

pletely disappeared.\* In numerous other instances, the cones of cinders and scorixæ, once raised, have become compacted and bound together by the effusion of lava, hardening into solid stone, and thus, becoming habitual volcanic vents, they continue to increase in height and diameter, and assume the importance of permanent volcanic islands. Such has been, doubtless, the history of those numerous insular volcanos which dot the ocean in so many parts of the world, such as Teneriffe, the Azores, Ascension, St Helena, Tristan d'Acunha, etc. In some cases the process has been witnessed from its commencement, as in that of two islands which arose in the Aleutian group, connecting Kamtschatka with North America, the one in 1796, the other in 1814, and which both attained the elevation of 3000 feet.

(56.) Besides these evident instances of eruptive action, there is every reason to believe that enormous floods of lava have been, at various remote periods in the earth's history, poured forth at the bottom of seas so deep as to repress, by the mere weight of water, all outbreak of steam, gas, or ashes; and reposing perhaps for ages in a liquid state, protected from the cooling action of the water on their upper surface by a thick crust of congealed stony matter, to have assumed a perfect level; and, at length, by slow cooling, taken on that peculiar columnar structure which we see produced in miniature in

\* Such an event is at this moment in progress (March 1866), close to the island of Santorini, in the bay of Thera, in the Greek Archipelago: itself, with the adjacent Kaimeni Islands, products of the same kind.