

volcanic rocks by subsequent denudation have been treated with no less careful observation and insight.

In the course of his researches, Geikie did not confine himself to the Scottish volcanoes of Tertiary age. The first volume of his important work treats the older volcanic rocks of Great Britain from the Pre-Cambrian to the close of the Permian period. Geikie does not admit any essential difference between old and modern volcanoes, and he judges all massive outpourings, sills and dykes, homogeneous bosses and cones, from this standpoint. On the one hand, the phenomena of past periods are read in the light of recent manifestations of volcanic action; and *vice versâ*, the stratigraphical relations of the submarine tuffs and massive outbreaks of the Palæozoic era are used to elucidate certain of the recent phenomena which are removed from present observation. In this volume, examples are described of typical stratified volcanoes in the Silurian and Devonian formations of Wales and Scotland, the extensive fissure-eruptions of the Carboniferous epoch in Scotland, and the scattered homogeneous domes or tuff-cones which took origin in England during the same epoch. In the Mesozoic period, Great Britain was marked by almost complete cessation of volcanic activity.

The volcanic phenomena of the Farøe Islands have been investigated by Professor James Geikie (1880), Amund Helland (1881), Bréon (1884), and Lomas (1895). These islands display a close relationship with the northern areas of Great Britain.

Important contributions to our knowledge of volcanicity have been made by Dr. Hermann Abich, in his works on the geology of the Caucasian areas. The Persian volcano Demavend has also been made the subject of geological researches, the Austrian geologist, Dr Tietze, having given the most recent account in 1878. Reports of the extinct volcanoes of Asia Minor appear in several books of travel published about the middle of the nineteenth century; the volcanoes in the vicinity of the Dead Sea have been examined in some detail by Blanckenhorn and Diener.

In Asia proper, volcanic activity is at present concentrated along the eastern coast-line, on the borders of the Pacific Ocean. The volcanoes in Kamtschatka, in the Aleutian and Kurile Isles, in Japan, Formosa, and the Philippines, have been repeatedly described in geographical and geological litera-