could see that the lava was still red-hot at the bottom of the fissures, and a stick thrust into one of them instantly took fire. The Vesuvian lava of 1785 was found by Breislak, seven years afterward, to be still hot and steaming internally, though lichens had already taken root on its surface. The ropy lava erupted by Vesuvius in 1858 was observed by the author in 1870 to be still so hot, even near its termination, that steam issued abundantly from its rents, many of which were too warm to allow the hand to be held in them, and three years later it was still steaming abundantly. Hoffmann records that from the lava which flowed from Etna in 1787, steam was still issuing in 1830. Yet more remarkable is the case of Jorullo, in Mexico, which sent out lava in 1759. Twenty-one years later a cigar could be lighted at its fissures; after 44 years it was still visibly steaming; and even in 1846, that is, after 87 years of cooling, two vapor-columns were still rising from it.[84]

This extremely slow rate of cooling has justly been regarded as a point of high geological significance, in regard to the secular cooling and probable internal temperature of our globe. Some geologists have argued, indeed, that if so comparatively small a portion of molten matter as a lava-stream can maintain a high temperature under a thin, cold crust for so many years, we may, from analogy, feel little hesitation in believing that the enormously vaster mass of the globe may, beneath a relatively thin crust, still continue in a molten condition within. More legitimate deductions, however, might be drawn from more accurate and precise measurements of the rate of loss of heat, and of its variations in different lava-streams. Lord Kelvin, for instance,

[84] E. Schleiden, quoted by Naumann, "Geognosie," i. p. 160.