

I shall here briefly enumerate the principal known thermal waters in the Pennine Alps, and add some observations and inferences, which I trust will be acceptable to several of your readers.

**NATERS, in the Haut Valais.**—The warm spring rises under a rock of mica-slate on the north side of the Rhone. The temperature when I visited the place was  $86^{\circ}$  Fahrenheit; but it is variable, from the intermixture with surface-water. At the time of the great earthquake at Lisbon, in 1755, the mountain above the spring, I was informed, opened, and threw out a considerable quantity of hot water.

**LEUK, in the Haut Valais,**—situated in a deep gorge on the northern side of the Rhone. There are twelve springs, varying in temperature from  $117^{\circ}$  to  $126^{\circ}$ . These springs have been long known, and are visited by patients from various parts of Europe.

**THE VALLEY OF BAGNES, in the Bas Valais.**—The warm springs in this valley were buried under a heap of débris from the fall of part of a mountain, which destroyed the baths, the village of Bagnes, and 120 inhabitants, in the year 1545. The name of the valley is obviously derived from the baths. The temperature of the water unknown.

**CHAMOUNI.**—The thermal waters at this place have been discovered since I visited Chamouni in 1821. I have received no account of the temperature; baths have recently been erected. The situation is near the junction of mica-slate, with the lowest beds of secondary limestone.

**ST. GERVAISE,**—situated in a deep gorge on the north-east side of Mont Blanc. The thermal water rises near the junction of mica-slate and limestone. The temperature  $94^{\circ}$  to  $98^{\circ}$ . This spring was discovered about the year 1806: it is very copious. Baths have lately been erected, and are much frequented.

**AIX LES BAINS, in Savoy;**—the temperature from  $112^{\circ}$  to  $117^{\circ}$ . The thermal waters rise in great abundance from two springs, situated at the foot of a lofty calcareous mountain, and are near the bottom of the great calcareous formation that forms the outer range of the Alps: there are also numerous hot springs in the vicinity, which the Sardinian government will not allow to be opened. Of the mode of douching at these baths, I have given a particular account in the first volume of my *Travels in Savoy, Switzerland, and Auvergne*. The thermal waters of Aix were well known to the Romans.

**MOUTIERS, in the Tarentaise.**—The thermal waters rise in great abundance from the bottom of a nearly perpendicular mass of limestone. From the position of this rock, and its connection with those on the opposite side of the valley, in which the hot springs rise, I have no doubt that it is the lowest calcareous bed in that part of the Alps; but its junction with mica or talcose slate is not here seen. The thermal waters of Moutiers, contain about two per cent. of saline matter, chiefly common salt. The process of extracting it, I have described in the *Philosophical Magazine*, vol. lxiii. p. 86.

**BRIDA, in the Tarentaise.**—The thermal waters of Brida were noticed in the ancient records of Savoy, but they were covered during a sudden inundation of the valley, and their situation was concealed for many years. In the summer of 1819, another inundation, occasioned by the breaking down of the side of the glacier, laid open the spring