

for a few hours on the rocks, in the hot sun, which permits the skins to be taken off with greater ease; the flesh is then stripped off the bones, mashed and pounded as fine as possible; it is then spread out on mats, and placed upon frames to dry in the sun and wind, which effectually cures it; indeed, it is said that meat of any kind dried in this climate never becomes putrid. Three or four days are sufficient to dry a large matfull, four inches deep. The cured fish is then pounded into a long basket, which will contain about eighty pounds; put up in this way, if kept dry, it will keep for three years.

During the fishing season, the Indians live entirely on the heads, hearts, and offal of the salmon, which they string on sticks, and roast over a small fire.

The fishing here is very much after the manner of that at Willamette Falls, except that there is no necessity for planks to stand on, as there are great conveniences at the Dalles for pursuing this fishery. They use the hooks and spears, attached to long poles: both the hook and the spear are made to unship readily, and are attached to the pole by a line four feet below its upper end. If the hook were made permanently fast to the end of the pole, it would be liable to break, and the large fish would be much more difficult to take. The Indians are seen standing along the walls of the canals in great numbers, fishing, and it is not uncommon for them to take twenty to twenty-five salmon in an hour. When the river is at its greatest height, the water in the canals is about three feet below the top of the bank.

The Dalles is one of the most remarkable places upon the Columbia. The river is here compressed into a narrow channel, three hundred feet wide, and half a mile long; the walls are perpendicular, flat on the top, and composed of basalt; the river forms an elbow, being situated in an amphitheatre, extending several miles to the northwest, and closed in by a high basaltic wall. From appearances, one is led to conclude that in former times the river made a straight course over the whole; but, having the channel deeper, is now confined within the present limits. Mr. Drayton, on inquiry of an old Indian, through Mr. Ogden, learned that he believed that in the time of his forefathers they went up straight in their canoes. In order to illustrate this pass, Mr. Drayton made a careful diagram of it, which is represented in the wood-cut on the following page.

Besides the main channel, A, there are four or five other small canals, through which the water passes when the river is high: these are but a few feet across. The river falls about fifty feet in the distance of two miles, and the greatest rise between high and low water mark, is sixty-two feet. This great rise is caused by the accumulation