stream which overflowed part of that town in 1794. It was found that the window-panes of the houses had been devitrified into a white, translucent, stony substance; that pieces of limestone had acquired an open, sandy, granular texture, without loss of carbon-dioxide, and that iron, brass, lead, copper, and silver objects had been greatly altered, some of the metals being actually sublimed. We can understand, therefore, that, retaining its heat for so long a time, a mass of lava may induce many crystalline structures, rearrangements, or decompositions in the rocks over which it comes to rest, and proceeds slowly to cool. This is a question of considerable importance in relation to the behavior of ancient lavas which, after having been intruded among rocks beneath the surface, have subsequently been exposed by denudation (Book IV. Part VII.).

But, on the other hand, the exceedingly trifling change produced, even by a massive sheet of lava, has often been remarked with astonishment. On the flank of Vesuvius, vines and trees may be seen still flourishing on little islets of the older land-surface, completely surrounded by a flood of lava. Dana has given an instructive account of the descent of a lava-stream from Kilauea in June, 1840. Islet-like spaces of forest were left in the midst of the lava, many of the trees being still alive. Where the lava flowed round the trees, the stumps were usually consumed, and cylindrical holes or casts remained in the lava, either empty or filled with charcoal. In many cases, the fallen crown of the tree lay near, and so little damaged that the epiphytic plants on it began to grow again. Yet so fluid was the lava that it hung in pendent stalactites from the branches, which nevertheless, though clasped round by the molten rock, had barely their bark scorched. Again, for nearly 100 years there has