

researches of Sir James Hall on the influence of pressure in fusions, the existence of carbonic acid in substances contained in basalt presents nothing surprising. Several lavas of Vesuvius present similar phenomena. In Lombardy, between Vicenza and Albano, where the calcareous stone of the Jura contains great masses of basalt, I have seen the latter enter into effervescence with the acids wherever it touches the calcareous rock.

We had not time to reach the summit of a hill very remarkable for having its base formed of banks of clay under strata of basalt, like a mountain in Saxony, called the Scheibenbergen Hügel, which is become celebrated on account of the disputes of volcanean and neptunean geologists. These basalts were covered with a mammiform substance, which I vainly sought on the Peak of Teneriffe, and which is known by the names of volcanic glass, glass of Muller, or hyalite: it is the transition from the opal to the chalcedony. We struck off with difficulty some fine specimens, leaving masses that were eight or ten inches square untouched. I never saw in Europe such fine hyalites as I found in the island of Graciosa, and on the rock of porphyry called *el Peñol de los Baños*, on the bank of the lake of Mexico.

Two kinds of sand cover the shore; one is black and basaltic, the other white and quartzose. In a place exposed to the rays of the sun, the first raised the thermometer to 51.2° (41° R.) and the second to 40° (32° R.) The temperature of the air in the shade was 27.7° or 7.5° higher than that of the air over the sea. The quartzose sand contains fragments of feldspar. It is thrown back by the water, and forms, in some sort, on the surface of the rocks, small islets on which seaweed vegetates. Fragments of granite have been observed at Teneriffe; the island of Gomora, from the details furnished me by M. Broussonnet, contains a nucleus of micaceous schist:—the quartz disseminated in the sand, which we found on the shore of Graciosa, is a different substance from the lavas and the trappean porphyries so intimately connected with volcanic productions. From these facts it seems to be evident that in the Canary Islands, as well as on the Andes of Quito, in Auvergne, in Greece, and throughout the greater part of