

ticular that, by being brought up to the surface, the fine particles are exposed to meteoric influences, notably to wind and rain. Even a grass-covered surface may thus suffer slow denudation. Lob-worms on sandy shores possibly aid transport by waves and tides, inasmuch as they bring up large quantities of fresh sand.<sup>381</sup>

Burrowing animals, by throwing up the soil and subsoil, expose these to be dried and blown away by the wind. At the same time, their subterranean passages serve to drain off the superficial water, and to injure the stability of the surface of the ground above them. In Britain, the mole and rabbit are familiar examples. In North America, the prairie dog and gopher have undermined extensive tracts of pasture-land in the west. In Cape Colony, wide areas of open country seem to be in a constant state of eruption from the burrowing operations of multitudes of *Bathyergi* and *Chrysochloris*—small mole-like animals which bring up the soil and bury the grassy vegetation under it. The decomposition of animal remains produces chemical changes similar to those resulting from the decay of plants.

2. The flow of streams is sometimes interfered with, or even diverted, by the operations of animals. Thus the beaver, by cutting down trees (sometimes 1 foot or more in diameter) and constructing dams with the stems and branches, checks the flow of water-courses, intercepts floating materials, and sometimes even diverts the water into new channels. This action is typically displayed in Canada and in the Rocky Mountain regions of the United States. Thousands of acres in many valleys have been converted into lakes, which, intercepting the sediment carried down

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<sup>381</sup> Mr. Davidson estimates the amount to be sometimes nearly 2000 tons annually over an acre. Geol. Mag. 1891.