

The basaltic columns of the Island of Staffa are too well known to require a description; but, according to Dr. MacCulloch, the columns which form the lofty promontory called the Scuire of Egg, another of the Hebrides, exceed in grandeur and in picturesque effect those of Staffa: they are formed of black pitchstone, containing crystals of glossy felspar. "The promontory rests on a bed of compact grey limestone, approaching to a stone marle. This bed, which is three or four feet thick rests on a still lower bed of hard reddish stone. Masses of bituminized wood, penetrated with carbonate of lime, are found in the marle stratum not at all flattened. Portions of trunks of trees, retaining their original shape, but petrified (silicified,) are found in the same stratum; the rifts are filled with chalcedony, approaching in aspect to semi-opal. The columns on this island are both perpendicular and inclined, and some of them are bent or curved."

In various parts of Scotland and the Hebrides, the tendency to a columnar arrangement in the basaltic rocks may be distinctly seen: it is obscurely developed in the basalt of Arthur's Seat near Edinburgh. The basalt of this hill appears identical with some of the volcanic mountains I examined in Auvergne, particularly near the summit of Montadoux, a mountain near Cleremont.

In England the columnar structure of some of the basaltic and trap rocks is observable in the northern counties, particularly on the banks of the river Tees, and at Swarthfell near Ulswater. In some of the basaltic hills near Dudley, the columnar structure is developed but the columns are not separated and well defined. Prismatic blocks of sienite, are scattered over a hill of sienite called Markfield Knowl, at Charnwood Forest in Leicestershire.

Columns of porphyritic trap or greenstone occur in groups, on the northern side of Cader Idris in Merionethshire. One of these columnar groups is represented Plate V. fig. 1.; the outline of the columns was taken with a camera lucida by Henry Strutt, Esq. of Derby, and cannot fail to be correct; the figure is introduced, to show the relative magnitude of the columns. Rocks of trap and basalt, both in solid beds, and also arranged in columns like those of Staffa, were observed by Sir G. Mackenzie, on the coast of Iceland and also in the interior; the lower parts of the beds and columns contained scorix and slags, and empty cavities. A successive range of beds of basalt was also observed alternating with beds of tufa, the lower parts of which presented the same appearance of the action of fire.

From the situation of these rocks, and from the existence of submarine volcanoes near Iceland, Sir G. Mackenzie conceives that these beds of basalt were formed under the sea by the ejection of lava, which, flowing over the moist submarine ground, would confine a portion of water beneath the melted mass: this water would be converted into elastic vapour, or steam, which would endeavor to expand: but where the superincumbent pressure of the ocean, or the