kept up and curried.

This is the original home of the Yakima tribe of Indians, who still have a reservation containing about thirty-six townships on the west side of the basin, watered by the Atahnam and Topunish Rivers. These people kept large herds of horses before white men came among them, and now in addition keep herds of cattle. White settlers at first imitated them in the matter of neglecting agriculture for stock-raising, but the advent of railroads and the outcome of some experiments in farming have inaugurated very important changes. Irrigation is now the demand, and the problem which science and capital are attempting to solve. That it will be solved there can be no doubt.

The first place of any consequence which we come to after passing the mining towns of Cle-ee-lum and Roslyn is Ellensburg, in Kittitass County. It was first settled in 1867, by two families. The present population is five thousand. It was almost destroyed by fire July 4, 1889, one month after Seattle was burned, and one month before another city of Washington—Spokane—was destroyed by the same element. One million dollars was immediately expended in rebuilding the burnt district with brick and stone, and the trade of that year amounted to two million five hundred thousand dollars.

Ellensburg was not entirely a creation of the great railroad, but of the country whose resources have been developed by its people. These resources are both mineral and agricultural.



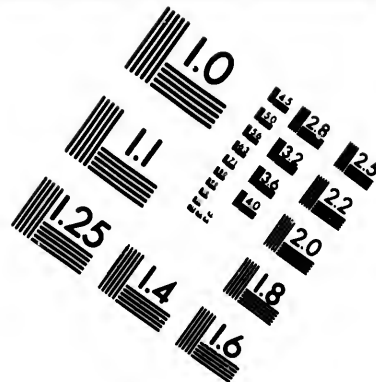
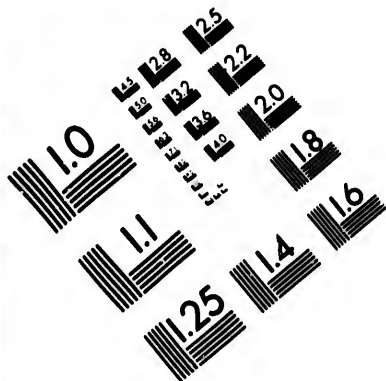
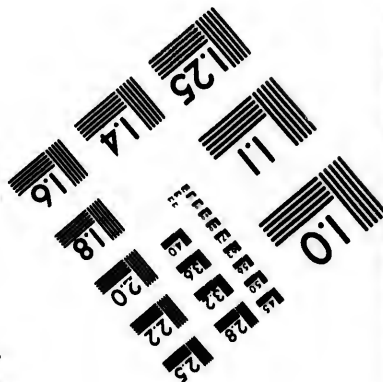
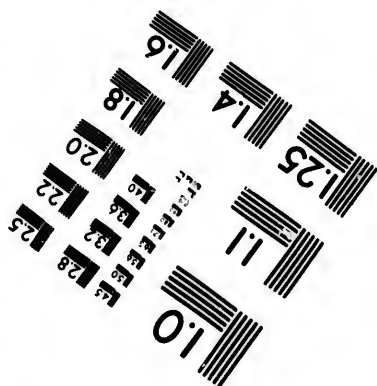
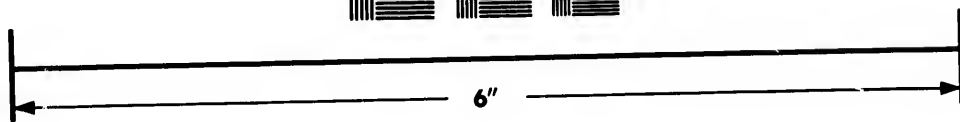
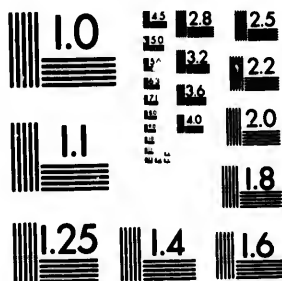


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There are four irrigating canals in the Ellensburg district. One, the Teanaway Ditch Company's canal, is fifty miles in length, and can water seventy-five thousand acres of land. It is claimed that, without irrigation, forty bushels to the acre of wheat can be produced! It is in evidence that the Ellensburg Valley produced, in 1887, one million bushels of wheat, without artificial moisture. Fruit, vegetables, hops, and hay do well without irrigation; but with it, they produce larger crops.

Ellensburg is the county-seat of Kittitass County. It is situated on Wilson Creek, a short distance from the Yakima River, on a plain sloping south. The Cascades and Mount Rainier close in the western view; the water-shed between the Yakima and Wenatchee defines the valley on the northeast, and the hills of the Cowiche on the southwest, while the Yakima on the southeast is closed in by highlands forming a long, crooked, and narrow defile, shutting off all the landscape on the farther side. The town is regularly laid out, with wide streets, good sidewalks, and well-kept public grounds. There has been a large accession to the population since the completion of the Cascade division of the Northern Pacific.

Ellensburg controls the trade of a wide section, and is reaching it after that of the Okanogan mining region and the Big Bend country. Its business men built a steamboat in 1889 to run on the Columbia, between a point about thirty miles from Ellensburg and the mouth of the Okanogan River, and, although it was run at a loss the first year, voted a subsidy to keep it on the route the second year, a measure which is bringing its reward. All the freight from the West for the mines had heretofore been sent to Spokane Falls, and thence across the country by rail- and wagon-roads, making a long and expensive detour. The Ellensburg and Northern Railroad is being constructed to the Columbia River to connect with the steamer for the Okanogan mines.

Ellensburg has a good water-system, electric-light service, one street railway, a telephone exchange, two banks, three newspapers, a foundry and machine-shops, and other manufactures. There are six flouring-mills in the valley, three saw-mills, three sash- and door factories, with numerous well-stocked general merchandise establishments. A company has recently been

formed with a capital of one million dollars to develop the mineral wealth of the Kittitass and tributary country. Among other projects is one to build a smelter to reduce the ores of the Conceonully Mines at the north, and another to organize an iron and steel manufacturing company. Limestone, sandstone, pumice, coal, gold, and other minerals, it is said, are only awaiting the action of associated capital to create a great deal of wealth.

The second town in the Yakima Basin is North Yakima. Why *North* Yakima? Only because when some people of their own accord had laid off a town two or three miles south of them, then came the Northern Pacific Railroad Company, and in 1885 laid off a town of its own, on the most approved plan, north of them, and drew to itself the trade of the country of Yakima. This proceeding naturally was greatly irritating to the South Yakimas, who complained of the treatment of the railroad company. The company as a corporation could not be expected to have a soul, but it had a fair-to-middling kind of brain, and made a proposition to the residents of South Yakima to come over and dwell in the tents of the north town, or, in other words, to let the railroad company remove them, houses and inhabitants, on the railroad town-site, where they were to be given lots for those they left behind, and made welcome. As the business of the place had already departed, the majority felt forced to accept the proposition, and the company accordingly had the south town removed, house by house, and set down on its town-site. This procedure increased the value of North Yakima real property. History is silent as to the financial and mental condition of real-estate dealers in the old town, but they probably threw themselves off a rock into the sea.

North Yakima is a flourishing town, situated near the confluence of the Naches and Yakima Rivers. It is admirably laid out, with streets from eighty to one hundred feet in width, shaded by handsome trees, and irrigated by rivulets of pure water flowing next the sidewalks. The county-seat is located here, and its three thousand inhabitants pay taxes on an assessed valuation of one million dollars, which is about one-fourth of the actual value of the town property. It is equipped, like all the new towns of Washington, with water, fire, light, and street-

railway service, and with a handsome public-school building, half a dozen churches, and several benevolent societies. A railroad to Portland is talked of, towards which one hundred thousand dollars bonus is pledged.

The principal interests of North Yakima are agricultural. Irrigation schemes are the topic of conversation. Two canals were completed in 1889; one from the Naches River extending twelve miles towards town, with branches which open up thirty thousand acres of land, at a cost of sixty thousand dollars, and the other between the lower Yakima and the Columbia, which waters twenty-five thousand acres, and cost thirty thousand dollars. The Northern Pacific and Yakima Irrigation Company is surveying for another canal, to cost six hundred thousand dollars, and to have a length of one hundred and ten miles. A still greater scheme is on foot to expend about two million dollars in extended irrigation and in constructing dams in the mountains for the storage of water, which will be wanted when the eight hundred thousand acres, now reserved for the pleasure of the Indians, shall be thrown open to settlement.

The Moxee Farm, near North Yakima, is a tract owned by a company, that is experimenting with the soil and other conditions of the land. It derives large profits from alfalfa, hops, corn, tobacco, and fruits. Peaches bear profusely the second year after transplanting, and grapes do well. A fair average crop of tobacco is one thousand pounds per acre, and nets six hundred dollars. Hops net one hundred dollars. Fruit and vegetables find a ready market at good prices. The company is also experimenting with cotton and tea. It owns fourteen miles of ditch, and can flood its fields if so disposed. Dairying and raising blooded stock is a part of the business of the Moxee Farm.

If one chooses to take a conveyance south about fifty miles from North Yakima, he will strike Goldendale, the county-seat of Klickitat County, lying south of the Indian Reservation. He will find the ride interesting, even if there is no pioneer present to relate to him incidents of the Yakima Indian War, when Fort Simcoe was erected by Major Garnett, who was afterwards a Confederate general in the civil war.

There is a range of hills called the Simcoe Mountains, which you cross, and find very pleasant, because wooded, after the dun and monotonous grass and sage-brush lands. The road takes us across the reservation, and shows us a good many fat cattle and lusty aborigines, but little improvement.

Goldendale is an agricultural town in a level valley among hills. It is a pretty and prosperous place, and looks forward to having railroad connection with Portland when the Hunt System is completed to that city. It is making proposals to secure the Soldiers' Home upon a tract of land near the town, and the place seems well adapted to the purpose, the plan being to erect cottages with gardens attached instead of one grand institution.

Trout Lake, and the ice caves mentioned in another chapter, are in Klickitat County, to both of which a large number of visitors repair in summer. Mount Adams is only about thirty-six miles northwest of Goldendale, and is the point of sight of the people here, as Hood is of Portland and The Dalles.

A new town, called North Dalles, has sprung up opposite the Oregon town, in Klickitat County, Washington. It is proposed to erect manufactories here, and it is said some are already secured. Manufactures on the Columbia, with free navigation of the great river, are what are required to give stability to that development which capital has inaugurated in other ways.

"*Keep your eye on Pasco!*" is the injunction which meets you in newspaper and hand-bill advertisements, making you curious to behold it, as if it were the What Is It. When you arrive, you look about you for something on which to keep your eye, which being blown full of sand refuses to risk more than the briefest glimpses thenceforward. There is a hotel, of brick, and some houses scattered about, built, I am told, by the Pasco Land Company, which has also in contemplation a large irrigating canal with which to make cultivable the wastes of sand and sage-brush owned by it. A Chinaman, it is said, has a small patch of ground behind his cabin which he sprinkles with a watering-pot, thereby being enabled to grow flowers and vegetables in luxuriant beauty and proportions. From this it is inferred that the irrigation of these wastes will redeem them

from their present sterility; but in the interim, keeping one's eyes on Pasco is a painful experience.

Merely as a location for a city, Pasco, or Ainsworth, which is a couple of miles beyond, at the crossing of Snake River, either, or both together, are fine town-sites. Mr. Villard, it is said, has remarked that a large city must some day be built up at the junction of the Snake and Columbia Rivers. It is more than probable, and I hope is true, and that it will be called Ainsworth, to perpetuate the memory of the man, than whom no single individual has done so much to develop the Inland Empire.

Captain J. C. Ainsworth was a very young man for the place when he took command of a steamboat, as part owner, on the upper Mississippi River; but, meeting with a painful bereavement, this, with the reports arriving at that time of the riches of the California gold placers, gave him a distaste for his manner of life, and he was just in the mood to break away from it when his friend William C. Ralston, also a steamboat man in his youth, returned from the golden shore with such representations as put to flight all hesitation, and young Ainsworth became, as so many others have become, a "man of destiny." He spent a few months in California, in 1850, as deputy clerk of the court at Sacramento, being while there solicited to go to Oregon to take command of the first steamboat built on the Wallamet,—the "Lot Whitcomb,"—in which he bought an interest.

This was the beginning of a career which lasted from 1851 to 1879 of continued progress in the development of transportation by steamboat on the Oregon rivers, in which Captain Ainsworth bore an active part. In 1859 he succeeded in forming—what he had long been aiming to do—a company which he could control in a manner to help the country and benefit himself. This was the Oregon Steam Navigation Company, composed at first of the combined interests of several heretofore antagonistic companies or individuals, who were gradually bought off until the company consisted of a few men who could work together harmoniously, and of this company Captain Ainsworth was president for twenty years.

Chief officer though he was, he attended to every detail of the business. He exacted good service, and rewarded generously. The company made money, but it was put back into transporta-

tion facilities, and enterprises which changed Oregon from an impassable wilderness to a charming route for tourists. The United States military officer who was conducting an Indian campaign; the miner who was exploring for, or had found the precious metal; the stock-raiser who fattened his cattle on the bunch-grass plains, and brought them back to market them at home; the farmer who learned rather late the productive quality of the soil east of the mountains, as well as the immigrant and the traveller, all had reason to thank the Oregon Steam Navigation Company for the means which made it possible for them to carry on their undertakings with ease and safety,—made it possible not from motives of gain exclusively, but with intelligent foresight for the country, as well as the company.

No corporation that ever was in Oregon has done for it and for the country north of the Columbia what this Navigation Company did. Its career as a civilizer has been only equalled in Washington by the Northern Pacific Railroad, which succeeded to the ownership of the O. S. N. Company's property by purchase, a short time before Jay Cooke's failure, which came near losing the railroad company its lands on the Portland branch. Ainsworth had been made a director in the Northern Pacific, and was general manager of its affairs out here. When Cooke failed the branch from the Columbia to the Sound was not completed, and the men employed were deserting, when the old Navigation Company came to the rescue with its own funds, paid off the men, and completed the road to Tacoma. They were able afterwards to buy back again a majority of the O. S. N. stock, and made improvements in its property before selling out to Villard, and assisting him to organize the Oregon Railway and Navigation Company, the control of which was relinquished to the Union Pacific. I hope I have shown why the name of Ainsworth should be preserved in the nomenclature of Oregon and Washington. While legislatures are naming new counties, why not remember this and others of the founders?

At Pasco the Walla Walla passengers are detached from the through train, and proceed to Wallula Junction, crossing the Snake River, which is very wide here, by a handsome bridge. A few miles more brings us to Hunt's Junction, which is just above Wallula Junction, and the new town of Wallula, which

in general features resembles the old one, where the Hudson's Bay Company had its fort,—once called Fort Nez Perce, but more commonly Fort Walla Walla. It is now fallen into ruins. Could these tumbling old walls speak, strange, tragical, and humorous, often, would be the stories they would tell. Here McKinlay, to avert a massacre, sat on the keg of powder with a lighted match, and threatened to touch it off, if the sullen Walla Walla chief failed on the instant to cease from his insolent demands and lay down his arms. Here Peter Skeen Ogden related his amusing but not always very dainty adventures; and Tom McKay recalled the death of his father, when the northern Indians seized the *Tonquin*.

Here, also, in the palmy days of the O. S. N. Company, was a large floating wharf; and here was the terminus of Dr. Baker's railroad to Walla Walla. This road causes Dr. D. S. Baker, of Walla Walla, to be classed among the founders, he having built the first railroad in East Washington, from Walla Walla to the Columbia River, about 1876. It was a narrow-gauge, and treated its patrons to nothing more luxurious than a wooden seat in a box-car. But then it was not built so much for passenger service as for the transportation of wheat from the Walla Walla Valley to the Oregon Steam Navigation Company's boats. Wheat, in sacks, was piled up six feet high, for an eighth of a mile along the beach, just after harvest, and it was a pretty sight to watch the loading of the steamers for Portland. A good deal of mirthful comment was provoked by some of the doctor's devices, as, for instance, the use of old tin oil-cans to water the engine, the service not yet having reached the dignity of tanks and hose. It was *effort* and not *money* which made the founders worthy, and therefore we honor them, recognizing that

"The attempt

Is all the wedge which splits its knotty way
Betwixt the possible and the impossible."

