

again and again after wide intervals on the same ground, some modern active volcanoes being thus the descendants and representatives of older ones. Some of the facts regarding former volcanic action have been already stated. Others will be given in Book IV. Part VII.

Confining attention to vents now active, of which the total number may be about 300,¹⁴⁴ the chief facts regarding their distribution over the globe may be thus summarized. (1) Volcanoes occur along the margins of the ocean-basins, particularly along lines of dominant mountain-ranges, which either form part of the mainland of the continents or extend as adjacent lines of islands. The vast hollow of the Pacific is girdled with a wide ring of volcanic foci. (2) Volcanoes rise, as a striking feature, from the submarine ridges that traverse the ocean basins. All the oceanic islands are either volcanic or formed of coral, and the scattered coral-islands have in all likelihood been built upon the tops of submarine volcanic cones. (3) Volcanoes are situated not far from the sea. The only exceptions to this rule are certain vents in Mantchuria and in the tract lying between Thibet and Siberia; but of the actual nature of these vents very little is yet known. (4) The dominant arrangement of volcanoes is in series along subterranean lines of weakness, as in the chain of the Andes, the Aleutian Islands, and the Malay Archipelago. A remarkable zone of volcanic vents girdles the globe from Central America eastward by the Azores and Canary Islands to the Mediterranean, thence to the Red Sea,

¹⁴⁴ This number is probably below the truth. Prof. J. Milne has enumerated in Japan alone no fewer than fifty-three volcanoes which are either active or have been active within a recent period. He remarks that, "if we were in a position to indicate the volcanoes which had been in eruption during the last 4,000 years, the probability is that they would number several thousands rather than four or five hundred." "Earthquakes and other Earth-movements," 1886, p. 227. Compare Fisher, "Physics of Earth's Crust," 2d ed. chap. xxiv.