

lava, the basis of which is obsidian, pitch-stone, and phonolite. This phenomenon is the more remarkable, inasmuch as in Bohemia and in other parts of Europe, the porphyrschiefer with base of phonolite\* covers also the convex summits of basaltic mountains.

It has already been observed, that from the level of the sea to Portillo, and as far as the entrance on the elevated plain of the Retama, that is, two-thirds of the total height of the volcano, the ground is so covered with plants, that it is difficult to make geological observations. The currents of lava, which we discover on the slope of Monte Verde, between the beautiful spring of Dornajito and Caravela, are black masses, altered by decomposition, sometimes porous, and with very oblong pores. The basis of these lower lavas is rather wacke than basalt; when it is spongy, it resembles the amygdaloids† of Frankfort-on-the-Maine. Its fracture is generally irregular; wherever it is conchoidal, we may presume that the cooling has been more rapid, and the mass has been exposed to a less powerful pressure. These currents of lava are not divided into regular prisms, but into very thin layers, not very regular in their inclination; they contain much olivine, small grains of magnetic iron, and augite, the colour of which often varies from deep leek-green to olive green, and which might be mistaken for crystallized olivine, though no transition from one to the other of these substances exists.‡ Amphibole is in general very rare at Teneriffe, not only in the modern lithoid lavas, but also in the ancient basalts, as has been observed by M. Cordier, who resided longer at the Canaries than any other mineralogist. Nepheline, leucite, idocrase, and meionite have not yet been seen at the peak of Teneriffe; for a reddish-gray lava, which we found on the slope of Monte Verde, and which contains small microscopic crystals, appears to me to be a close mixture of basalt and anal-

\* Klingstein. Werner.

† Wakkenartiger mandelstein. Steinkaute.

‡ Steffens, Handbuch der Oryktognosie, tom. i, s. 364. The crystals which Mr. Friesleben and myself have made known under the denomination of foliated olivine (*blättriger olivin*) belong, according to Mr. Karsten, to the pyroxene augite. Journal des Mines de Freiberg, 1791, p. 215.