This road was finally sold to the Oregon Railway and Navigation Company, and made standard gauge. It is still the only direct route to Walla Walla from the Columbia River, although from Hunt's Junction that city may be reached by the devious

ways followed by the Hunt system, or, officially speaking, by the lines of the Oregon and Washington Territory Railroad Company. This system was intended to furnish transportation to the farming communities in the Walla Walla and Umatilla Valleys, and as such has been an important factor in the development of these fruitful regions. Together with the Snake River and the Oregon Railroad and Navigation Company, which has roads extending through the Palouse country, or Whitman County, this portion of East Washington is already quite well furnished with transportation,—that is, if the railroads had cars and locomotives enough on the ground at the proper time, which this year they did not have.

The distance from the Columbia River to Walla Walla City is thirty miles. The Walla Walla River flows, with short curves, directly west from Round Mountain, in the Blue Range, where it has its rise. Its main branch, the Touchet (pronounced Too-shay), rises on the opposite side of Round Mountain, and describes a semicircle, with the main river for its base, all the other branches describing lesser curves inside of this one, an arrangement by which this valley is well watered. These streams also flow near the surface level, making them easily available for irrigation.

The railroad follows the course of the river, and for about twenty miles the country is rolling, but at Dry Creek Crossing the aspect of the landscape suddenly changes, and a level basin, or plateau, bounded by the foot-hills of the Blue Mountains on the east, and stretching away into undulating prairie on every other side, strikes the eye as something new and charming after the mountains, cañons, and bunch-grass hills passed during the day's ride.

This beautiful valley contains about eight thousand square miles of land unsurpassed for fruitfulness. Its elevation above sea-level is nine hundred and twenty-six feet, or six hundred and one feet above the Columbia at Wallula. Its climate is the warmest of any part of Washington, having a mean temperature of 54°. In July the mean is 73.8°, and in January it is 32.4°. The greatest amount of moisture falls in December and January, but its only *dry* month is July. Spring opens early,

and is more delightful than in any part of the State,—I had almost said of the United States,—and I speak whereof I know.

Some years ago, before the era of railroads, I chanced to travel leisurely through this Walla Walla country, and to go as far as Lewiston on the Idaho border. What a charming journey it was! The atmosphere was almost intoxicating with vitality. Overhead blue sky and sunshine. All about waving grass and wild flowers. On every side larks pouring forth their liquid notes. Dodging about among the bunches of grass were prairie-hens, grouse, and a long-necked bird, which I did not recognize, and which my driver said was a curlew.

"What is the use of so much neck?" I inquired.

"I don't know," was the Yankee response, "unless it is to eat out of a bottle."

Then I told him about the man who grew excessively fat eating mush and milk out of a jug with a knitting-needle.

Later, in the summer's close, I returned through the same region, and saw immigrants taking up these lands. There were small cabins of one or two rooms (for lumber is not so plentiful here as in the Puget Sound country) to shelter the families, and just across the road from the cabins were newly-broken fields, surrounded by sod-fences and ditches (no expense for fencing). The seed was put in on the newly-upturned earth, and left to do the best for itself that it could. Imagine the pleased surprise of these immigrants when they harvested twenty-five to forty bushels of wheat to the acre! It was not long before the cabins disappeared and comfortable farm-houses arose in the midst of golden grain-fields.

This plenty and prosperity were the joint result of soil and climate, and I need not analyze the one or the other. But as I have generalized rather than particularized when speaking of the productiveness of the soil of Washington, I will now introduce some statistics, obtained from the most reliable sources, concerning the Walla Walla Valley, which does not, like the Yakima Valley, require irrigation to produce crops.

The Census Bureau quotes Washington as yielding twenty-three bushels of wheat to the acre, which is the largest average given for any State in the Union. The average of East Washington should be placed at thirty bushels of wheat per acre, but

many farms produce from forty to sixty bushels, and seventy-two bushels have been raised per acre. Oats go from seventy to ninety and one hundred bushels, barley from forty to eighty, and corn from twenty-five to forty bushels to the acre. This is not a corn-growing country, as Illinois is, because the nights are too cool, but farmers usually raise a few acres of it. Alfalfa, clover, and timothy yield heavy crops,—the first named yielding from two to four crops a years.

Mr. Philip Ritz, formerly of Walla Walla, was the first to experiment with fruit-growing in this valley. When his orchard was three years old from the graft he reported as follows:

YIELD OF EACH TREE, VINE, PLANT, AND SHRUB.

	1st year.	2d year.	3d year.	4th year.
Apples	20 lbs.	50 lbs.	125 lbs.	250 lbs.
Peaches	15 "	35 "	100 "	200 "
Pears	20 "	50 "	125 "	250 "
Plums	20 "	50 "	125 "	250 "
Cherries	5 "	15 "	50 "	100 "

From Offshoot.

	1st year.	2d year.	3d year.	4th year.
Blackberries	3 lbs.	8 lbs.	15 lbs.	35 lbs.
Raspberries	8 "	10 "	20 "	40 "
Strawberries		1½ "	2 "	2 "
Grapes (at 2 years)	3 "	10 "	25 "	75 "
Gooseberries (at 2 years)	2 "	5 "	10 "	20 "
Currants (at 2 years)	2 "	5 "	10 "	20 "
Pie-plants (at 2 years)	8 "	20 "	20 "	10 "

When the trees were seven years old he gave the average yield, per acre, of his orchard:

	Pounds.		Pounds.
Apples	40,000	Grapes	46,000
Peaches	30,000	Blackberries	15,000
Pears	40,000	Raspberries	15,000
Plums	50,000	Gooseberries	5,000
Cherries	20,000	Currants	10,000

The money results of fruit-raising may be learned from the books of a Walla Walla gardener, last year's crop from four acres being as follows:

16,000	pounds strawberries, at 6 cents	\$960
500	" raspberries, at 7 cents	35
1,000	" blackberries, at 8 cents	80
4,000	" cherries, at 7 cents	280
7,500	" prunes, at 3 to 5 cents	300
2,000	" apples, at 2 cents	40
500	" pears, at 3 cents	15
Total		\$1710

The average yield of vegetables per acre, in bushels, was:

	Bushels.		Bushels.
Peas	40	Turnips	300
Beans	36	Carrots	1,000
Potatoes	500	Parsnips	800
Sweet potatoes	200	Cabbage, pounds	20,000

Vegetables will in one year pay one hundred per cent. on expenditures.

The various cereals and fruits of this valley are harvested as follows:

Wheat, from the 24th of June to 10th of July.
 Oats, from 1st of July to 20th of July.
 Barley, from 20th of June to 1st of July.
 Rye, from 1st of July to 10th of July.
 Corn, from 20th of August to 10th of September.
 Strawberries, from 1st of May to 10th of June.
 Raspberries, from 10th of June to 20th of July.
 Blackberries, from 25th of June to 1st of August.
 Gooseberries, from 20th of June to 1st of July.
 Cherries, from 20th of May to 1st of July.

As an example of what talent, grit, and opportunity may sometimes accomplish, I quote the Blalock Farm, near the city of Walla Walla. Dr. N. G. Blalock, of Illinois, arrived here in October, 1872, having come overland with teams, bringing his family. He at once commenced earning money,—for he did not bring any,—both by the practice of medicine and the use of his teams, putting all his income that could be spared into land along the base of the Blue Mountains, and cultivating these acres, the outcome of which went into more land, until he owned five thousand, and in 1881 harvested ninety thousand bushels of wheat and barley. His practice is now so large that he has no time for farming!

But how would Dr. Blalock have gotten his five thousand acres except he had come at a time when land was cheap, or gotten ninety thousand bushels of grain to the seaboard, if he had raised all that, before the day of Dr. Baker's railroad? It is just an instance of the man and the hour coming together. Perhaps it was Dr. Blalock's action which caused Dr. Baker and other citizens to attempt a railroad.

The most serious drawback—and every country must have a drawback—to the perfect desirability of the Walla Walla Valley for a residence is the lack of timber. The nearest lumber supply is in the Blue Mountains, about twenty miles distant, but lumber is also brought by railroad from Puget Sound and Portland. Fuel is supplied from the Blue Mountains in a novel manner,—namely, by a V-shaped flume, which carries the wood from the mountains to within seven miles of town, where it is loaded on flat cars and taken to its destination, the "Blue Mountain Flume Company" formerly owning a narrow-gauge railway from the terminus of the flume to Walla Walla, which is now owned by the Oregon Railroad and Navigation Company.

The wood consumed in the city and at Fort Walla Walla amounts to twenty-two thousand cords, only a little more than half of which comes from the Blue Mountains. It sells for six dollars to six dollars and fifty cents a cord. When the coal-mines of the Cascades are sufficiently developed, coal will undoubtedly come into general use in the treeless regions; but for the present all the slab and refuse timber of the mills in the Cascades is carried by rail down into the valleys to be used as firewood.

Walla Walla City is not one of the new towns of Washington, and never had any real-estate excitement. The long occupation of the country by the Hudson Bay Company, some of whose servants remained here with their Indian relatives after white people of American blood were driven out, furnished a basis of settlement dating back to the second decade of the century. But it was not until 1858 that some American citizens established themselves on the site of the present city, under the protection of the United States fort, erected the previous year.

In 1859 it was decided among the settlers to lay out a town-

site, half a mile long and a quarter of a mile wide, with its east-and-west streets one hundred feet wide, and its north-and-south streets eighty feet; and to leave off calling the settlement Step-toe City and name it Walla Walla, which was done. In 1862 the Territorial legislature incorporated the city, with an extent of eighty acres. It immediately became an important point, on account of the necessity of an outfitting place for miners then rushing to the Oro Fino and Florence Diggings, in what is now the State of Idaho, and from that time until now it has been the centre of a large trade, supported first by the mining interests of the upper country, and more recently by the agricultural interests of the valley.

A word about the name of Walla Walla, which I observe is frequently translated to mean the "valley of waters." I had it from the lips of the famous Nez Perce chief, Lawyer, that *walla-walla* meant the confluence of two rivers, and, being used to designate the junction of the river which waters the valley with the Columbia, became used by Indians and white people to designate the natives who lived about the mouth and the fur company's fort at that place. From this the white men spoke of the river, and then of the river-valley, as the Walla Walla and "the Walla Walla country." It is not the custom of the Indians to name rivers arbitrarily as we do, but to speak of certain localities by some descriptive word, and to call the tribe or family living there by that name.

The designation chosen for Walla Walla by her inhabitants is "Garden City," and well does she merit it, for trees and flowers fairly *obstruct* the view. There are few pretentious buildings of any character, the business houses being usually no more than two stories, and the residences simple cottages and villas. In the outskirts are a continually increasing number of the latter, surrounded by beautiful grounds.

The city has a handsome court-house, this being the county-seat; a large and costly public school; a collegiate institution,—Whitman College; several banks; three daily papers, the most important of which is the *Union*, published ever since 1869; a free library and club-room; a hospital; free postal delivery; water-works; gas lighting; churches of all denominations, and, in short, just what one would expect to find in an Eastern town

of seven thousand inhabitants, besides a board of trade and a business worth eleven million dollars annually. The land-office for this district is located here. So is the State penitentiary.

The flour industry of the city and county amounts to two hundred and seventy thousand barrels annually; the oldest miller in East Washington being Mr. H. P. Isaacs, who erected in 1862 a mill, which has been twice rebuilt to keep pace with the improvements which he found desirable. The very best of roller flour is manufactured here, which finds a market in Liverpool and San Francisco.

Walla Walla, besides its grain and flour trade, jobs one million dollars' worth of general merchandise throughout the valley. One firm, H. Dusenberry & Co., which has been here since 1858, furnishes a number of establishments in outlying towns, and has connections with San Francisco. No, Walla Walla is not a new town, nor has it ever been said of it that it is a marvel of rapid growth; but I think I like it all the better that its growth is natural and hardy. Whatever "moss" it has upon it now will fall off with a few more years' increase.

The drives about the city are excellent. The chief point of attraction to visitors is the garrison, just outside of the city limits. The post was established, as I have said, in 1856, by Colonel Steptoe, at a point now within the present corporation, but removed in the following year to the slight eminence which it now occupies, and improvements were then begun. I have been informed that the first wheat sown in the Walla Walla Valley was sown in this year by the troops at the fort, under the direction of Quartermaster-General R. G. Kirkham. If we except the grain grown by the mission superintendent in the '40's, this is probably true. Both gentlemen took it for granted that only the bottom-lands were fit for agriculture, devoting the valley in general to stock-raising, and it was some years before it was found that the uplands were prime wheat lands.

The post was abandoned in 1866, and re-occupied in 1873, since which date there has been a strong force kept here, and it is a handsome and comfortable place of residence for the officers and soldiers here stationed. It cuts no little figure, besides, in the trade of the town, there being expended by the military each year about four hundred thousand dollars.

Another place of interest, although associated only with painful ideas, is the site of the Waiilatpu mission, about seven miles west of the city, where, in 1847, perished Dr. and Mrs. Whitman, Presbyterian missionaries, and about a dozen others, at the hands of the Cayuse Indians. One common mound marks the spot where they were hastily buried by volunteer troops from Wallamet Valley after the flesh had been torn from their bones by wolves. A movement is on foot to erect a monument to the memory of Dr. Whitman. The most suitable monument, it seems to me, would be an endowment for the college which bears his name, with a tablet inscribed to him set in its wall.

Of the towns in the Walla Walla, Waitsburg is one of the prettiest. It is in the valley of the Touchet, where it is joined by the Coppei, in the midst of beauty and fertility. The place was first settled by Mr. S. M. Wait about 1864, who built a flouring-mill, then very much needed by the settlers, from which he cleared five thousand dollars in two months after it was running. Soon tradesmen of various kinds settled about him, and a town grew up which does honor to its founder. Mr. Wait was one of the first to experiment with grain on the uplands.

Waitsburg has a population of one thousand, who maintain good schools, support a daily newspaper, and enjoy life in this garden of plenty, which is also a model of good taste.

Another pretty town is Dayton. Like Waitsburg, it lies in a valley, and is embowered in trees, while it is surrounded by wheat-fields which would seem continuous but for here and there a line of poplars pointing out where a farm-house is concealed. The swift, cool Touchet flows through the town, and turns the wheels of two flouring-mills, and is joined by a smaller stream with a French name *Petite*, anglicized into Pattit.

Dayton has a population of two thousand five hundred, a handsome court-house, four public schools, foundry, furniture-factory, brewery, and other industries, besides five saw-mills in mountains near by. It has a national bank, is lighted by electricity, and has water-works. The streets are broad, with good sidewalks, and tempting fruit-gardens just over the fence. The town was founded in 1871 by Jesse Day, formerly of St. Paul. Both Waitsburg and Dayton are reached by the Hunt system

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A SUBURB OF SPOKANE.





of railroads, giving them outlets to the Columbia and connection with the transcontinental lines.

Between the Touchet and the Snake Rivers, in Walla Walla County, is a strip of country twenty miles in breadth by fifty in length, lying on the top of a bench of the high hills south of the Snake, of which thirty by ten miles is a flat, called Eureka, of rich, loamy soil, constituting a region unsurpassed for fruitfulness, and through it the Hunt railroad is run. In this favored grain-land has sprung up recently the town of Fairfield, which promises to be able soon to compete with any of the older towns in the county in growth and prosperity.

From these brief observations on this part of the Inland Empire it will, perhaps, be possible to catch some general view of it and those features which contrast so strongly with the Puget Sound region. It is at the same time an admirable counterpart, each being necessary to the completeness of the other.

CHAPTER XXIX.

