## Guettard

striking examples of the general disintegration, he sees only the continual operation of "gentle rains and heavy downpours."<sup>1</sup>

From illustrations supplied by his own earliest observation, he passes on to others drawn either from his personal researches or his reading, and exemplifying the potent influence of heavy rains and flooded streams. Not only are the solid rocks mouldering down and strewing the slopes below with their debris, but the sides of the hills are gashed by torrents, and narrow defiles are cut in them, like the Devil's Gap in Normandy.<sup>2</sup> He combats the notion that landslips, such as had occurred at Issoire in Auvergne in the year 1733, were caused by internal fires or subterranean winds, and agrees with a previous writer in regarding them as the result of the penetration of water from the surface into the interior of the hill. He thus recognises the efficacy of subterranean as well as superficial water, in changing the face of a country.

He believes the sea to be the most potent destroyer of the land, and as an instance of its power he was accustomed to regard the chalk cliffs of the northwest of France as the relics of a great chain of hills, of which the greater part had been swept away by the sea.<sup>3</sup> He shows, further, that while the hills are worn down by the waves, by the rains, and by the inundations to which the rains give rise, the materials removed from them are not destroyed, but are deposited either on the land or along the shores of the

> <sup>1</sup> "Des pluies et des averses," Op. cit. p. 210. <sup>2</sup> P. 214. <sup>8</sup> Pp. 220, 222.