

America, in Patagonia, the Argentine Republic, Chili and Peru, and at the southern extremities of Australia and Africa.

Darwin, in founding his Coral-reef theory, assumed that a slow subsidence had taken place over a vast region of the Pacific and Indian Oceans. In spite of a very large number of data, however, it has not been possible to formulate any definite law of secular variations. Movements of elevation and depression are reported in various latitudes, and are frequently known to take place in opposite senses at localities adjacent to one another. When Dana in 1849, from his observations in the Pacific Ocean, concluded that elevation was in progress in the region around the North Pole, and subsidence in the areas near the Equator, he formed his opinion upon insufficient data. The general truth has, however, been established, that relative changes of level are still in progress along many of the coast-lines, and that since the Diluvial epoch dislocations have been produced, measuring 300-1500 feet. In many cases these movements are slowly and imperceptibly accomplished, in others they occur with convulsive suddenness. Sartorius von Waltershausen in 1845 distinguished the former as *Secular*, the latter as *Instantaneous* fluctuations of ground-level.

Von Humboldt and Von Buch had directed attention to local movements of land in connection with volcanoes and earthquakes, and the example of this character most frequently cited in literature is the temple of Serapis at Pozzuoli, in the Bay of Naples. The columns of the ruined portico are marked by the borings of a marine mollusc at a height of thirteen feet above the present surface-level of the Bay. In 1803, Breislak in the French edition of his text-book explained the phenomenon on the hypothesis that the Serapeum had subsided and had remained for a period stationary at the water-level indicated on the pillars by the mollusc borings, but that afterwards a period of emergence and uprising had succeeded. This explanation was strongly opposed by Wolfgang von Goethe. The great poet would not listen to any arguments in favour of oscillations of level; in his opinion, the former submersion of the temple had been due to an enormous flood. Breislak's view has, however, been supported by several leading British scientists, Babbage, Forbes, Poulett-Scrope, and Charles Lyell. The excellent treatise published by