WHAT ABOUT SPOKANE?

THE route of the Northern Pacific to Spokane from Walla Walla is a tortuous one, and for a large part of the distance an uninteresting one. It is haying-time, the weather is warm, and travel dusty. The road winds among hills after the manner of water seeking its level. Prescott, named after an officer of the company, is a pretty place between hills, the approach to it being along the Touchet River bordered by thickets of mock-orange. From here to the Snake River there is little to attract the eye. The Palouse country north of the Snake appeared more thrifty. Along the streams were dense groves of poplar, birch, and willow, and thickets of wild roses. Endicott is in a good farming region, and well built for a small, new settlement. I observed several tree plantations along the route through Whitman County. About Colfax the hills are dotted with pines. I had a glimpse of Steptoe's Butte, where that officer was badly beaten by the Spokane and Cœur d'Alene Indians in 1858. On that butte he buried most of his command and

cached his howitzers previous to a stolen retreat to the south bank of the Snake River.

Farmington seemed a town of considerable population, with good houses and fencing. Rockford is in the edge of a lumbering region, and is an old town built scatteringly on the piney slopes, which furnish timber for milling. Taking it all in all, there is little to remark on the journey, which ends after nightfall.

I was told in Walla Walla that I should not like Spokane Falls, because it was "right in the woods." If this had been said about many places west of the Cascades, there would have been no surprise; but a town "right in the woods" in the arid region called a halt to my previous and, as I believed, well-founded impressions. It was therefore with curiosity that I peered through the window beside me, as night drew on, to catch the first view of the northern forest which I was assured surrounded the Phoenix of the Plains. But before I had discovered it the train rolled into the well-lighted streets of a cheerful-looking town, and the guard called out "Spokane!" By good luck I went to a hotel just below the falls which gave the city its name, and where I enjoyed from my room a view different from, but strongly reminding one of, the great cataract of Niagara. It is true there is not the heavy roar of a large lake pouring over a great height as at Niagara, but there is enough water and enough fall, or rather succession of falls, all roaring and foaming together, to make a good deal of noise and a very attractive spectacle. To the music of these waters I slept joyously, if I may be allowed the term, and waked the following morning with a feeling of exhilaration to commence my quest for information.

What a strange town! Ten years ago it was a pioneer settlement of half a hundred houses, and had been struggling up to this degree of grandeur for a previous ten years. Only ten months ago thirty business houses, valued at six million dollars, were consumed by fire. To-day the only reminders of this disaster to a young city are the piles, not of burnt rubbish, but of fresh building-material, which obstruct the broad avenues. Nor are the buildings which are replacing the former structures of a temporary nature, but of granite, brick, and iron, from three to seven stories in height, and fashioned after the most elegant modern styles. An opera-house costing over a quarter of a mil-

lion, a hotel costing nearly two hundred thousand dollars, a handsome post-office, cable and electric street railroads, electric and gas lighting, the power furnished by the falls, water-works, and every other modern appliance of a luxurious civilization, are to be found here. Yet Spokane Falls is three hundred and seventy-two miles west of Helena, the nearest city on the east, and four hundred miles east of any western metropolis, standing alone between the Missouri River and Puget Sound, with seven railroads radiating to all the points of the compass, and bringing to it the contributions of an immense area of trade.

The population of Spokane Falls is about thirty thousand. There are, I am told, a hundred business blocks, costing from thirty thousand dollars to two hundred and fifty thousand dollars each, covering the burnt district, and a thousand residences being erected. These latter are chiefly of a cost to suit people of moderate means; but the city contains a goodly number of elegant and even sumptuous dwellings, excelled by few in any part of the United States, and the impression conveyed by a tour about the streets from which business is excluded is that there is an unusual number of refined homes in proportion to the population. This impression is confirmed by the testimony of house-furnishing establishments, more goods of a costly character being sold in Spokane Falls than in any other town in Washington. How far the merchants themselves are responsible for this extravagance—for in too many instances it is extravagance—can only be conjectured; but I know that the same fully prevailed in California in an early period, and that it was accounted for not only by the facility with which money was acquired, but by the fact that cheap goods were not imported, and there were no local manufactories, therefore people were compelled to buy that which the market afforded. The excuse of the merchants was that for such long distances and high rates of freight it did not pay to import cheap articles. This truth at once points to the importance of home manufactures.

The city has four daily newspapers and several weeklies, nineteen churches, numerous schools, public and private, three colleges, a home for the friendless, seven banks, a mining exchange, and many handsome public buildings. It has mills for grinding wheat and sawing timber, a smelter for the reduction

of ores, and a number of factories in lumber, stone, iron, pottery, lime, and other articles in daily demand and use. The sales of real estate in Spokane Falls for the year ending in December, 1889, amounted to eighteen million seven hundred and fifty-six thousand three hundred and twenty-three dollars, and for the first seven months of 1890 to ten million eight hundred and seventy thousand dollars.

If you inquire of a citizen of Spokane Falls what makes his city what it is, he will answer you that on one side lies a vast region of the richest agricultural lands, rapidly being populated by intelligent farmers, which whether sown to grain or used to pasture stock are productive of great wealth, and on the other hand there are mining and timber regions productive of even greater wealth. The total output of lumber for 1889 was thirty million feet; while the ore shipments from Cœur d'Alene Mines in the same period were seventy-two thousand tons, of an aggregate value of four million three hundred and twenty thousand dollars. The total of freight brought by the railroads to this city in the last year was about fifty thousand tons, and the freight-bills paid aggregated two million dollars.

The city, notwithstanding its recent losses by fire, paid subsidies to railroads to the amount of four hundred and fifty thousand dollars, and subscriptions to various city institutions to the amount of three hundred and sixty-six thousand dollars.

Such are the figures presented to one. It is plain from these, and from everything we see about us, that there is an abundance of capital in Spokane Falls. Since the fire a good deal of borrowed capital has been employed to build up again, and much of the fine property in sight is covered with mortgages. But this fact does not seem to depress, much less dismay, the mortgagors. They point to the wheat-fields of the Palouse country, the mines of Kootenai, Cœur d'Alene, Colville, and Okanogan, and enumerate with pride the several new railroads which will soon open up other districts, agricultural and mineral, and always mention the truly magnificent water-power which is destined to "turn the wheels of progress." With a population annually almost doubling, it seems probable enough that the paragon city will go on and on until it reaches a rank on the Pacific coast second to no interior city on the Atlantic slope.

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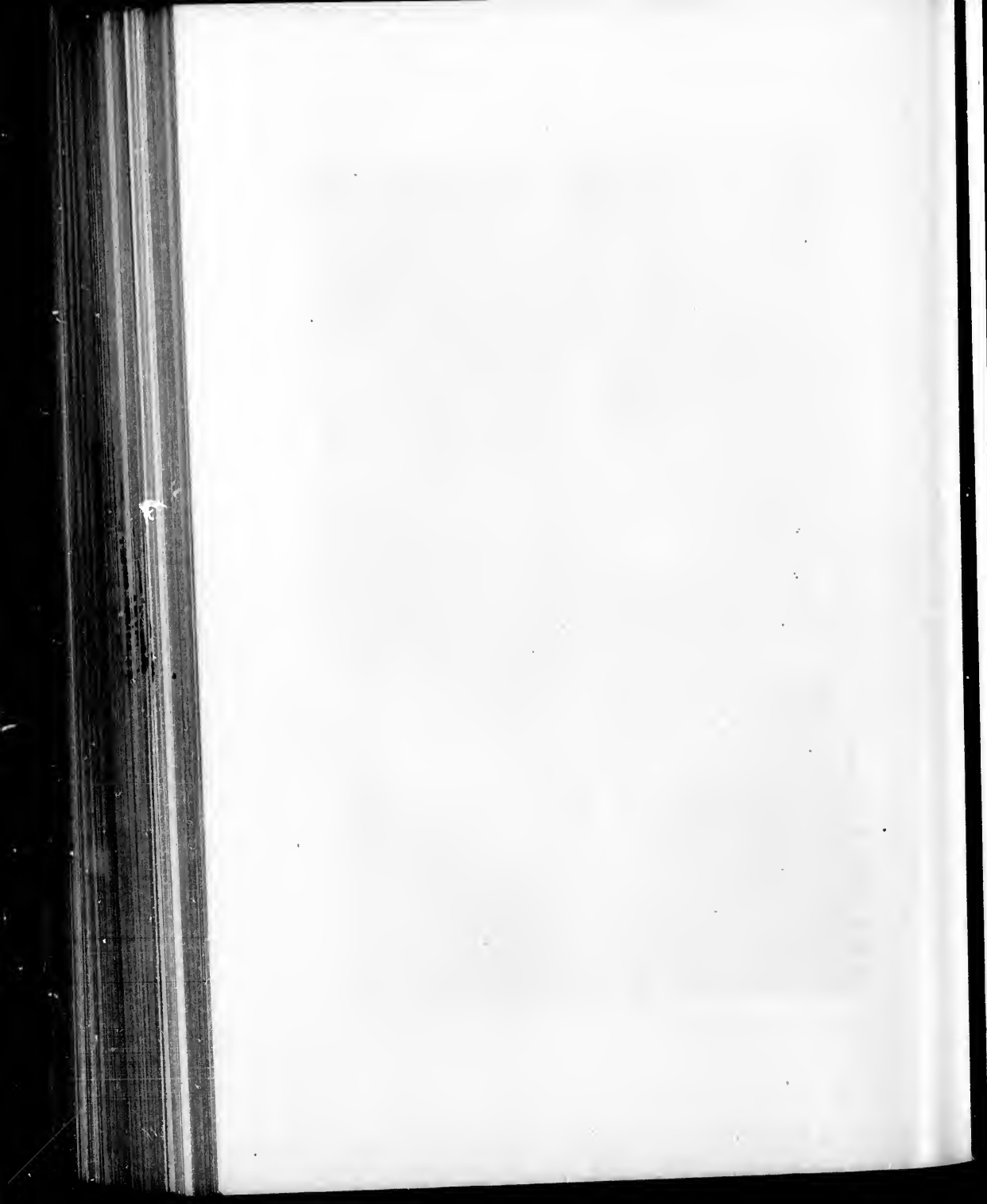
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MIDDLE CHANNEL. POST FALLS.





The plain on which Spokane Falls is built is finely adapted to the purpose. The bluffs recede from the river by several broad terraces to the high mountains of the Spokane and Cœur d'Alene Ranges on the north and east, and melt away into the rolling plains of the Palouse and Big Bend countries. The long slopes up from the river are beautifully wooded with pines, which stand apart with grassy intervals, giving the country a park-like appearance, and causing me to smile when I remember the repulsion of my Walla Walla informant towards the forest gloom I should encounter in this timber region.

Until within a comparatively recent period the country about Spokane Falls was unoccupied. During the period of mining excitement in the '60's, there was a great deal of passing back and forth to Colville and Northern Idaho, but the prevalent opinion that the country was worthless except for cattle-ranges deterred settlers of a more enterprising class. About 1870 two men, J. J. Downing and S. R. Scranton, built a small saw-mill at the falls of the Spokane, which in 1873 they sold to James N. Glover, who disposed of an interest to C. F. Yeaton. They had also laid out a town-site, which they did not sell. There seems to have been some settlement by this time, for these owners found it advisable to enlarge the capacity of their mill from five hundred feet to two thousand feet per diem. A trading-post had been connected with the mill from the start, which the new owners enlarged, and a few more people had gathered in the vicinity, waiting for the Northern Pacific Railroad, when its financial agent, Jay Cooke, failed and railroad construction ceased, and after a tedious waiting of five years, from 1873 to 1878, the mill was again sold, to A. M. Cannon and J. J. Browne, together with a half-interest in the town-site laid out by the original owners. In 1876 a flour-mill was erected (which is evidence that the agricultural capacity of the country had been discovered) by Frederick Post, after whom Post Falls in Idaho is named. The occurrence of Indian wars in 1873 and 1877 drove many of the settlers out of the country, whom the military hastened in their flight.

It is amusingly related, in view of the present status of the country, that General Sherman expressed himself in this wise: "This country is not fit for white men, at any rate. Give it up

for a reservation for the Indians, and go elsewhere. If you are bound to stay, you may as well make up your minds to keep your guns ready and fight it out. We cannot cover this immense territory with a few companies of troops." However, a post was established at Cœur d'Alene, and named Fort Sherman, and the people remained.

The resumption of work by the Northern Pacific brought an increase of population, and when the road was opened to Portland, or to the Columbia River, in 1883, Spokane Falls had fifteen hundred inhabitants. At the present rate of increase it will have in 1893 eighty thousand. A great Northwestern exposition is to be held here this year,* at which specimens of minerals found in the adjacent mountain regions will be among the most important exhibits, although grains, fruits, and woods will attract much attention for their excellence.

I was shown a novelty recently discovered at Fort Spokane, at the mouth of the Spokane River. It is a white sand of a cubular form, looking like granulated sugar. When found it is in a compact form like rock, but on being struck with a hammer falls into loose particles. The only mineral known to resemble it is found in Fostoria, Ohio, and is used for making glass. In this city this snow-white sand is used in finishing plaster, and makes a wall like marble, on which the most delicate tints can be brought out in frescoing. As for marble, there are mountains of it along the Spokane River, and a rose-colored building-stone which calls to mind Ruskin's "Stones of Venice."

The second day after my arrival I took passage on the Seattle, Lake Shore and Eastern for Medical Lake, fifteen miles from the city, and a popular resort. The road winds among the hills, in company with the Spokane River, which is, everywhere that I saw it, most picturesque and interesting. The windings bring into view over and over again the city at the falls, until having climbed high enough the road enters a region of fir, cedar, pine, and tamarack, not much resembling the forests of West Washington, but sufficiently woodsy to justify a plainsman in warning a metropolitan against it.

* It was successfully held, and a beautiful "Souvenir" published.

Along the river for a few miles I observed wood-cutting and brick-making, with farming and gardening, and a good deal of settlement all the way. I found Medical Lake to be one of four small lakes, the others being named Silver Lake, Cedar Lake, and West Medical Lake. Silver Lake, the largest of the group, is to be connected with Medical Lake by a "motor" line, but whether the motor is to be steam or electricity I did not learn.

By comparing the locality with my recollections of history, and with Lawrence Kip's "Army Life on the Pacific," and "Indian Council in the Valley of the Wella Walla," I perceived that this was historic ground, where Colonel Wright had fought the Spokanes at the Battle of the Four Lakes, when he so humbled them that they have made no more trouble to the present time.

Medical Lake is two miles long by one-half mile in width, and sixty feet in depth. There is a bluff shore on the west side covered with pines, and on the east side a bold and treeless elevation, on which the town is laid out. Taking a carriage at the train I drove by a pleasant road along the west shore of the lake a mile or more to some pleasure-resorts on the water side, and back around the north end to a hotel near the lake, and afterwards made a voyage to its south end in a steam-launch. Having thus seen it from all points, I visited the works where the salts are manufactured by evaporation of the waters, and was shown over them by their superintendent, Dr. Middaugh, who also exhibited various testimonials to the remedial value of the waters, and the salts extracted from them.

