

a conchoidal fracture. These masses, which will one day perhaps be objects of commerce, are constantly bedewed with sulphurous acid. I had the imprudence to wrap up a few, in order to preserve them, but I soon discovered that the acid had consumed not only the paper which contained them, but a part also of my mineralogical journal. The heat of the vapours, which issue from the crevices of the caldera, is not sufficiently great to combine the sulphur while in a state of minute division, with the oxygen of the atmospheric air; and after the experiment I have just cited on the temperature of the soil, we may presume that the sulphurous acid is formed at a certain depth,\* in cavities to which the external air has free access.

The vapours of heated water, which act on the fragments of lava scattered about on the caldera, reduce certain parts of it to a state of paste. On examining, after I had reached America, those earthy and friable masses, I found crystals of sulphate of alumine. MM. Davy and Gay-Lussac have already made the ingenious remark, that two bodies highly inflammable, the metals of soda and potash, have probably an important part in the action of a volcano; now the potash necessary to the formation of alum is found not only in feldspar, mica, pumice-stone, and augite, but also in obsidian. This last substance is very common at Teneriffe, where it forms the basis of the tephritic lava. These analogies between the peak of Teneriffe and the Solfatara of Puzzuoli, might no doubt be shown to be more numerous, if the former were more accessible, and had been frequently visited by naturalists.

An expedition to the summit of the volcano of Teneriffe is interesting, not solely on account of the great number of phenomena which are the objects of scientific research; it has still greater attractions from the picturesque beauties which it lays open to those who are feelingly alive to the majesty of nature. It is a difficult task to describe the

\* An observer, in general very accurate, M. Breislack, asserts that the muriatic acid always predominates in the vapours of Vesuvius. This assertion is contrary to what M. Gay-Lussac and myself observed, before the great eruption of 1805, and while the lava was issuing from the crater. The smell of the sulphurous acid, so easy to distinguish, was perceptible at a great distance; and when the volcano threw out scorïæ, the smell was mingled with that of petroleum.