tifically of agriculture and forestry have usually looked upon the vegetable soil in its own simple capacity, without regard to its foundation and origin. To point out the way by which we are to proceed in our investigation of the relations which exist between the solid crust of the earth and the productive soil which covers it, is the principal object of the following observations.

Bare rocks cannot be made subservient to the purposes of agriculture. Lichens indeed, cover the surface of rocks, deriving their chief nutriment from the atmosphere; mosses draw the water necessary for their subsistence from the fissures of stones; the roots of grasses seek in the chinks of rocks for particles of earth sufficient for their sustenance; various shrubs and trees penetrate here and there into rocky masses by their roots (having the powerful and continued action of living wedges), where the cohesion of the parts is smallest, in order to prepare a fixed seat for themselves, and be secure from the pernicious effects of the atmosphere. The surface of the earth is always sterile, however, when it shows a continuity of naked rock, uncovered by vegetable mould. The cultivation of fields and woods, and even the rearing of cattle, cannot therefore find scope in regions which are entirely rocky. Abrupt and precipitous mountains being generally in this condition are usually barren; but in plains and on declivities, a bare rocky surface is much less frequently the cause of sterility than an unfavourable proportion of mould. Some rocky and moderately elevated regions also occur, more or less destitute of vegetable mould, whose sterility depends upon volcanic caus-Iceland, for example, affords cases of this descripes.