have flowed as lava, and which appear the most homogeneous, are composed of microscopic crystalline particles, belonging to a small number of minerals, particularly felspar, augite, olivine, and iron sand; and the same intermixture of minerals may be observed in all scoriaceous lava and in basalt. To the white or grey lava, composed principally of felspar, the French have given the name of *trachyte*, from its breaking with a rough surface.

Trachyte.—Common or stony trachyte has generally a whitish or greyish colour, a dull earthy fracture, and is more or less fine-grained; sometimes the grains are very minute; it has then a compact surface, and sometimes a glistening lustre, in which state it becomes pearlstone. Its hardness is variable; some of the trachytes near Clermont are spongy, and almost friable. Trachyte melts readily into a greyish glass; it generally contains imbedded crystals of vitreous felspar. Acicular or needle-shaped crystals of hornblende, hexagonal crystals of mica, and grains of iron sand, and laminæ of specular iron ore, occur in trachyte. Augite is seldom found in the trachyte of Europe, though it is common in the trachytes of the Andes. The claystone of Braid Hill, near Edinburgh, nearly resembles some of the trachytes in Auvergne; but it is not porphyritic. Trachyte may be regarded as an earthy form of felspar; it is, therefore, unnecessary to speak of its constituent parts. To the variety of trachyte on the Puy de Dôme, M. Von Buch has given the name of *domite*,—a term which the French geologists have properly rejected, as it is only common trachyte, rather whiter than some of the other varieties. It has before been stated, that the trachytes in Auvergne were probably formed by the more or less perfect fusion of granite; like the granite of that district, they contain but a very small portion of quartz.

Trachyte occurs in the Lipari Islands, in a perfectly vitreous state, forming obsidian or volcanic glass, which is sometimes colourless, and sometimes black; the black variety, however, forms a white glass when melted. The colouring matter, being fugitive, is probably bitumen: in this respect, it differs from obsidian formed from dark lava or basalt: the latter melts into a black glass. Pumice appears to have been formed from felspar or trachyte, exposed to an intense heat, which has reduced it to a fibrous mass.

The island of Lipari contains a mountain formed entirely of white pumice: when seen at a distance, it excites the idea, that it is covered from the summit to the foot with snow. Almost all the pumice-stone employed in commerce is brought from this immense mine. The mountain is not one compact mass, but is composed of balls or globes of pumice aggregated together, but without adhesion. From hence Spallanzani infers, that the pumice was thrown out of a volcano in a state of fusion, and took a globose form in the air. Some of these balls of pumice do not exceed the size of a nut, others are a foot or more in diameter. Many of these pumices are so compact,