

sea usually breaks on the bar, but regular lines of steamers and sailing vessels are engaged in the trade between the several towns on the bay and San Francisco. Extensive coal mines are found in the vicinity, and the surrounding mountains are covered with valuable forests, and these form the basis of an important commerce. The bay is irregular in shape, having the form of a horse shoe, one light arm extending southwardly, the other and principal arm having a total length of about twelve miles, with an average width of three-quarters of a mile. Other arms join it which increase its navigable area.

The Umpqua enters the ocean in latitude 43° 42', and although a large river of some 200 miles in length, and navigable for sixty miles, it is so obstructed at the mouth as to prevent its acceptance as a harbor. The bar has a depth of about thirteen feet, but is changeable. The Yaquina River and bay form a small harbor, nine miles north of Cape Perpetua, having a depth of but nine and a half feet at low water, with a narrow channel and swift current, rendering navigation difficult. Elk River also enters the bay, and is navigable for light draft steamers to Elk City, a distance of 25 miles. The Nehalem, is the next considerable stream south of the Columbia, entering the ocean. The bar at the mouth has a depth of about 18 feet, and when inside the river widens out into a deep lagoon of four miles in width by eight in length.

The Columbia is the great river of Oregon, and in fact the largest of the Pacific Coast, excepting the Yukon, of Alaska, but the bar at the mouth and the heavy breakers upon it detract from its value as a convenient and safe harbor. The river, at its mouth, is about five miles broad, and flows with such a strong current in time of freshets that water for ship's use can be taken up on the bar. Once inside, the river shores afford many fine harbors. Astoria, near the mouth, has a good harbor, and is a place of historical interest, but the great shipping point of Oregon is at Portland, on the Willamette River, 110 miles from the ocean, and 13 miles from the Columbia. This is at the head of ship navigation of vessels drawing 18 feet of water. Ocean steamers and large sailing vessels navigate the Columbia to the Cascades, a distance of 160 miles from its mouth, and above these, after a portage of six miles, the river is again navigable for small steamers for a distance of 400 miles, to Lewiston, in Idaho, with the interruption at the Dalles, or Rapids, at the eastern base of the Cascade Range, fifty miles east of the first falls. The main Columbia, or north branch, is navigable, with several interruptions, for nearly 1,000 miles, far into British Columbia. Large steamers ascend the Willamette to Portland; and with the exception of the fall of forty feet at Oregon City, the river is navigable for small steamers a distance of 200 miles, to Eugene City.

The Cascade range of mountains, running north and south, between the 121st and 122nd degrees of longitude, divides the State into two divisions, called Eastern and Western Oregon. This is a grand range, having many of the outward features of the Sierra Nevada, with the lofty peaks of Jefferson and Hood standing as sentinels along its high walls, while eastward is the elevated plateau characteristic of the basin of Nevada, and westward are the valleys of Rogue River, the Umpqua, and Willamette, with the forest-covered ranges of mountains, and the mild climate peculiar to the Pacific coast. The Western division, containing about one-third the area of the State, is the most populous and wealthy, and is itself divided into valleys and mountainous sections of different characteristics.

The Willamette Valley constitutes the chief subdivision of the west, having a length of one hundred and forty miles, and an average width of forty miles, or an area of agricultural land of over three million acres, and including the foothills, an aggregate of over five million acres. The Willamette River runs from south to north, through the entire length of the valley, rising in the Cascade Range, in latitude 43° 20', and after a sinuous course of some three hundred miles, joins the Columbia. Several branches of considerable size enter the Willamette, the principal of which are the North and South Santiam, Mill Creek, Pudding and Clackamas, and many tributaries of these on the east side, and the Long Tom, Luckiamute, La Creole, Yamhill, and Tualitin on the west, several being navigable for short distances, and the main stream being navigable through eight months of the year to Eugene City, near the head of the valley.

The Umpqua Valley lies south of the Willamette, from which it is separated by the Calapooia range of mountains. The valley is large and fertile, though composed more of rolling hills than level plains. The Umpqua River rises in the Cascade Mountains, and running westerly, draining the valley which bears its name, then breaks through the Coast mountains to the ocean. South of the Umpqua is Rogue River Valley, which bears many features of resemblance to the one north of it. These, with the several ranges of mountains near the coast, and the small valleys enclosed, constitute Western Oregon, a region of temperate climate, and unlimited resources in soil, forests and mines.

Eastern Oregon comprises the elevated plateau east of the Cascade Range, embracing an area of 63,000 square miles, of peculiar formation. The principal rivers of the Division are the Snake, or Lewis Fork of the Columbia, Des Chutes, John Day, Umatilla, Walla Walla, Grande Ronde, Powder, and Malheur, and in the southeast is the Owyhee; besides rivers and creeks of lesser note in every section. The southern portion is a basin with but little, if any, water-shed to the sea, containing within itself twenty or more lakes, from one to thirty miles in diameter, and from this feature is designated as the "Lake Country." This region is generally barren, but about the lakes are extensive marshes, capable of reclamation and cultivation. The lakes and marshes are great resorts for water-fowl, which gather about them in myriads during the spring and summer, and here hatch their young. The principal lakes are the Klamath, 20 miles long by 6 in width, connected by Link River with Little Klamath, 9 miles long by 6 wide; Goose Lake, 30 miles long by 12 wide; Lake Albert, 15 miles by 5 in area; Summer Lake, containing about 9 square miles; Silver Lake, 48 square miles; Harney Lake, the largest in Oregon, having an area of 300 square miles; the Christmas Lakes, a chain of 50 miles in extent; and Warner Lake, which is 35 miles in length by 5 in breadth. From its peculiar features and historical events, the Lake Country is of great interest. Being occupied by many tribes of warlike Indians, several wars and massacres have occurred, the campaign of General Crook, and the recent Modoc war being the most notable.

The Blue Mountains, Stein's Mountain, and numerous other ranges and peaks are in this division of the State, and are generally metalliferous. The rivers flowing into the Snake and Columbia are bordered by valleys of considerable size, and containing much agricultural land of great value; and mines of gold and silver in river beds and adjacent hills are profitably worked.

The arable lands of Oregon are very fertile, and the climate and seasons are such as to make them exceedingly productive, which, with their vast area, makes it one of the most promising of the agricultural States of the Union. Although the cultivation of the soil has been the chief occupation of the people, this is far from being the only resource, if, indeed, it may be called the predominant one. The forests are extensive, and grand in character, and generally so accessible to navigation that the manufacture of lumber, pitch, tar and turpentine, constitutes an important branch of industry. Minerals of such variety, value and extent exist, that mining may at some time dispute the precedence of importance with agriculture. These comprise every class, including coal, iron, lead, copper, salt, silver and gold, all in large quantities, while minerals of nearly every name are found to a greater or less extent. The gold mines of the southwestern counties have been worked since 1850, and although for some years have been neglected and the product declined, the same steps of improvement that are advancing the mining interest in California are felt in Oregon, and the great gravel beds that are known to exist are threatened with attacks from the hydraulic "giants" and "monitors." Gold-bearing veins of quartz are known to exist in large numbers, and attempts have been made to work them; but from want of capital, and, perhaps, of skill, no great success has been made. The importance and future value of this branch of mining cannot be doubted. The regions of the Umpqua, Rogue River and the Illinois in the southwest, and of the John Day, Powder and Malheur in the northeast, are gold-bearing, comprising a vast extent of territory, which