

With respect to the fragments of granite, gneiss, and mica-slate, found on the shores of Santa Cruz and Orotava, they were probably brought in ships as ballast. They no more belong to the soil where they lie, than the feldsparry lavas of Etna, seen in the pavements of Hamburgh and other towns of the north. The naturalist is exposed to a thousand errors, if he lose sight of the changes, produced on the surface of the globe by the intercourse between nations. We might be led to say, that man, when expatriating himself, is desirous that everything should change country with him. Not only plants, insects, and different species of small quadrupeds, follow him across the ocean; his active industry covers the shores with rocks, which he has torn from the soil in distant climes.

Though it be certain, that no scientific observer has hitherto found at Teneriffe primitive strata, or even those trappean and ambiguous porphyries, which constitute the bases of Etna, and of several volcanoes of the Andes, we must not conclude from this isolated fact, that the whole archipelago of the Canaries is the production of submarine fires. The island of Gomera contains mountains of granite and mica-slate; and it is, undoubtedly, in these very ancient rocks, that we must seek there, as well as on all other parts of the globe, the centre of the volcanic action. Amphibole, sometimes pure and forming intermediate strata, at other times mixed with granite, as in the basanites or basalts of the ancients, may, of itself, furnish all the iron contained in the black and stony lavas. This quantity amounts in the basalt of the modern mineralogists only to 0.20, while in amphibole it exceeds 0.30.

From several well-informed persons, to whom I addressed myself, I learned that there are calcareous formations in the Great Canary, Forteventura, and Lancerota.\* I was not able to determine the nature of this secondary rock; but it appears certain, that the island of Teneriffe is altogether destitute of it; and that in its alluvial lands it exhibits only clayey calcareous tufa, alternating with volcanic breccia, said to contain, (near the village of La Rambla, at Calderas, and near Candelaria,) plants, imprints of fishes,

\* At Lancerota calcareous stone is burned to lime with a fire made of the alhulaga, a new species of thorny and arborescent *Sonchus*.