An analysis of a gallon of the water gives, in grains—

Sodic chloride	16.870
Potassic chloride	9.241
Lithic carbonate	Traces
Sodic carbonate	63.543
Magnesian carbonate238
Ferrous carbonate526
Calcic carbonate186
Aluminic oxide175
Sodic silicate	10.638
Potassic sulphate	Traces
Sodic diborate	Traces
Organic matter551
	<hr/> 101.463

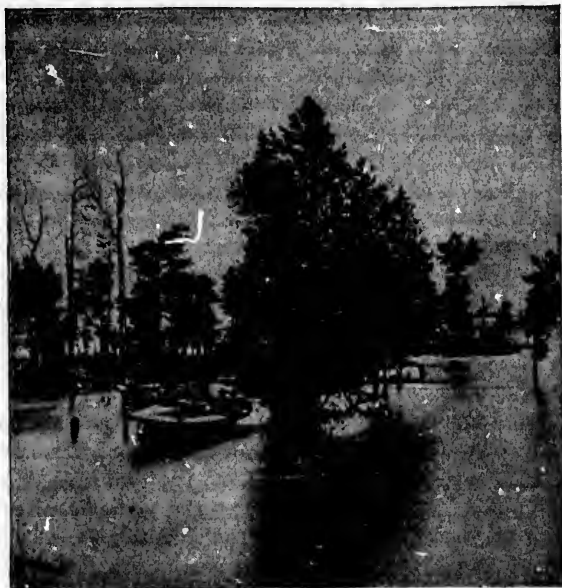
Various tales are related as coming from the Indians concerning the cleansing and healing qualities of the lake water; but the simple story of a herder with a band of scabby sheep who after being washed in the lake recovered of their sores appealed most strongly to my belief, the sodic quality being so evident in the water as to recommend it without argument as an anti-scorbutic. All this is not at all romantic,—I always avoid "health resorts" where one meets unwholesome people,—nevertheless, Medical Lake is a pretty place, with a population of nine hundred inhabitants, many of whom, it is said, have been healed of their infirmities by the lake waters.

On the bluff west of the lake is the State Hospital for the Insane, a large and handsome structure, which is not yet finished and furnished; but which adds a noble feature to the landscape. At the close of a pleasant day I returned to my hotel to listen to the music of the falls, and again to ponder upon the wonders of that strangely rapid development of material resources which is seen in its most surprising forms in the Northwest.

Perhaps one should not be surprised who studies the situation of Spokane Falls, which is the centre, as has already been indicated, of a great extent of productive country, whose conformation and arrangement are exceedingly fortunate. Within one hundred and fifty miles of Spokane are no less than twelve rivers. Of these the Columbia, Snake, Okanogan, Pend d'Oreille, Kootenai, and Spokane are important. The others are the St. Mary's, St. Joseph's, Cœur d'Alene, Methow, Colville, and Priest. The branches of all these make up a fine system of natural irrigation. Besides the use to which these streams can be put in floating the timber of the mountains to market, they are objects of beauty, and a joy to the resident or traveller alike. Several of them are connected with lakes charmingly picturesque in appearance and navigable. There are, besides, a great number of smaller lakes within a radius of forty miles,—one for every mile,—while in a radius of one hundred miles there are, large and small, fully eighty. The best known and most beautiful of these are Lakes Cœur d'Alene, Pend d'Oreille, Kanisku, Diamond, Loon, Spirit, Fish, Hoodo, Hayden, Kootenai, Upper and Lower Arrow, Okanogan, and

Chelan. Some of these lakes are nearly one hundred miles long, with a width of one-third that distance. Spirit Lake is one of the smaller class, and a bit of Swiss scenery, while Cœur d'Alene is widely celebrated for its beauty, and Lake Chelan, in the Okanogan country, with an area of fifty square miles, is only waiting to be as well known to become its rival.

Clarke's Fork of the Columbia, or that portion of it known as the Pend d'Oreille River, furnishes some of the wildest and



LAKE PEND D'OREILLE.

grandest scenery to be found anywhere. It is a stream from one-half to three-quarters of a mile in width between the lake and the Columbia, but when within twenty-five miles of the junction it rushes through a cañon twenty feet in width, with walls from two hundred to six hundred feet in height. The water boils and tumbles, throwing its waves up forty feet. The gauge of a former flood is seen in a tree-trunk lodged between the walls

two hundred feet above the ordinary stage. Below the cañon a few miles is a fall of great height. This is in the Metaline mining district, of which I shall have more to say in another place.

The whole of East Washington lying between the forty-eighth and forty-ninth parallels is divided into three parts of about equal extent; that lying east of the upper Columbia is spoken of as the Colville country, and is both agricultural and mineral in its resources. A separate account being given of its several mining districts it is necessary here only to remark that it contributes daily from forty to one hundred tons of smelting-ores to the works in Spokane Falls.

Colville Valley is a body of rich land, which extends from the mouth of Colville River to within forty-five miles of Spokane Falls. In the days of the Hudson Bay Company's occupation Fort Colville was a point of the greatest importance to the American missionary settlements, one of which was on the Little Spokane River, and the others at Walla Walla and on the Clearwater, in Idaho. All the wheat the southern missionaries had to eat for several years came from the Colville Valley, and was carried on horseback to their station, one hundred and fifty miles!

The Roman Catholic fathers also established missions, a little later than the Protestants, in the Colville country and among the Cœur d'Alenes and Pend d'Oreilles. Of the Protestant missions there remains hardly a trace, but the Catholics still hold their ground. The first log house of the Catholic mission at Kettle Falls, on the Columbia near the company's fort, may still be seen, but the spirit of it has removed to the newer town of Colville, a dozen miles east of the Columbia. This place was the joint result of mining and military matters, a post having been established here during the Indian disturbances of 1859, which followed upon the rush to the British Columbia mines. Some French and half-breed settlers, with a few Americans, remained in the valley upon farms, where civilization is at length in danger of overtaking them. A railroad—the Spokane and Northern—passes up the Valley to Colville, and terminates beyond at Little Dalles of the Columbia, where the great river offers one of its several obstacles to navigation.

The railroad takes a nearly direct northerly course, striking the upper valley of the Little Spokane. Within a year considerable improvement has been made within reach of the road as fast as it was opened. Walker's Prairie, named after Elkanah Walker, Presbyterian missionary of 1827, and forty-five miles above Spokane Falls, has now a settlement,—Squire City, or Springdale,—with several business houses, and a daily mail, whereas twelve months ago there was no trading-post within thirty-five miles. The railroad and the discovery of mines at Chemokane have made the difference. Walker's Prairie is a good farming country, where grain grows enormously high and vegetables marvellously large. There are few settlements as yet in the southern part of Stevens County (named after General I. I. Stevens), and those few quite insignificant.

Chewelah, a place of importance on account of its mines, spoken of in another place, is at the foot of the Colville Valley. From here to Colville City, twenty-three miles, the road runs through a natural meadow, and, as hay is a profitable crop, there is little inducement to cultivate the soil. The town of Colville, which contains about eight hundred inhabitants, is picturesquely situated at an altitude of about fourteen hundred feet, with the valley on the west defined by timbered hills beyond, and mountain walls encircling it on the north and east. The air of this region is recommended for throat diseases, and the beautiful drives about Colville are certainly an inducement to test it. The country around is adapted to dairying, hop-growing, and fruit-raising rather than to the production of cereals, which require more room to become profitable. Streams are numerous. Snow falls and remains without drifting during the winter months, melting into the earth in the spring.

But Colville does not depend upon the value of its soil for farming. It is the centre of a rich mining district, and boasts of a smelter which turns out three and a half tons of bullion per day, while already the erection of substantial improvements in building has commenced.

The Spokane Northern Railroad has a branch from Colville to the Columbia River at Marcus, a distance of eighteen miles, and from Marcus north along the Columbia to its terminus at Little Dalles. A number of town-sites have been surveyed

along the line of the railroad from Colville to Little Dalles, of which Kettle Falls, below Marcus five or six miles, is the most promising. Should the government clear the channel of the Columbia of the obstructions at this place, and the Indian reservation be opened up, all of which seems probable in the future, Kettle Falls might become a not unworthy rival of Spokane Falls. Much of this now merely suggested greatness will depend on the route of the Great Northern Railroad.

The Columbia from the mouth of Spokane River flows sharply west, though with many a deviation from a true course, for sixty miles as the crow flies, to the mouth of the Okanogan or Okinakane River, a large tributary from the north which parallels the main river above the bend made at the mouth of the Spokane, and forms the western boundary of a reservation set apart for the Colville Indians after the disturbances of 1877. This tract of country is unsurveyed and little explored, but is understood to be a mountainous region, containing small and fertile valleys. It is doubtless rich in minerals and timber, but at present is held by about seven hundred Indians, who do (if they do nothing else) a good deal to preserve a small portion of the earth's surface in a state of nature.

West of the Okinakane is what is known as the Okanogan country, which is interesting at present chiefly on account of its mines, although the valley of the Methow River is known to be of great fertility, and the whole is a good grazing section. The only part which is surveyed is south of Lake Chelan and the forty-eighth parallel, but farming settlements are being made, and I heard of an orchard of eight hundred apple-trees and various small fruits, including peaches, apricots, and grapes, all in a healthful condition of growth. Ruby City, Silver City, and other mining camps are at present the only towns in this section, which is regarded as exceedingly rich in minerals. Streams are numerous, and, coming from the mountains, serve admirably for mining or irrigating purposes, and their names are those of aboriginal origin, like the Loop-Loop, Chilliwhist, Eptiat, Zuvush, Chewuch, Stomekin, Twursp, Conconully, Wenatchee at the southern boundary, and Similkameen at the northern. This region is not, strictly speaking, tributary to

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See page 368.





Spokane Falls, being west of the Columbia and quite as near Tacoma as Spokane. But the latter is making all the effort to connect it by railroad to itself, and will undoubtedly prevail,—the Spokane and Northern and the Washington Central both reaching out after it. A more particular account of the Okanogan mines is reserved for another place.

The remainder of East Washington included between the Columbia and Snake Rivers on the west and south is divided by popular consent into the "Big Bend country," consisting of six or seven millions of acres enclosed by the western bend of the Columbia, whose southeast line extends from a point twenty-five miles west of Spokane Falls to Pasco, near the junction of the Columbia and Snake Rivers, and "the Palouse country," which includes all of Whitman County, or all the country on the Palouse River and its branches.

A subdivision of the Big Bend country is known as "Sagebrush land," and this strip, unfortunately for the pleasure of travellers of the present period, is on the main line of the Northern Pacific Railroad. The soil is a light sandy loam, which is not anywhere available, without irrigation, for the purposes of agriculture, but in this case is also "scabby," or roughened with outcroppings of basalt.

The western part of the Big Bend country, embracing between four and five million acres, was originally covered with the nutritious bunch-grass, and wherever bunch-grass grows the land is good for farming without irrigation,—a discovery only made in recent times. One may travel a whole day (by stage) between Moses's Rancho and the mouth of the Okanogan River without seeing in any place ten acres of land which cannot be ploughed and which will not return a rich harvest. I have it from good authority, Judge W. Lair Hill, of Seattle, that the Big Bend country contains "two thousand square miles of the finest wheat land on earth," and I learn from residents in it that there are no less than fifty thousand acres in crop this year which will yield twenty-five bushels to the acre. Its only way out, however, is by wagon to Ellensburg on the west side of the Columbia. No wonder the people of Spokane, Ellensburg, and the Big Bend country are impatient for a railroad.

Waterville is the county-seat of Douglas County in this great

wheat-producing region, but is waiting for the completion of the Washington Central to start it on a career of prosperity, to be supplemented by the arrival of the Great Northern, whose route is not yet selected.

There are a number of towns in that part of the Big Bend country included in Lincoln County, near the Columbia, among which Wilbur is spoken of as taking the lead as an agricultural centre. A country that grows wheat and oats six feet, and rye eight feet in height, should have towns every thirty miles, and is a good land in which to place the agricultural college.

Coulée City, on the Columbia, is a striking example of the growth of towns in this age of town-building. A quarter of a year ago there was nothing here but a camp of railroad graders. All about waved perennial grasses, while the view was broken here and there by dikes of crumbling basalt, and the only moving things in the landscape, aside from the railroad graders, were a few cattle feeding, a rabbit, perhaps, followed by a sneaking coyote, or a curlew lifting its watchful eyes and long bill above a tuft of the prevailing bunch-grass. But now! Well levelled streets stretch from one side of the town-plot to the other. Two good bridges span the creek on which it stands; substantial buildings are rising all along the main avenue; well-stocked stores and business houses of every class are in place, and the improvements belonging to a railroad division station are already here. A system of water-works is under construction, a school-district is organized and a school-house under way, with a church-building in contemplation, a seven-column newspaper on the spot, and a bank promised. Such is the method of all these railroad or land-company towns. This one is expected to be the terminal point for freight going to Okanogan, Methow, Lake Chelan, Wanacut Lake, Waterville, Douglas City (on the road from Sprague), and the Conconully country. So long as it holds this position it will make progress, and in the end establish itself on the merits of the Big Bend country.

Coulée claims the attractions of being in the midst of "the best agricultural lands to be found out of doors;" a cool climate in summer, but one that will bring to perfection all the fruits of the temperate zone. In the vicinity is a bottomless lake surrounded by a natural park, and that by scenes of the utmost

grandeur, all of which features conspire to make this a charming summer-resort. Most of this is evident and true. But one wearies of the immensity and even of the scenic attractions of the great Northwest: you travel so far to find something that, although undeniably fine, differs from the view in some other place only by so-and-so.

And yet right here we have at hand one of the wonders of the earth,—the Grand Coulee. It used to be called the "Grand Coulee of the Columbia," from an impression that the waters of the great river had some time run through it. Closer observation has done away with that theory of its formation, and it is now seen to be a rent in the earth, over one hundred miles in length, and from three to eight miles in breadth, with walls in many places over one thousand feet in height. These walls are basalt, thrown out at four several periods, as the rocks give evidence. All the curious features of the place are easily explained if we bear this fact in mind. But this rent in the lava was made after the last of these outflows had cooled and hardened, because the opposite sides match. There are no traces of the action of water, no gravel, no water-rolled boulders, no indications of detritus at its lower end, which is at Island Rapids of the Columbia, as its upper end is just west of Coulee City.

Among the many curious forms of the rocks is one called the Steamboat, from its resemblance to a river boat. It is in the Coulee, about eighteen miles from Coulee City, and the stern-post of the steamer is fourteen hundred feet above the bottom of the chasm. Only on the eastern side can one climb to the deck, but once there a fine view of this enormous crevasse is obtained. About half-way up a five-hundred-foot slide of loose angular rock, on the ascent to the Steamboat, are two deposits of ice, which melting a little on the surface furnish ice-water to the thirsty, and are called "ice-springs." It is thought the snows of winter furnish the water and a draught of cold air the freezing, this having been carried on until a solid body of ice has formed among the rocks, which melts a little by day and freezes again by night, so that the supply remains from season to season. It is not clear to me, however, how it is that not enough heat gets into the interstices of the rocks to liquefy the

ice in the course of a summer, when the sun's reflection from the walls of this crevice is intense. In the bottom of the Coulée are numerous lakes and ponds, which gleam like silver on their emerald background.

Toward its southwestern end the Grand Coulée is divided into smaller fissures, but nowhere except here at Coulée City is there a crossing which could be used by a railroad; and this one fact secures for this place a certain future.

That strip of country through which the Northern Pacific main line is built has no towns of any consequence, present or prospective, unless Pasco, by its position with relation to the Columbia River and railroads, should come to be of significance, as before intimated. It is the county-seat of Franklin County, as Ritzville is of the adjoining county of Adams. Ritzville is named after Philip Ritz, formerly of Walla Walla, a noted fruit-grower, and an enterprising citizen of East Washington in ante-railroad days. There is a land-office at Ritzville. Lincoln County lies north of Adams, and is out of the sage-brush belt. It only partly belongs to the Big Bend country, and joins Spokane County on the east. Its county-seat is at Sprague, named after General J. W. Sprague, of Tacoma, for a long time an officer of the Northern Pacific. It has a population of two thousand, and is a point of shipment for wheat, cattle, wool, and other productions of the country. It is well built and enjoys a large trade.

Cheney, once the county-seat of Spokane County, and a seemingly prosperous place, has apparently lost its hold upon fortune, and has a look of collapse about it. It is prettily situated on a plain, with a growth of young pines on a gentle slope above it. From Cheney the Northern Pacific runs a line northwest to Medical Lake, and thence north, northwest, and west, through a farming-country, to Davenport in Lincoln County, paralleling the Seattle, Lake Shore and Eastern, and making, probably, for the Big Bend country. Davenport is a new town of one thousand inhabitants, in a region which possesses grazing, agricultural, and mineral land. A good deal of fruit is raised and marketed from here; and there is a large area of good land unimproved.

