

full of rocks and stones, much harder and more solid than any they had yet met with.

The rocks were all silicious, with their fissures penetrated by sparry matter. Indications of iron were frequent, and fragments of poor ore were common, but no rich ore of that or any other metal was found. Some of the hills appear well adapted to the cultivation of the vine: the soil being a sandy loam, with a considerable portion of gravel, and a superficial covering of good vegetable black earth. The natural productions are, several varieties of oak, pine, dog-wood, holly, &c., with a scattering undergrowth of whortleberry, hawthorn, china brier, and a variety of small vines.

Above the Isle de Mallon, the country wears another prospect. High lands and rocks frequently approach the river. The rocks, in grain, resemble freestone, and are hard enough to be used as hand mill-stone, to which purpose they are frequently applied. The quality of the lands improves, the stratum of vegetable earth being from six to twelve inches, of a dark brown color, with an admixture of loam and sand. Below Deer Island they passed a stratum of freestone, fifty feet thick, under which is a quarry of imperfect slate in perpendicular layers. About a league from the river, and a little above the slate quarry, is a considerable plain, called "Prairie de Champignole," often frequented by buffaloes. Some salt licks are formed near it; and in many situations on both sides of the river, there are said to be salines which may hereafter be rendered very productive, and from which the future settlements may be abundantly supplied.

About four miles below the "Chuttes," (falls) they, from a good observation, found the latitude 34, 21, 25, 5. The land on either hand continues to improve in quality, with a sufficient stratum of dark earth of a brownish color. Hills frequently rise out of the level country, full of rocks and stones, hard and flinty, and often resembling Turkey oil stones. Of this kind was a promontory which came in from the right hand a little below the Chuttes; at a distance it presented the appearance of ruined buildings and fortifications, and several insulated masses of rock conveyed the idea of redoubts and out-works. The effect was heightened by the rising of a flock of swans which had taken their station in the water, at the foot of these walls. As the voyagers approached, the birds floated about majestically on the glassy surface of the water, and in tremulous accents seemed to consult upon means of safety. The whole was a sublime picture. In the afternoon of the 3d of December, they reached the Chuttes, and found the falls to be occasioned by a chain of rocks of the same hard substance seen below, extending in the direction of northeast and southwest, quite across the river. The water passes through a number of branches worn by the impetuosity of the torrent, where it forms so many cascades. The chain of rock or hill on the left appears to have been cut down to its present level by the abrasion of the waters. By great exertions and lightening the boat, they passed the Chuttes that evening, and encamped just above the cataracts, and within the hearing of their incessant roar.