a long time the Spanish mineralogists considered them as furnishing undoubted proofs, that pumice-stone owes its origin to obsidian, in some degree deprived of colour, and swelled by volcanic fire. I was formerly of this opinion, which, however, must be understood to refer to one variety only of pumice. I even thought, with many other geologists, that obsidian, so far from being vitrified lava, belonged to rocks that were not volcanic; and that the fire, forcing its way through the basalts, the green-stone rocks, the phonolites, and the porphyries with bases of pitchstone and obsidian, the lavas and pumice-stone were no other than these same rocks altered by the action of the volcanoes. The deprivation of colour and extraordinary swelling which the greater part of the obsidians undergo in a forge-fire, their transition into pitch-stone, and their position in regions very distant from burning volcanoes, appear to be phenomena very difficult to reconcile, when we consider the obsidians as volcanic glass. A more profound study of nature, new journeys, and observations made on the productions of burning volcanoes, have led me to renounce those ideas.

It appears to me at present extremely probable, that obsidians, and porphyries with bases of obsidian, are vitrified masses, the cooling of which has been too rapid to change them into lithoid lava. I consider even the pearlstone as an unvitrified obsidian: for among the minerals in the King's cabinet at Berlin there are volcanic glasses from Lipari, in which we see striated crystalites, of a pearl-gray colour, and of an earthy appearance, forming gradual approaches to a granular lithoid lava, like the pearlstone of Cinapecuaro, in Mexico. The oblong bubbles observed in the obsidians of every continent are incontestible proofs of their ancient state of igneous fluidity; and Dr. Thompson possesses specimens from Lipari, which are very instructive in this point of view, because fragments of red porphyry, or porphyry lavas, which do not entirely fill up the cavities of the obsidian, are found enveloped in them. We might say, that these fragments had not time to enter into complete solution in the liquified mass. They contain vitreous feldspar, and augite, and are the same as the celebrated columnar porphyries of the island of Panaria, which, without having been part of a current of lava, seem raised up in the