The Palouse country is comprehended within the limits of

Whitman County, named in honor of Dr. Marcus Whitman, superintendent of the Presbyterian missions in Oregon Territory from 1836 to 1847, when he was killed, with his wife and others, by the Cayuse Indians, who had become jealous of and infuriated against Americans, on account of the annual immigrations arriving in the country for several years previous, and for other reasons. As the first American settler in Washington, Dr. Whitman is entitled to the distinction of having his name given to the finest agricultural county in it.

The Palouse country, which really includes a portion of Spokane County, is about one hundred and fifty miles in length by an average width of fifty miles, embracing four million five hundred thousand acres, two-thirds of which, or three million two hundred thousand acres, is available for wheat-growing, and yields more grain to the acre than any other portion of the United States. But only about one-third of this three million two hundred thousand acres is under improvement, and only about eight hundred thousand in wheat. At the low average (for this country) of twenty bushels per acre, the crop would amount to sixteen million bushels. If only twelve million bushels were marketed at fifty cents per bushel, the crop would bring six million dollars; and accordingly, as the fields are looking wonderfully well, bright hopes are entertained of a profitable year.

[But let me here write between the lines that it is not every year that a full crop may be expected, and that the best farmers summer-fallow their fields, taking a crop only once in two years, thus saving the expense, as great for a poor as a good year, of putting in and harvesting on the off year, while they get a double crop after letting the land lie idle.

The year 1890 was a good one all over East Washington, and the amount of wheat raised in the Palouse, Walla Walla, and Big Bend countries did not fall short of thirty million bushels. Farmers looked at their fields and expected to grow rich quickly. But behold how the unexpected happens! Although the transportation companies were informed of the prospects of an unusual demand for their services, they made no preparations to meet it. The market prices opened fairly, but declined when it was found there was an overplus. Wheat-elevators and store-houses were filled, and thousands of tons lay piled upon the

ground exposed to the weather. Freight-cars could not be obtained to carry it either to Chicago or Tacoma, and one general wail went up from the Palouse country as prices went down. The railroad and elevator companies were accused of combining against the farmers. The facts when sifted down seemed to show that the railroads had been negligent; that the people themselves were negligent in not securing river-transportation to Portland or not making known to European ship-owners the amount of the season's crop; but, even if all the wheat raised had been carried to Portland and the Sound, there was not storage for it while vessels made a four-months' voyage from Liverpool to receive it.

The lesson of that year seems to be that railroad and other transportation companies, while they have caused and encouraged the development of the country, have not themselves been able to keep pace with it. It seems to teach also that there should be intelligent organization amongst the agriculturists, and means provided against loss. The Columbia River is the natural and economical outlet for the grain fields of East Washington and Oregon. Yet, since the Oregon Railway and Navigation Company have owned the steamboats on this river, navigation has become so far secondary to wheel service that at The Dalles, in November, sacks of wheat were piled ten feet high, and from a quarter to half a mile in length of line, besides that which was housed! It was thus accumulated at first for lack of transportation, and afterwards held for higher prices. Steamboat service, such as the Oregon Steam-Navigation Company formerly furnished, would have given the needed relief, the grain have been moved earlier, and prices have remained firm while vessels came to take it away. But, why should vessels *come*? Why do not American vessels *go* as they are needed? This being a question of political economy to be settled by Congress or Legislature, I leave it unanswered.

It should here be remarked that this blockade in transportation causes little distress. It is chiefly embarrassing as affecting the mercantile class whose collections are impeded by it. The good effect will be to set the farmers thinking what they can do to prevent a recurrence of similar misfortunes. Already the Palouse country agriculturists are agitating the

proposition to build an independent railroad to Puget Sound, while others along the Columbia propose a steamboat company. But the great railroads are not going to allow independent companies to succeed, although the fear of them may compel a better service.]

It is not to grain alone that land-owners are now giving their attention, although when wheat-raisers have a good year they make money in one season. Fruit and vegetables are more profitable per acre, and fruit once in bearing gives very regular returns. To any observer it is evident that not more than half enough fruit is raised for the requirements of the population. Indeed, how should it be, when the population doubles every year or two? But fruit is no longer an experiment in the Palouse country, and large orchards are being planted along the Palouse River, while in the Snake River Valley this is the chief interest of the settlers. Spokane depends on the Snake River Fruit Growers' Association for peaches, pears, prunes, and small fruits. Even the Walla Walla crop of berries and peaches may have to be helped out by their abundance. But while fruit is shipped from California, as it now is, to this distant region, it is evident there is room for new orchards.

Colfax, at the south fork of the Palouse River, of which I have before spoken, is the county-seat of Whitman, and a thriving place of seven or eight hundred. It was founded about 1876, and is touched by railroads from three directions,—roads that go everywhere but in a straight line, seeking freights from the great grain centres. One of these is over the line in Idaho, at Genesee; another, also in Idaho, at Moscow; Garfield, Farmington, Salteese, Oaksdale, Rosalia, all in Whitman County; and another at Rockford, in Spokane County. Most of these roads were or are being constructed by the Oregon Railway and Navigation Company.

It will be readily seen how great an area and what vast resources Spokane Falls claims as tributary to itself in Washington. But there remains to be added the rich mineral regions of Cœur d'Alene and Kootenai. There may and will build up rival cities in the Colville and Big Bend countries, at no very distant day; but the pan-handle of Idaho does not seem adapted to such designs, at least in its northern end, therefore Spokane

seems quite sure of a share in the wealth being extracted from its mines.

But it is not for minerals alone that the Idaho annex to Washington is valuable. Besides the rich lands about Moscow and Genesee, the large bodies of timber on the Cœur d'Alene and Pend d'Oreille Rivers, or that can be brought to the mills at Spokane Falls, either by floating from the Cœur d'Alene, or by railroad when the Great Northern is completed to this city, constitute one of its most valuable resources.

Lake Cœur d'Alene receives the waters of the Cœur d'Alene, St. Joseph, and St. Mary's Rivers. Along each of these and on the mountains grow the white and yellow pine, cedar, and tamarack. The quality of this timber is equal to that of Puget Sound, and the cost of getting it out is small. The business of "booming" logs to Spokane Falls is already begun, one mill there cutting one hundred thousand feet per diem.

Clarke's Fork, or Pend d'Oreille River, runs out of the lake, which is a large one, and, as I have before said, falls into the Columbia, and consequently cannot be used for booming logs to Spokane Falls. But Priest River, which flows out of Kanisku Lake into Pend d'Oreille River, near the lake, has upon its borders one hundred thousand acres of pine, cedar, and tamarack, some of the pines having a diameter of six feet, and trunks that are clear of limbs one hundred feet from the ground.

There is on the upper Kootenai, or Flat-Bow River, lying chiefly within the United States, and on the eastern prong of the bow which gives the river its name, an almost unknown region, which is only now beginning to be heard of. It is watered by many streams falling into the Kootenai, namely, the Mooyie, one hundred and fifty miles in length; the Yakh, ninety miles long, and half a dozen creeks of considerable size. The mountains lying south of the Kootenai are heavily timbered, and those on the north less densely covered, with the bunch-grass growing between.

Along both banks the bottom-land is clear and covered with grass. This strip is from six to ten miles in width, and sixty in length, with a deep soil which will produce any kind of vegetables or fruits of the temperate zone. The grass grows from March to November, and millions of tons of hay might be saved annually.

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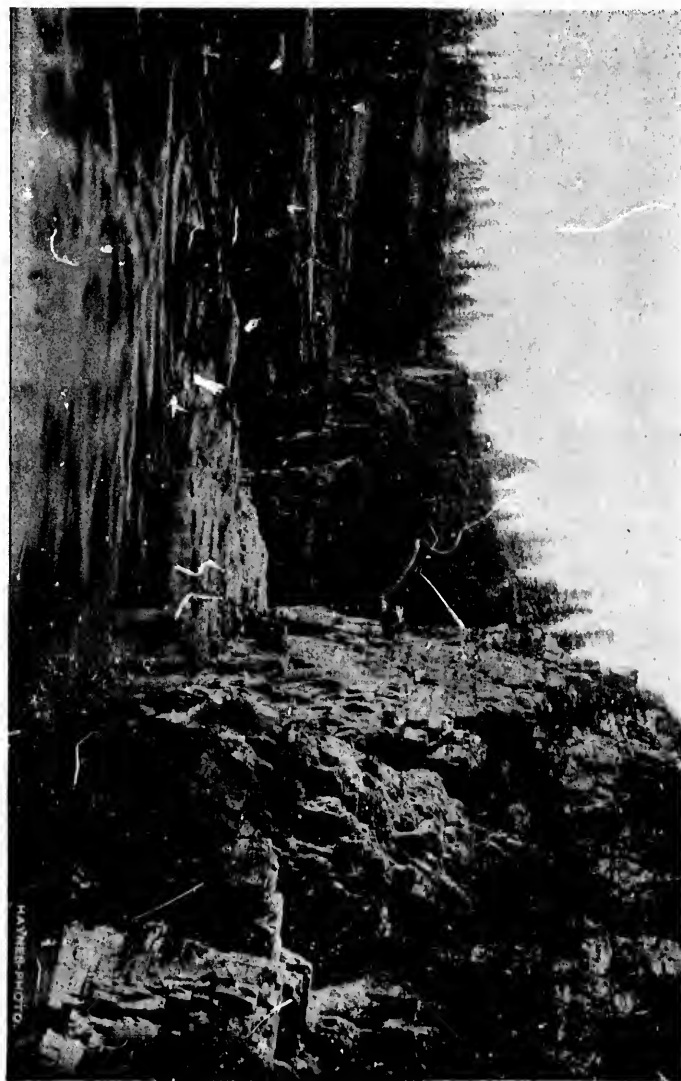
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CLARKES FORK OF THE COLUMBIA.

See page 371.





Ranchmen are already driving herds in here, which settlers will in time drive out. The country will not be improved, however, until it is drained, above the boundary line, by a canal from the Kootenai River to the Upper Columbia Lake, a distance of little over a mile, a scheme in which an English syndicate is interested. There is at present an annual overflow in the bottom-lands below the boundary, which it is believed will be relieved by the canal in British Columbia. Mineral discoveries are being sought for in this region, and to some extent found, in galena and float-coal.

The route to this new wilderness is *via* the Northern Pacific Railroad to Kootenai Station, on Lake Pend d'Oreille, thence by toll-road to Kootenai River, eighty miles, and by boats of a quaint fashion the remaining distance, or as far as the explorer pleases to go,—for there is a good depth of water for over two hundred miles up into British Columbia, where no doubt it will soon be the fashion to go for a summer's outing.

At Hauser Junction on the Northern Pacific, which is just east of the Idaho line, a branch road runs south to Post Falls on the Spokane River, which is the outlet of Cœur d'Alene Lake, and thence to Cœur d'Alene City at the head of the lake. This beautifully-located place, with Fort Sherman, is much resorted to by travellers and residents. On its southern shore is about to be erected a club-house, where the mining men resident in Cœur d'Alene mining district may spend their Sundays. Is this suggestive of Cape May or Long Branch? It is the same thing with a difference. It is nineteenth-century luxury in the midst of the exciting race for wealth in a virgin world. There is a mountain opposite Post Falls which the Indians regard as having a benign influence upon the lives of those lovers who seek its influence at the time of their marriage. It is haunted by a spirit which answers to the Greek god Hymen. Here are held the wedding festivities of the Cœur d'Alenes who truly desire love and unity.

The scenery of these lumbering and mining regions is on a grand scale. It educates the eye of the most commonplace beholder, as it also broadens his knowledge of natural science by illustration and his views of the authorship of the great book of creation by inference. The men found in wilderness places

are often an agreeable surprise, from the number of things they are able to teach the conventionally educated. But it is not uncommon to find among prospectors, surveyors, miners, and lumbermen, college-bred men, as well as specimens of the genus *homo* of every other variety. The rarest of all is to find one resembling the type invented for literary effect by writers of American fiction, and badly copied by our cousins over sea. If there is one in all this Northwest, he remains hidden from my observation.

CHAPTER XXX.

ABOUT GEOLOGY AND MINERALOGY IN WASHINGTON.

THE history of the formation of the country north of the Columbia is given in about these words by Professor Condon:

"During the older geological period, when the Pacific Ocean covered all Washington west of the Blue, Bitter Root, and Cœur d'Alene Mountains, the Cascade Range, one hundred and fifty miles from the then ocean-beach, was being slowly lifted up from the bottom of the sea, until it formed a barrier excluding the ocean from East Washington, and changing the sea-shore to the west slope of the Cascades, where conditions favorable to coal-deposits existed, resulting in the laying down of a vast coal-field extending almost from the northern to the southern boundary of the State.

"After ages given to the draining and drying up of the inland sea and the deposition of rocks and soils east of the Cascades, the Coast Range was elevated in the same gradual manner, the ocean, however, not being excluded from the long north-and-south depression between the two ranges. This is shown by the fresh-water sediment in the later rocks of the interior, while the sediments in the rocks west of the Cascades are marine. As in the former instance of upheaval, the conditions again favored the deposit of coal, but of an inferior quality, being lignites.

"The glacial period following the tertiary, grinding down the mountains and scooping out the valleys, gave the country its

most striking features. As these glaciers moved down the mountains, much higher then than now, ice-floes were formed in which were imbedded blocks of slate and boulders of granite, and as these floes floated on the waters or melted on the earth where they were stranded, they deposited these fragments over the future State of Washington, to be found and utilized in our nineteenth century. When the glacial period was passed the waters distributed their mud, gravel, and sand, forming those deep deposits found on the shores of Puget Sound, Gray's Harbor, and Shoalwater Bay. Then followed another period during which the waters were drained off and the country assumed its present general appearance."

From this history is deduced these facts in regard to minerals in Washington: The coal-bearing belt on the west slope of the Cascades belongs to the early cretaceous period, as do also the gold-bearing slates, limestones, and marbles of East Washington. But the sandstones, bearing marine shells of a later type, found abundantly in the hills bordering the Sound, the Chehalis and the Cowlitz Rivers, and the lignite coals of West Washington, belong to the tertiary period; while the high, light-colored bluffs on the Sound and the bays before referred to belong to the quaternary.

Of the various minerals belonging to the Northwest coast already enumerated in the mineralogy of Oregon, few have been to any extent developed in Washington, these few being coal, iron, gold, silver, limestone, and sandstone.

Coal was known to exist in the Cowlitz Valley as early as 1848, when a small quantity was sent to San Francisco to be tested, and declared worthless. Two years later it was discovered at Skookum Chuck, one of the forks of the Chehalis River. Meanwhile it had been heard of at Bellingham Bay, and on the Stillaguamish River about the same period. An analysis of croppings was made in 1851 for the Secretary of the Navy; and the Pacific Mail Company, whose coal cost them forty dollars per ton, employed agents to explore for this mineral on both sides of the Columbia.

The first coal-claim taken up was by William Pattie, an English subject, looking for spar timber on the coast of the Fuca

Sea, in October, 1852. He located a tract immediately south of the present town-site of Sehome. His associates, Morrison and Thomas, took each a claim, and a company was formed called the Puget Sound Coal-Mining Association, which worked the Bellingham Bay mines from 1860 to 1879, with an average annual yield of thirteen thousand tons. A coal discovery was also reported near Clallam Bay, on the Strait of Fuca, in 1867, which was never worked.

About this same period a vein of coal was partially opened on Black River, ten miles southeast of Seattle, by Dr. R. H. Bigelow, who sold it to a company, which failed to make it remunerative, on account of its remoteness from navigable waters, and other causes. Coal had also been found in Squak Valley, fourteen miles east of Seattle, and a few tons taken out and sold. All these discoveries and efforts failed, partly through want of knowledge and greatly through want of capital.

