

themselves ; that they have been slowly dug out by the washing and erosion of the land ; and that it is by the repeated touches of the same instrument that this curious assemblage of lines has been engraved so deeply on the surface of the globe.”¹

The whole of the modern doctrine of earth-sculpture is to be found in the Huttonian theory. We shall better appreciate the sagacity and prescience of Hutton and Playfair, if we remember that their views on this subject were in their lifetime, and for many years afterwards, ignored or explicitly rejected, even by those who accepted the rest of their teaching. Hall, their friend and associate, could not share their opinions on this subject. Lyell too, who adopted so much of the Huttonian theory and became the great prophet of the Uniformitarian school, never would admit the truth of Hutton’s doctrine concerning the origin of valleys. Nor even now is that doctrine universally accepted. It was Jukes who in 1862 revived an interest in the subject, by showing how completely the valley system in the south of Ireland was due to the action of the rivers.² Ramsay soon after followed with further illustrations of the principle.³ Later effective support to Hutton’s teaching has been given by the geologists of the United States, who, among the comparatively undisturbed strata of the Western

¹*Illustrations of the Huttonian Theory*, p. 102. It will be remembered that the subaerial excavation of valleys was first demonstrated in ample detail by Desmarest from Auvergne, and subsequently by De Saussure from the Alps. The doctrine was afterwards sustained by Lamarck. See chap. xi.

²*Quart. Journ. Geol. Soc.* xviii. (1862).

³*The Physical Geology and Geography of Great Britain*, 1863.