mud, produced by the melting of the snow and ice of the cone, rushed down from the mountain. Huge portions of the glaciers of the mountain were detached by the heat of the rocks below them and rushed down bodily, breaking up into blocks. The villages all round the mountain to a distance of sometimes more than ten geographical miles were left deeply buried under a deposit of mud mixed with blocks of lava, ashes, pieces of wood, lumps of ice, etc.[90] Many of the volcanoes of Central and South America discharge large quantities of mud directly from their craters. Thus, in the year 1691, Imbaburu, one of the Andes of Quito, emitted floods of mud so largely charged with dead fish that pestilential fevers arose from the subsequent effluvia. Seven years later (1698), during an explosion of another of the same range of lofty mountains, Carguairazo (14,706 feet), the summit of the cone is said to have fallen in, while torrents of mud containing immense numbers of the fish *Pymelodus Cyclopum*, poured forth and covered the ground over a space of four square leagues. The carbonaceous mud (locally called *moya*) emitted by the Quito volcanoes sometimes escapes from lateral fissures, sometimes from the craters. Its organic contents, and notably its siluroid fish, which are the same as those found living in the streams above ground, prove that the water is derived from the surface, and accumulates in craters or underground cavities until discharged by volcanic action. Similar but even more stupendous and destructive outpourings have taken place from the volcanoes of Java, where wide tracts of luxuriant vegetation have at different times been buried under masses of dark gray mud, sometimes 100 feet thick, with a rough

[90] Wolf, Neues Jahrb. 1878, p. 133.