At length, in 1863, a coal claim was taken up eleven miles southeast of Seattle by Philip H. Lewis, whose example was followed by several others, and a company was formed. A road was opened to Seattle, and one hundred and fifty tons of coal were sold there for ten dollars a ton, and used on steamers. This drew attention to the mine, which was finally incorporated under the name of the Lake Washington Company, with a capital stock of five hundred thousand dollars. In 1870 it sold out to a new organization, styling itself the Seattle Coal Company. There was a tramway built from the mine to Lake Washington, a scow and small steamer, for towing, being placed on the lake. With this beginning the Seattle company was able to make a success of coal-mining:

The Renton Mine, next in importance and point of time to the Seattle Mine, was first worked about 1873, and has proved profitable. A number of locations were made on Cedar and Black Rivers, about Seattle, and on the Stillaguamish, Snohomish, and Skagit Rivers, all on the east side of the Sound.

The first actual prospecting for coal in the Puyallup Valley was in 1874, when some exploiting was done on Flett Creek, a tributary of South Prairie Creek, a branch of the Puyallup, by an association of three men. About the same time a surveyor found coal on the Northern Pacific Railroad land, half a mile

distant, which led to a thorough examination of the country for twenty-five square miles, and to the working of the mines at Wilkeson and Carbonado. Quite recently the coal-beds in the Skagit Valley have been opened and to a considerable extent developed. One vein in what is known as the Cumberland District is thirty feet in thickness, and another fourteen. The quality of the coal is said to be excellent, and the field very extensive. Its analysis gives fixed carbon 65.70, volatile matter 30.30, ash .038, sulphur .005. Its freedom from sulphur and low percentage of ash are remarkable, promising a coking coal of great density and purity. A third vein five and a half feet through at the surface and gaining thickness with depth is also being opened. This mine belongs to the Skagit Coal and Transportation Company, or Nelson Bennett and associates, who own about three thousand acres of coal-lands near Sedro, twenty-nine miles east of Fairhaven, with which it is connected by railroad.

The comparative values of the Seattle and Tacoma, or Green River and Puyallup coals, is given in the following table:

SEAM.	Moisture.	Volatile Hydrocarbon.	Fixed Carbon.	Ash.	F. C. V. H. C.	Coke.
LIGNITES.						
Newcastle	4.16	44.84	43.86	7.14	0.98	None.
Green River, Seam (?)	7.27	36.02	28.48	28.23	0.79	"
" " " 33	9.98	40.63	41.07	8.82	1.01	"
" " " (?)	8.68	35.90	47.07	8.35	1.31	"
BITUMINOUS LIGNITES.						
Green River, Seam 18	2.50	45.71	48.37	3.42	1.06	Poor.
" " " 9	4.82	42.02	37.12	16.04	0.88	None.
" " " 6	3.34	39.89	41.49	15.78	1.05	"
" " " 3	3.24	39.52	48.39	9.85	1.22	Worthless.
BITUMINOUS COALS.						
Wilkinson Field, Wingate Seam	1.80	42.27	52.11	3.82	1.23	Very good.
" " " Seam 123	3.98	28.64	54.10	13.28	1.88	None. (?) (b)
" " " 18	1.33	26.83	60.67	12.12	2.34	Excellent.
" " " 3	1.16	29.09	60.38	9.37	2.07	"
" " " 1	1.54	28.17	59.70	10.59	2.12	Poor. (?) (b)
" " " 53	0.61	29.58	56.18	13.63	1.89	Black and friable.

Extensive deposits are known to exist in the Chehalis Valley, and, although geologists assign this to the tertiary period, I see no reason why these coals should not be as valuable as those on the coast, at Coos Bay or Bellingham. The cost of mining the

coals of Western Washington is light, averaging one dollar and ten cents per ton.

The only coal-mine on the east slope of the Cascades is at Roslyn, on the line of the Northern Pacific Railroad, to which company it belongs. This mine furnishes the locomotives of the road with steam fuel, and this coal is shipped to Montana, Dakota, and Minnesota to grade up the inferior coals mined in those States, while the Oregon Railway and Navigation Company and Oregon Short Line are glad to use any surplus which may be had. A vein of anthracite is reported discovered on the Wenatchee River, northeast of Roslyn. The output of the various mines for two years is thus tabulated in the report of the governor of Washington for 1889.

COMPARATIVE STATEMENT OF COAL MINED IN FIRST AND SECOND DISTRICTS FOR YEARS ENDING SEPTEMBER 30, 1888 AND 1889.

NAME.	1888.	1889.
<i>First District.</i>	<i>Tons.</i>	<i>Tons.</i>
Bucoda	49,160	26,600
South Prairie	86,149	45,107
Wilkeson	2,300	6,738
Carbon Hill	208,702	195,387
Tacoma Coal and Coke Company	14,871	8,081
Total	305,682	281,918
<i>Second District.</i>		
Franklin	182,921	186,844
Black Diamond	186,522	105,255
Cedar Mountain	52,813	23,120
Gilman	13,528	41,482
Roslyn	234,201	280,548
Newcastle	158,184	76,122
Durham		22,819
Total	828,119	685,690
Output first district	305,682	281,918
Output second district	828,119	685,690
Total output	1,133,801	917,608

The decrease in shipments in 1889 is accounted for by competition with British Columbia mines, and the decline of prices in the California markets. That this was not the true cause seems evident when it is known that during the autumn and winter of 1889-90 there was almost a coal famine in San Francisco, and that prices ruled high. It looks more like a combination among coal-miners to force prices up. The market in San Francisco is variable, owing to the fact that English vessels coming out in ballast to load with wheat and salmon carry coal instead of rock in the hold, and sell to dealers for a moderate price coal of a good quality. This is a kind of competition which cannot always be foreseen or provided for.

It is an interesting fact that the great Southern Pacific system of railroads is compelled to depend upon Washington for steam-making fuel. That corporation owns the Carbon Hill mines in the Wilkeson district, four in number, which furnish about eight hundred tons daily. A railroad has been constructed through the cañon of Carbon River, with a descending grade, which carries the product of the mines to the bunkers at Tacoma, where it is loaded on a steamer carrying four thousand tons which makes thirty-five trips a year. Sailing-vessels carry the remainder of the output.

When this coal was used in its natural state it carried with it so much dirt and grit that the lives of the engineers on the Southern Pacific were rendered burdensome by the effort to keep up steam. A remedy was found in washing the coal, which is now being shipped perfectly clean, the saving in transportation more than paying the expense of washing, while the danger from sparks is very much lessened.

The other Wilkeson mines being worked belong to the Tacoma Coal and Coke Company, of which A. C. Smith is president; and the Wilkeson Coal and Coke Company, Hugh White, president. The Bucoda mines are on the head-waters of the Chehalis River, in Thurston County. They once formed the main supply of the Northern Pacific Railroad, and belong now to the Northwestern Coal and Transportation Company, of which Samuel Coulter is president. The superintendent says of them that the seam being worked is seven feet in thickness, with dark-blue sandstone roof, with the same rock one hundred

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feet thick for a floor. Beneath this is another vein ten feet thick, resting on a floor of fire-clay six feet thick and of good quality. Under the fire-clay is a light-colored sandstone one hundred and sixty feet in thickness, overlying an eighteen-foot seam of very good coal. The Bucoda coal is a black lignite, preferred for domestic purposes. The three seams all pitch five degrees to the east, which makes it convenient to work.

The Northwestern Coal and Transportation Company shipped forty-two thousand six hundred and seventy-five tons during the year ending December 1, 1889, which is a third more than mentioned in the report of the governor quoted above. The coal-mines of West Washington employ over two thousand miners and other laborers, and no miners receive less than three dollars a day. This, too, is but the beginning of a very great industry, and the time will soon arrive when Washington will rival Pennsylvania in coal and iron production.

Iron follows naturally after coal, one being necessary to the other in manufactures. This northwest corner of the United States is fortunate in possessing them in conjunction. The iron-ores of Washington comprise bog-iron or limonite, hematite, and magnetic ore. Bog-ore is found underlying the flats bordering Puget Sound. Large beds of magnetic ore occur in the Cascade Mountains, at a height above the water-courses of from twelve hundred to fifteen hundred feet. The largest discovered deposit is on the Cle-elum River, in Kittitas County on the east side of the range, and about twenty-five miles north of the Northern Pacific Railroad. It is owned by the Moss Bay Company, an English corporation which designs manufacturing iron and steel on a large scale. Extensive deposits are also found on the Snoqualmie River, which are reached from Seattle by the Seattle, Lake Shore and Eastern Railway. The ores from this section are what are termed typical steel-ores, of a superior quality. Analysis gives a greater per cent. of metallic iron than the average of Lake Superior or Iron Mountain, Missouri, ores, with more sulphur and less phosphorus than those, and with very little more silica than the former, and much less than the latter. The present difficulty in working the

Snoqualmie ore is the gangue-rock, and experiments are being made at eastern iron-works with good results.

In the Skagit Valley, near Cedro, is Iron Mountain, separated from Connor Mountain, in which are found coal deposits, only by a deep gorge. In this mountain are ten distinct veins varying in thickness from twelve to seventy-five feet, and in a favorable position for tunnelling. The ore occurs in pre-cretaceous crystalline rocks, in which limestone also occurs, and proof of its true bearing and great magnitude is found in the drift and ancient volcanic rock associated with it. The iron is of a rich black color, of strong polarity and even fracture, surpassing in purity and merit the Lake Superior ores occurring in the same geological formation. Some of the ledges contain a high percentage of manganese, which it is believed with proper treatment will make it valuable for the manufacture of steel. A practical working test of the ore in the Irondale smelting works resulted in obtaining sixty per cent. of pure iron.

The only iron-mine in Washington actually developed is in Chimacum Valley, two and a half miles from the Irondale furnace on Port Townsend Bay. The ore in this case lies in a blanket from ten to twenty inches in thickness immediately under the sod of the valley, is porous, but sufficiently solid to be dug in lumps. The analysis gives:

Metallic iron	41.83	per cent.
Phosphorus	0.751	"
Phosphorus in 100 parts iron	1.795	"

In 1880 the Puget Sound Iron Company, Cyrus Walker, president, erected a furnace for smelting iron near Port Townsend, calling the place Irondale, and commenced work in January, 1881, the first iron made in Washington being turned out on the 23d of that month. The ore used was obtained from the dairy farm of William Bishop, at Chimacum, and from Texeda Island in the Fuca Sea. There is ore enough in the Chimacum Mine to keep a forty-ton furnace running for twenty years, but it requires mixing with another quality of ore. The Texeda Mine is a fissure vein, eighty feet wide, bearing sixty-two per cent. of metal of excellent quality and inexhaustible in quantity, although the ore requires to be desulphurized by roasting. It

costs about two dollars a ton delivered at the furnace. The Chimacum iron is soft, while the Texeda is hard, and by mixing the proper density is obtained. The charcoal used in smelting is made from the timber at hand, and the lime comes from San Juan and Orcas Islands at a dollar and a half a ton, the cheapness of all these materials adding greatly to the success of the manufacture. The pig-iron produced here is equal to the best in the United States.

The Union Iron Works of San Francisco have their smelting works at Irondale, and it was here that the material was manufactured from which the United States cruiser "Charleston" was constructed. Thus Washington furnishes both coal and iron to the Golden State.

Magnetic iron-ore is found on San Juan Island, but it contains so large a percentage of phosphorus as to be of little worth. There are also large beds of magnetic and red hematite ores of a high grade about twenty miles northeast of Vancouver, Clarke County.

In connection with iron, limestone may be named as of importance. The deposits which have been worked are found on San Juan Island and in other parts of the archipelago, where the supply is practically unlimited. It was first made in 1860 by Augustus Hibbard and his partner N. C. Bailey, by whom he was killed in a quarrel eight years afterwards. The works were then closed until 1871, when Hibbard's heir appeared and claimed them, but died in 1873. In the mean time Bailey returned and took possession of his interest, but he also died, and James McCurdy, who held a mortgage on the property, came into possession. The capacity of the kilns previous to 1879 was twenty-six thousand four hundred barrels per annum. In 1879 new works were opened in two places on the island by other parties. The lime-works on Orcas Island, opened in 1862, turned out forty barrels per diem. For many years these quarries supplied the Pacific Northwest with lime for building and other purposes. But it is now known that limestone and marble are to be found in the Skagit Valley and in different parts of the Cascade Range in quantities sufficient not only for smelting the metals existing in these localities, but for commercial purposes. In 1878 the

Northern Pacific Railroad Company opened a quarry in the Puyallup Valley, their works having a capacity of two hundred and seventy-five barrels. The production of lime in Washington in 1880 was sixty-five thousand barrels, worth eighty-four thousand five hundred dollars. Limestone is also abundant in the region of Fort Colville.

Copper is found in connection with gold and silver on both sides of the Cascade Mountains and in the mineral regions of Northeastern Washington. Recent discoveries have been reported as having been made in the Cascades of high-grade copper-ore, and late explorations in the Olympic Mountains reveal the existence of copper in this range. Valuable copper ledges are said to exist eight miles from Hood's Canal in Kitsap County. The Humptulips River, which flows into Gray's Harbor, is said also to lead to a copper belt of great proportions, the deposit being found in a formation of slate and limestone quite accessible by railroad from the Chehalis Valley. For the present a movement is on foot to cut a trail from the head of navigation on the Wishkah River to the vicinity of the indicated mines.

Among the specimens of minerals to be seen in the Skagit Valley is a fine quality of asbestos from a mine opened at an altitude of two thousand feet. The same mineral has been found at Ellensburg, produced in the Sebastian mining district, thirty-eight miles north of that place. It is long-fibred and of superior quality, but has never been mined.

In the Yakima Valley, lower down, is a mountain of pumice of a fine grain, which, as this volcanic product has also a commercial value, is of importance to the country.

Clays of several qualities, from that used in brick-making to tripoli and kaolin, are abundant in West Washington, although not of equally good quality. While there exist deposits of pottery-clay so uniform in texture as to be immediately convertible into dry-pressed bricks, or with a small hand press moulded into tiles, which on being burned become vitrified and of a deep red, the greater number require thorough treatment by the best processes known to ceramics in order to produce a ware equal to that manufactured in the East. There are good brick-making and fire clays at no great distance from Tacoma,

and also at Gray's Harbor, and porcelain clays in the Cowlitz Valley, never yet thoroughly tested, but abundant.

The lesson taught by the great fire of Chicago was that iron expands, cracks, twists, and gives way under heat and pressure; that granite will split and crumble if subjected to a great degree of heat and weight; that limestone will be burned into quicklime and slacked by water, or will blow out in masses, destroying a building; and that sandstone will become flaky and split off under the action of a general conflagration; but that brick made of a high-grade refractory clay, properly manufactured, will withstand the fiercest heat. Hence the value of building-brick produced from the refractory clays, which, mixed with those of a lower grade and burned until vitrified, can be made to withstand a heat that will melt and boil glass or steel.

The Puget Sound fire-clays vary in appearance, some of the best resembling slate and being of a blue-black color. When these are broken up and exposed to the rains of winter, they are resolved into a pasty mud, which on treatment becomes refractory. Other of the fire-clays are a bluish-gray in color, and look like stone when dry, but dissolve into paste when wet; and still others contain an excess of silica, and resemble laminated sandstone; while some are soft and oily to the touch, and of different degrees of color, from very light to very dark. As a foundation for future industries in Washington, this class of mineral substances is likely to prove of importance to the new State. An industry kindred to that of brick or pottery was carried on in 1868 by the firm of Knapp & Burrell, of Portland, on the north bank of the Columbia, at Knappton,—namely, the manufacture of cement from nodules of a yellowish limestone, found near the mouth of the river. The yield was thirty-five barrels daily.

The precious metals are not yet at all developed in West Washington, although gold has been found in some of the streams, and alleged discoveries have been made in the Cascade and Olympic Ranges of quartz veins bearing gold and silver, both separately and in conjunction.

