

Domite (so named from the Puy-de-Dôme) is a porous loosely aggregated trachyte, having a microlitic ground-mass, through which are dispersed tridymite, sanidine, much plagioclase, hornblende, magnetite, biotite, and specular iron. **Soda-trachyte** (Pantellerite) is a variety rich in oligoclase, found in Pantelleria.

Phonolite (Nepheline-trachyte, Clinkstone)¹⁸⁸—a term suggested by the metallic ringing sound emitted by the fresh compact varieties when struck, is applied to a compact, gray or brown, quartzless mixture of sanidine and nepheline, with nosean, hauyne, leucite, pyroxene, hornblende, or mica. The rock is rather subject to decomposition, hence its fissures and cavities are frequently filled with zeolites. An average specimen gave on analysis—silica, 57.7; alumina, 20.6; potash, 6.0; soda, 7.0; lime, 1.5; magnesia, 0.5; oxides of iron and manganese, 3.5; loss by ignition, 3.2 per cent. The specific gravity may be taken as about 2.58. Phonolite is sometimes found splitting into thin slabs which can be used for roofing purposes. Occasionally it assumes a porphyritic texture from the presence of large crystals of sanidine or of hornblende. When the rock is partly decomposed and takes a somewhat porous texture, it resembles normal trachyte.

It is a thoroughly volcanic rock, and generally of Tertiary date. It occurs sometimes filling the pipes of volcanic orifices, sometimes as sheets which have been poured out in the form of lava-streams, and sometimes in dikes and veins, as in Bohemia and Auvergne. Some of the great bosses or eruptive vents connected with the trachyte lavas of the Carleton Hills, Haddingtonshire, have recently been determined by Dr. Hatch to be true phonolites.

With the phonolites may be classed **Leucite-trachyte**, or **Leucite-phonolite**, where the felspathoid is leucite instead of nepheline, and **Nosean-trachyte** (Nosean-phonolite), or **Hauyne-trachyte** (Hauyne-phonolite), with nosean or hauyne taking the place of the felspar of ordinary phonolite.

Andesite—a name originally given by Von Buch to some lavas found in the Andes, is now applied to a large series of rocks distinguished from the trachytes in that their felspar is plagioclase, and passing by the addition of olivine

¹⁸⁸ Boricky, "Petrograph. Stud. Phonolitgestein. Böhmens."—Archiv. Landdurchforschung Böhmen, 1874. G. F. Föhr, "Die Phonolite des Hegau's," Verh. Phys. Med. Ges. Würzburg, xviii. (1883). F. H. Hatch, Trans. Roy. Soc. Edin. 1892.