

faces, through the agency of earth-worms, by which fine particles of loam are brought up and exposed to the air, to be dried and blown away by wind, or washed down by rain. The lower limit of the layer of soil is thus made to travel downward into the subsoil, which in turn advances into the underlying rock. As Hutton long ago insisted, the superficial covering of soil is constantly, though slowly, travelling to the sea.<sup>73</sup> In this ceaseless transport, rain acts as the great carrying agent. The particles of rock and of soil are, step by step, moved downward over the face of the land, till they reach the nearest brook or river, whence their seaward progress may be rapid. A heavy rain discolors the water-courses of a country, because it loads them with the fine *débris* which it removes from the general surface of the land. In this way, rain serves as the means whereby the work of other disintegrating forces is made conducive to the general degradation of the land. The decomposed crust produced by weathering, which would otherwise accumulate over the solid rock, and in some measure protect it from decay, is removed by rain, and a fresh surface is thereby laid bare to further decomposition.

**Movement of Soil-cap.**—In some countries, where the ground is covered with a thick spongy mass of vegetation exposed to considerable variation of temperature and moisture, appearances have been observed of an extensive slipping of the layer of soil to lower levels, bearing with it whatever may be growing or lying upon it. Such are the so-called “stone-rivers” of the Falkland Islands, and the superficial *débris* of certain parts of the west coast of Patagonia.<sup>74</sup> In Western Europe, slight indications of a

<sup>73</sup> “Theory of the Earth,” Part II. chaps. v. vi.

<sup>74</sup> Wyville Thomson’s “Atlantic,” vol. ii. p. 245. R. W. Copping, Q. J. Geol. Soc. 1881, p. 348. See postea, under “Landslips,” p. 628.