Gold-mining in East Washington was begun in the spring of 1855, when gold in placers was discovered near Fort Colville,

being followed by the usual migration of thousands to that locality, and the subsequent discovery of other placer diggings in the upper Columbia region, followed by the organization of the Territory of Idaho, which took away from Washington some of its most valuable mining-lands. The yield of the placer mines in the Colville and Okanogan districts was very considerable, but could not be accurately stated on account of the many routes by which gold was carried out of the country, and also because the express companies, who were the common carriers of treasure, had no means of knowing from what districts came the gold intrusted to their keeping. It is interesting merely as an indication of the value of the placers of Washington, Oregon, and the northwestern portion of Idaho in a half-dozen years, covering the period of profitable placer mining in the Northwest, to take such figures as Wells, Fargo & Co. were able to furnish, as follows: Shipped from Portland in 1864, \$6,200,000; 1865, \$5,800,000; 1866, \$5,400,000; 1867, \$4,000,000; 1868, \$3,037,000; 1869, \$2,559,000; 1870, \$1,547,000. Add to these sums \$419,657, shipped by Portland bankers in 1869, and we have \$28,953,657 that can be accounted for. This partial statement does not include the first and best product of the Colville mines, or the output of the years 1862 and 1863, when the yields of the Oro Fino, Florence, and Salmon River mines (then in Washington) were at the best.

Very little of the gold of Boisé, Owyhee, or any part of Southern Idaho went to San Francisco *via* Portland; therefore the millions of which any account was taken were produced in East Oregon, Washington, and the Panhandle of Idaho, which Washington always claimed as belonging to her territory.

Quartz veins were discovered to some extent during the placer-mining excitement, but were disregarded. Ledges were known to exist in the Okanogan District, and discoveries were made on the eastern flank of the Cascades, on the Wenatchee River. The development of quartz is, however, recent, for obvious reasons, capital and transportation being necessary to quartz-mining enterprises.

The counties in East Washington where gold- and silver-mining are carried on are Kittitass, Okanogan, Douglas, and Stevens. The yield from the deep mines of Kittitass for the

year 1880 was twenty-two thousand and thirty-six dollars, and from placers one hundred and twenty thousand and nineteen dollars, and it had not increased in 1883. These mines are, in fact, undeveloped, the iron and coal of the Cascades being sought after rather than the precious metals. Silver-, lead-, and copper-ores exist, but it is not known what tonnage they will yield. The Wenatchee, Yakima, Lake Chelan, and Methow River Districts, all lying just east of the Cascades, are promising, but imperfectly known. Silver is believed to exist in the Olympic Range, singly and in connection with copper. This is, however, more presumptive than real knowledge, founded on croppings of an apparently good character gathered up in recent explorations.

It is in the country lying immediately west of the Okinakane River and Colville Indian Reservation, in Okanogan County, and in that part of Stevens County lying east of the Indian Reservation and the Columbia River, that quartz-mining is being carried on with energy.

Ruby District, in Okanogan County, is situated on Conconully Creek (called Salmon River on many maps), fifteen miles west of Okinakane River. This creek rises in a high and rugged range, running southeast through deep cañons to its junction with the Okinakane. In the spring it is a strong and turbulent stream, but diminishes with the dry season until it discharges but about twelve cubic feet per second.

This district is approached from the east by a stage-road either from Spokane Falls or Sprague, on the Northern Pacific, the two uniting seventy miles west of Spokane, and continuing west to the head of the Grand Coulee and Condon Ferry on the Columbia, thence to the Okinakane River, which it crosses, and to Ruby City, the whole distance from Spokane Falls being one hundred and fifty miles. The western approach is *via* Ellensburg, either across the country, one hundred and ninety-five miles, or by steamboat a part of the distance. A railroad will soon cross the country from Spokane Falls to Puget Sound, affording better facilities for travel to these mines.

Ruby City is situated on Conconully Creek, at an altitude of eighteen hundred feet, but surrounded by mountains rising

four thousand and six thousand feet above sea-level. It is the county-seat of Okanogan County, and the centre of the mining district.

The principal mines are on the south side of the creek, in a ridge rising abruptly from it to a height of two thousand five hundred feet. There is plenty of timber, but no water for mining purposes, and the ores must be conveyed over a very rough trail, or by a wire tramway to reduction works on the Conconully, a method which is entirely practicable.

The country rock of Ruby district is granite, gneiss, mica, and hornblende schists, which have been uplifted to nearly vertical positions. The width of the zone of gneissoid granites and schists is about three miles, flanked on the southwest by a high granite range, and the mineral belt is confined to this zone--the silver-bearing lodes conforming substantially to the generally southeast-and-northwest course of the schistose rocks, with a dip varying from fifty degrees to the nearly vertical position, with frequent local variations.

One of the latter is the Arlington, which has a north-and-south direction, and is situated in the southerly end of Ruby Mountain, about three hundred feet from the top, with a dip into the mountain of from sixty to eighty degrees below the horizontal. The lode is from three to nine feet wide, and has been traced for a distance of seven hundred feet. The ore assays one hundred and eighty-seven dollars in silver to the ton, or, taking all classes of ore together, eighty-six dollars and sixty-four cents, with merely a trace of gold. Professor Clayton, in a report on the Ruby district, to which I am indebted for figures, estimated that a block of ground three hundred feet long, sixty feet deep, and five in width, making ninety thousand cubic feet of quartz in the lode, would give about six thousand tons gross, and, assuming that half of that would assay eighty dollars per ton, the gross value would be two hundred and forty thousand dollars. Deducting ten per cent loss in milling (twenty-four thousand dollars) and twenty per cent for the cost of milling, mining, and transportation (twenty thousand dollars), there would remain one hundred and fifty thousand dollars net from this block of ground, which he considered a safe estimate. What the actual yield is has not been made

known, but it is the leading mine in the district, and reduction works have been erected, at a cost of three hundred thousand dollars, at Ruby City, for the extraction of silver from this and other ores in this locality, with other improvements involving a large amount of capital. A concentrator has also been erected at Conconnully, but these helps have only partially relieved the embarrassments of the miners. The cost of transporting ore to Ellensburg, the nearest railroad point by steamboat and wagon-road, is two and a half cents per pound, a prohibitory price for the carrying of any but the highest grade of ores. Nothing like a general development can take place until the excessive cost of transportation is removed.

The other mines in the Okanogan country of the same general character of the Arlington are the Fourth of July, Ruby, and First Thought, in the Ruby district. The Tuff Nut, Mammoth, Lone Star, Home Stake, and Minnehaha, in Salmon River (Conconnully) district, are not so purely silver-bearing, and several in the Galena district carry enough lead for smelting.

The greatest advancement yet made in mining in Washington has been in Stevens County. About fifty miles by rail north of Spokane Falls, in the vicinity of Chewelah, is a mining district producing silver and lead ore which is reducible by smelting. The general character of the country is lime, the walls encasing the minerals being porphyry. These mines were discovered in 1883-84, but were not worked until about 1887. The Eagle Mine ore assayed three hundred dollars in silver and forty per cent. in lead. This property, situated about three miles east of Chewelah, is owned by capitalists who are able to develop it. In the vicinity are numerous mineral locations. The Shamrock is a vein forty-one feet wide, assaying twenty-four dollars in silver and thirty-five cents in gold, and the Pansy is an extension of the same formation, which is in porphyry. The Alpend, one mile east of the Eagle, is a good property, and many others promise well.

On the west side of the valley, seven miles from Chewelah, is the Finley, a vein of gray copper and chlorides, assaying from thirty dollars to six hundred dollars per ton, and there are several well-defined veins of the same quality of ore in the vicinity.

The mineral region extends eighty miles north, but it is in the region of Colville that the greatest development has taken place in mining. This country abounds in lime-belts, which pass through it from northwest to southeast at intervals of from five to eight miles apart, varying in width from one thousand yards to three miles. The deposits of ore are extensive, many of them bearing the minerals necessary to their reduction. Granite and porphyry enclose some of the veins, slate and quartz others, and still others are found in limestone. Some of the ores are iron carbonates, carrying silver, gold, and lead in paying quantities. The Old Dominion Mines, however, contain ore in the form of a chloride and black sulphate in limestone walls.

The Old Dominion Mine is six miles east of the town of Colville, and is an eight-foot fissure vein, assaying one hundred and fifty ounces of silver, twenty-five per cent. galena, and seven dollars in gold to the ton. The Old Dominion was discovered in 1885, and produced in 1886 eighty thousand dollars' worth of silver. Two years later it was estimated that half a million had been taken out, and ore had been found which assayed fifteen thousand dollars to the ton. On the same mountain, and forming a group of chlorides, are the Ella, Rustler, Paris Belle, East Side, West Side, War Eagle, St. Helena, John Harris, and Portland. Until a recent period the ores were shipped to Omaha for reduction, and only the highest grade ores would pay the expenses of mining, transportation, and reduction; hence, districts less rich than the Old Dominion were left unworked.

The Young America, owned by the Young America Consolidated Company, is situated on the east side of the Columbia, in a lime bluff sixteen miles north of Colville, and is one of the largest, if not the largest, surface-showing mines in the State. It was discovered in 1885, and within six months had been considerably developed. The ledge averages five feet in thickness, and runs northeast and southwest, with a pitch to the east. In 1888 it had been tunnelled to a point one hundred and eighty feet from the surface, following a heavy body of ore all the way, and finding a solid deposit of eight feet of mineral. A working test made in San Francisco showed ninety ounces of silver and forty per cent. of lead to the ton. The ore is now shipped by

the Spokane and Northern Railroad to Spokane, and reduced in the Mutual Smelting and Mining Company's works of that city. The mine is valued at over a million dollars.

The Bonanza, two miles east of the Young America, is in a formation similar to the Young America, which, while the ore is not so valuable, is so much larger as to make up for it. It is producing and shipping ore continuously.

The Little Dalles, thirty-eight miles north of Colville, is another region rich in minerals. The ores are galena and lead carbonate with silver. It was discovered in 1886, when the Silver Crown and Northern Light claims attracted much attention. They are true fissure veins located side by side, running east and west parallel with each other, and pitching towards each other. Practically, they are one ledge, as they must meet. The ore assays from eighty to three hundred ounces, and the ledges are eighteen inches in thickness.

The Silver Butte is an extension of the Silver Crown and Northern Light properties, with almost as good a showing of mineral; and the Amy, a short distance below Silver Crown, shares in the richness of the district.

Bruce Creek is another locality where some large ledges of galena are found; and on Clugston, five miles east of Bruce Creek and twelve miles north of Colville, there are some very fine ledges of galena, including the Uncle Sam and Tenderfoot, both of which are rich in lead, while carrying silver enough to defray expenses of transportation and reduction. Iron also abounds in the region of Bruce Creek.

The Daisy, in the Summit district, twenty-four miles south of Colville, was discovered in 1886, but not worked for a year or more. It was found to be a seven-foot vein of carbonates, worth one hundred and fifty-one dollars in silver and a few dollars in gold to the ton. In 1888 there were seventy thousand dollars' worth of ore in sight.

A smelter of twenty tons capacity was erected at Colville, to which all these mining districts are tributary, by the Mutual Smelting and Mining Company in 1888, which purchased ore or did custom work for the miners, but had not a sufficient capacity even at that time. The completion of railroad connection with Spokane Falls has solved many difficulties.

The Metaline district, on Clarke's Fork of the Columbia, was discovered late in 1886. It is situated on the west bank of the river (recently called Pend d'Oreille River), about one hundred miles from Pend d'Oreille Lake, and near the northern boundary of the State. It belongs to the Kootenai group of mines, which extend into Idaho, and is approached by the river from Sand Point on the lake and on the Northern Pacific Railroad.

The ores of this district are a low-grade galena, and lead the principal production, the average of that metal being from seventy-five to eighty-five per cent., with no refractory metal in the district. The ore is generally found in pockets in a limestone formation similar to the Frisco silver district of Southern Utah. The Bell O'May Mine and Diamond R. are of this description. The latter assayed six ounces of silver and eighty per cent. of lead on top, and at a depth of twenty-seven feet assayed seventy ounces of silver and fifty-eight per cent. of lead. The Oreole, owned in Spokane, is a vein mine, in lime rock containing gray copper and galena, the ore averaging one hundred ounces in silver. These mines are on the west side of the river, and within from one to two and a half miles of the town of Metaline.

A mile below the town, on the east side of the river, is Grand View Mine, on a bluff eight hundred feet above the stream. This ore assayed ten ounces of silver and seventy-five per cent. of lead, and showed a four-hundred-foot square of galena on the surface. Near the Grand View is the Friday Mine, running high in lead and low in silver; and five miles above, on the same side, is a six-foot vein containing a twelve-inch streak of gray copper-ore running very high in silver.

Again, the Waters Mine, discovered in 1888, on Little Muddy Creek, on the west side of Clarke's Fork, is a well-defined vein in lime, containing two feet of galena assaying thirty ounces silver and seventy-five per cent. lead, and two feet of galena carbonates carrying ten ounces silver and forty-five per cent. lead.

Gold is found in placers on Sullivan Creek on the east side of Clarke's Fork a mile below Metaline. The diggings are from three to six feet deep on gray slate bedrock; the ground is spotted, and the gold is in heavy scales.

It has been remarked by intelligent prospectors that from the international boundary-line south to Spokane Falls there is a peculiar distribution of rocks on the surface, particularly from Calispel Lake in the Colville country west to Oso-Yoos Lake in the Okanogan country, between which points there is a stream of granite boulders about a mile in width. This stream is the same, no matter what the country rock may be; whether lime, slate, porphyry, or granite, these boulders are present on the surface, some weighing many tons, and others smaller, but distributed in a straight line on the mountains and in the valleys.

Some years ago some prospectors found a large piece of galena ore on a mountain near the town of Marcus. Certain that they had made a valuable discovery they sold the ore, and searched for the vein from which it had come until satisfied that there was none in the vicinity. The theory, of course, is that the granite and other boulders so out of place were dropped from icebergs that were breaking up as they floated over this country, then covered with water. Where the bergs were formed is a query still to be answered.

The Kootenai country in the Pan-Handle of Idaho is east of the Metaline district, and, although belonging to another Commonwealth, is tributary to Washington. It has long been known to be a mineral country, and was prospected for gold placers in the early mining furore following the Fraser River and Colville excitements of thirty or thirty-five years ago. The country is mountainous and picturesque, and contains several of the most beautiful lakes in the Northwest,—the Cœur d'Alene, Pend d'Oreille, Kanisku, and a part of the Kootenai. It has five hundred miles of navigable waters, and vast resources in timber and minerals.

The first mining done in the Kootenai country was in the Cœur d'Alene region, which is drained through the Spokane River. The distance from Spokane Falls to the nearest point on the lake is twenty-five miles. The Cœur d'Alene River has two branches, on both of which placer gold-mining has been carried on for eight or ten years, but most largely on the South Fork. It was not until about 1883 that deep mining was undertaken, and previous to 1886 not much was accomplished. It is

now, however, a busy and prosperous mining region. The ores are argentiferous galena, with some gold in quartz. The veins are true fissures, accessible, and very thick, and carry from forty to sixty per cent. of lead, five to fifty ounces of silver, and a few dollars in gold to the ton. The strike of the principal lode, which is three miles in length, is parallel to the river, at a distance from it of from two to six miles, and it is frequently cut at right angles by ravines, which afford facilities for mining.

There are no fluxes in the Cœur d'Alene country except that contained in the ore, and no great amount of fuel near the mines, which makes it more economical to carry the ores out for smelting than to bring in the fluxes,—a fact in favor of Spokane Falls as a centre for reduction works. Mills and concentrators on the ground reduce the expense of transporting the ores, which, however, with the supplies required by the camps, furnish a profitable business to the Cœur d'Alene Railway and Navigation Company's lines, connecting with the Northern Pacific Railroad.

The Bunker Hill and Sullivan Mines, at the head of Milo Creek, were the first discoveries on the lode, and have been good producers. The ore as taken from the mine concentrates four tons into one, which has a gross value of one hundred dollars, and with the first concentrator, whose capacity was one hundred and twenty tons daily, returned three thousand dollars per day to the owners. The company employ one hundred and fifty men, and are well equipped for profitable mining.

The Stemwinder, just beyond these mines, on the main lode, is owned in Portland, and is a rich producer. The company has a concentrator at Milo. The Tyler, also owned in Portland, is a similar property, as well as the Emma—Last Chance, owned in Spokane.

The Sierra Nevada is a carbonate instead of galena, and yields a large amount of ore, giving returns of one hundred dollars per ton without concentrating. Specimens from this mine of crystallized silver and lead, consequent on some disturbance of the formation, are beautiful and wonderful, fantastic in shape and rich in color.

Silver King, Crown Point, and Eureka are also good mines in

the vicinity of Wardner; and there are very many equally as good in other districts of the Cœur d'Alene country.

The first mine thoroughly developed in this region was the Tiger, owned in Spokane, and located on Canyon Creek, a feeder of the South Fork. In order to secure this development it was necessary to construct a railroad for several miles through a narrow defile of the mountains, and erect a concentrator of one hundred tons capacity. There is enough ore in sight to keep it running for years.

The Cœur d'Alene mines already wield a great influence in the development of the Northwest, which is destined to increase as they are developed. They make necessary railroads and reduction works, and encourage various industries, which without them would remain unattempted for many a decade.

Lightning Creek district, on the northeast side of Lake Pend d'Oreille, and five miles by a level road north of Clarke's Fork Station on the Northern Pacific, is in the Kootenai country, and was discovered in 1887. The veins have an east-and-west course in a hard black lime and quartzite. The Mayflower is high-grade galena, one foot in thickness, averaging one hundred and thirty-six ounces silver and twenty-five per cent. lead. The Wallace, of the same size, gives one hundred and nine ounces silver and forty per cent. lead. Lightning Creek is twenty-eight miles long, and falls into the lake. It affords good sport to the trout fisher.

West of Clarke's Fork Station, and little over a mile from Hope Station, are the Silver Chord and Lake Shore Mines, with a six-foot body of ore assaying at the start thirty ounces silver, with a good per cent. of lead. The formation is quartzite, syenite, and slate.

On the south side of the lake, nearly opposite Hope Station, is the Garfield Bay district, by water eighteen miles southeast from Sand Point, and six miles northeast by rail from Cocolalla Station on the Northern Pacific. Two miles back from the bay, on the side of a mountain, is the Mountain Queen. The vein is in trachyte and lime, and contains a hard whitish quartz spotted with galena, which assays thirty ounces silver and a small percentage of lead. There are twenty or more locations in the

immediate vicinity, and all are owned in the Kootenai country and Spokane Falls, unless recently transferred.

On the south side of Lake Pend d'Oreille, where Gold Creek comes in from the southeast, is a mountain of limestone, which is being burned and shipped by the hundreds of barrels every week. Gold in quartz is also found on Gold Creek.

Kanisku Lake, forty miles northwest of Sand Point, is thirty miles long by from three to seven miles wide, and has its outlet through Priest River, a crooked and swift stream which empties into Clarke's Fork. North of Kanisku three miles, and connected with it by a stream, is Lake Abercrombie, six miles long, north-and-south, and two wide. These lakes have high, steep hills surrounding them and coming close down to the water, except where the numerous streams feeding them find entrance. These streams have level meadow-land extending back for several miles, and where the meadows cease a fine cedar forest begins, some of the older timber measuring fifteen feet in diameter, with a grain so true that it can be split into boards fifty feet long. White pine, hemlock, and tamarack also are here in large growths, and game, large and small, is plentiful.

In 1888 a five-foot galena vein was discovered at the head of Abercrombie Lake, running northeast and southwest, in syenite and granite, with one foot of solid galena on the foot-wall, that averaged thirty ounces silver and seventy per cent. lead. The general formation of the country is a cross-grained, hard, white granite.

Kootenai or Flat Bow Lake and River embrace a vast region. Together they form an elongated ox-bow, pointing north, and branching out until the points are six hundred miles apart, the east point being the source of the Upper Kootenai River, and the west point of the Lordeaux River. The lake is on the west arm of the bow, its south end being connected with Sand Point by a level wagon-road. Its length is over one hundred miles, and its width of an average of three miles. It seems to have been formed like the Grand Coulee by some great convulsion of nature, as glacial action is nowhere apparent on the ad-

jacent mountains, although living glaciers of great size are at the north end of the lake. The depth of this fissure is unknown,—assuming it to be a fissure,—but by carrying out the angles of the marginal mountains, which rise quite abruptly from the water to a height of four thousand feet, a depth of at least three thousand feet would be obtained. A sounding-line of one thousand feet does not touch the bottom of its still, dark waters. The outlet is on the west side, about forty-five miles from the north end, which is in British Columbia. The waters of the outlet are deep and still for twenty-five miles. The mountains



ONE DAY'S HUNT.

wear their snowy helmets the year through at the upper end of the lake. Many streams fall into it, large and small, entering through deep gorges, or tumbling over mossy rocks among green depths of forest. There is no more impressive scenery in the Northwest than in the Kootenai country. The lake is stocked with fish, from immense sturgeon and char weighing up into the hundreds, to thirty-pound silver trout, and other

smaller pan fish; and the forest affords game in the caribou, a species of large deer.

Kootenai Lake mining district lies on both sides of the lake about fifteen miles north of the outlet. The Blue Bell Mine, on the east side, is on Galena Bay, and owned by the Kootenai Mining and Smelting Company, which has its office at Kootenai Station, on the Northern Pacific. It is a ten-foot vein of low-grade galena in lime, extending north and south, assaying eight ounces in silver, with eighty per cent. of lead, and opened by a one-hundred-foot incline. The Blue Bell was discovered and to some extent developed previous to 1885, when, owing to a contest over rights, work was suspended until the present company acquired the property. The Kootenai Chief, an extension of the Blue Bell, is owned in San Francisco, but not at present worked. On the opposite side of the lake are numerous locations, among which are the Highland, owned in Spokane, a three-foot vein of clear galena, assaying from forty to two hundred and eighty ounces silver and sixty per cent. lead, opened by a sixty-foot tunnel at a depth of one hundred and ten feet; the Jim Blaine, a narrow vein, owned in Butte City, Montana, which shipped to the Wicks Smelter three thousand five hundred pounds of gray carbonate ore that netted over two hundred and eighty-three ounces of silver, the vein being in a basin on top of a mountain, and difficult to reach or work. Out of a large number of claims, a dozen or more show a good grade of galena. There are hot springs among this group of mines, which continually deposit lime.

The Bonanza district is situated six miles south of the Kootenai Lake outlet, on Cottonwood Creek, which comes into the outlet from the south at a point twenty-two miles southeast and down from the main Kootenai Lake. The principal locations are at an altitude of five thousand four hundred feet, and two thousand seven hundred feet above the lake, cutting at right angles through a timbered ridge running northeast and southwest, which slopes uniformly down to the outlet. The district was discovered in 1886 by parties from Colville, and located the following year. There are three parallel veins, about six hundred feet apart, ranging from thirty to eighty feet in width, and running in an east-and-west direction, with a dip

of forty-five degrees to the south. The casing of the ore matter is a lime shale, the whole extending across the country formation at right angles, and lying between a contact of granite and slate.

The veins carry ores known to mining men as copper-glance, antimonial silver, gray-copper, "black metal," or brittle silver, peacock-copper, and hard brown, gold-bearing quartz. It is claimed that no such conglomeration of ores was ever before found outside of Mexico, where similar deposits exist. The discovery was made by a party looking for placer claims at the head of the Little Salmon, which comes into the Columbia from the east a few miles north of the boundary-line of British Columbia. The whole summer was spent in cutting a one-hundred-mile pack-trail through the heavy timber of a country extremely rough in its configuration. The cañon of the Salmon River has stretches of twenty or more miles where the high bluffs are perpendicular and faced with rock. The Bonanza Ridge lies between the head-waters of a branch of the Salmon and the Kootenai Lake outlet.

When the Colville party were, at the end of summer, making prospect holes on this ridge, they stumbled on their bonanza; but it being near the season of snow in the mountains, they were forced to relinquish the hope of securing any returns for their labors at that time, and concealing their treasure retraced their steps to wait for another summer. But the secret was not so well kept but that it was guessed, and, when they started in the following May for the land of promise, they were watched and pursued so closely as hardly to get to their destination before others were also on the ground. This is a part of the romance and excitement of mining. Many a lonely prospector while looking for his bonanza has laid his bones where other equally evasive fortune-hunters could not find them. But the bonanza found, then comes the struggle for possession, and the race is to the swift. The discoverers of this one, named Winslow Hall and William Oakes, with eleven others, organized the Kootenai Bonanza Mining Company, and made three locations, the Kootenai Bonanza, Silver King, and American Flag. The Grizzly, Silver Queen, and Cariboo are extensions of the above named.

The richness of the Kootenai Bonanza district is extraordi-

nary. In doing the opening work on the first two locations twelve hundred tons of ore were taken out, which averaged one hundred and fifty dollars to the ton, three hundred tons averaging two hundred dollars. Forty-six sacks of ore, from which forty-eight assays were made, averaged five hundred and twelve ounces of silver, no assay being made for copper or gold. Several assays were made of "brittle silver," which averaged eight thousand ounces of silver, and a chunk of brown quartz showing wire and leaf gold gave ninety-seven thousand dollars gold and three thousand dollars silver to the ton. The entire vein carries thirty per cent. copper.

While there is this Arabian Nights' glamour of incredible wealth about these discoveries, there is always the possibility that nature has exhausted herself in producing this specimen of her handiwork, and cannot repeat this profusion or long continue it in one place. The reputation of this district, however, has been well sustained and has increased the value of the low-grade ores in the Kootenai Lake district, both districts being north of the boundary, in the British possessions, and low-grade ores being dutiable. But if the value of silver exceeds that of lead in ore, it can be shipped into the United States free of duty. By mixing the high and low grades the whole can be taken across the line free, and besides improve the ore for smelting.

The only outlet for this district is up the Kootenai Lake and River, one hundred and fifty-five miles, to Bonner's Ferry, thence south thirty miles by wagon-road to Kootenai Station or Sand Point, on the Northern Pacific, and thence sixty miles to Spokane Falls. The passage by water occupies forty-eight hours. It costs seven dollars per ton to transport the ore from Cottonwood Creek Landing to Kootenai Station. A railroad will soon be made to penetrate the Kootenai country, and reveal to the world a region well worth the attention of the business-man and the tourist.

It was the intention of the Ainsworth Company, which owned in the Blue Bell lead and had a grant from the colonial government, to have built a railroad out of the Kootenai country, but the policy of the Parliament proved so narrow, owing to the jealousy of their constituents towards railway connection with the United States, that the company was compelled to abandon

the scheme. This ill treatment by the colonial authorities for several years retarded mining in this region. The Spokane and Northern Railroad will soon be completed to Little Dalles, whence a line of steamboats will carry passengers and freight to this and other districts in British Columbia. It was the design of the Spokane and Northern to have continued its road to Kootenai on the northeast, and through the Colville Indian Reservation to the Rock Creek mines of British Columbia on the northwest, and finally to the Pacific coast, but the Dominion Parliament refused to grant charters for either of these branch lines, much desired by the people north and south of the boundary, the Canadian Pacific being opposed. It will not be possible much longer to prevent American enterprise from accomplishing its designs, even against the will of this governmental monopoly, in British Columbia.

CHAPTER XXXI.

LAST WORDS.

A TOURIST, I suppose, may be pardoned for giving a rambling account of the country run over. I desire to feel that my ramblings are of some value to my readers. It is difficult to conceive, if we have not seen it, the rapid change being effected in the Northwest. But a study of the census, and the rapid growth of American cities in all the States, will be found quite as surprising. Foreign immigration has filled up the country very rapidly. I have sometimes felt, in a San Francisco street-car, or other public conveyance, that it would be a pleasure to hear my mother-tongue spoken. In the North the foreign element is not so marked, although there are colonies of Norwegians, Swedes, and Germans, with the ever ubiquitous Irishman, and a sprinkling of Canadian English, Scotch, and occasional individuals from all nations. But the prevailing and governing class is American; and it is the American whom you meet, alert, observant, ready, who controls the enterprises of this part of the Pacific coast. Washington is peculiarly New-England-American, in the Puget Sound region particularly, because the New-

Englander is commercial. In the agricultural portions of the country are more people from the middle and western divisions of the Atlantic States.

I will now proceed to give, as I did for Oregon, a tabulated statement of the assessed valuation of different sections by counties, which will help the reader to understand the relative

COUNTIES.	Population, 1890.	Valuation, 1889.
Adams *	2,085	\$1,022,301
Assotin *	1,575	610,023
Chehalis	9,226	2,333,544
Clallam		871,480
Clarke	2,757	2,226,353
Columbia *	11,635	3,698,340
Cowlitz	5,888	1,097,008
Douglas *	3,161	1,160,830
Franklin *	693	640,392
Garfield *	3,898	1,562,895
Island	1,774	543,386
Jefferson	8,304	2,081,915
Klickitat *	5,150	1,837,378
Kittitas *	8,761	2,649,604
King	65,031	23,733,495
Kit-sap	4,623	1,243,470
Lewis	11,468	1,884,884
Lincoln *	9,813	3,006,069
Mason	2,813	986,257
Okanogan *	1,465	502,098
Pacific	4,348	891,116
Pierce	50,775	20,352,125
San Juan	2,097	379,090
Skagit	8,731	1,833,030
Skamania	776	158,055
Snohomish	8,511	1,610,922
Spokane *	37,402	14,584,363
Stevens *	4,307	684,819
Thurston	9,364	2,637,866
Wahkiakum	2,526	516,572
Walla Walla *	12,215	7,833,965
Whatcom	18,351	3,682,985
Whitman *	19,072	7,870,218
Yakima *	4,455	2,820,261
Total	335,464	\$125,165,215

development of these districts, although the valuation is for 1889 and the population for 1890, when there must have been a large increase in valuation over 1889.

I have marked the East Washington counties with an asterisk to point out the comparative wealth of the two great divisions. The difference in favor of the nineteen western counties is over fifty millions as against the fifteen eastern counties. The several large towns on Puget Sound should account for a greater difference than that, and the comparison shows that relatively the agricultural sections are as prosperous as, if not more so than, the commercial ones. Dividing the whole assessed value of the State (far below its actual value), it gives three hundred and seventy-three dollars to every individual in it, which is above the ordinary proportion of the older States.

A feature of Puget Sound commerce is that among the great number of vessels which enter annually,—the entrances amounting in 1889 to one million five hundred and forty thousand and fifteen tons,—the clearances exceed the entrances by fourteen thousand nine hundred and sixty-four tons, showing the balance of trade to be in favor of this new State as against the whole world.

The motto adopted for the territorial seal—*ALKI*—by and by—was well chosen, significant, and prophetic. The younger brother of Oregon, he will not be content with the younger brother's portion, but will strive for the sceptre.

Modern writers bring weighty evidence to prove that the tradition handed down to us by the ancient philosophers, of a submerged continent, occupying a portion of the area covered by the Atlantic Ocean, was scientific truth. If one continent sank, another must have arisen to balance it. If America is the Atlantis of Plato, or its substitute, as some believe, its west coast is the oldest, or that portion which was first elevated, as geology proves. It is also, as we know, the latest to be brought under development. It is the pioneer's last view out over the oceans that encircle the known world. Henceforward man's effort will be to restore to earth on this favored soil the glories of the buried continent, and to substitute for Atlantis lost, *ATLANTIS ARISEN*.

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