Rice from  $0^{\circ}$  to  $40^{\circ}$  in the Old World; and a crop has even been ripened on the banks of the Thames in latitude  $51^{\circ}28^{\circ}40^{\circ}$ . The Sugar Cane is productive in the Old World at latitude  $36^{\circ}$  and upwards when the mean temperature is  $67^{\circ}$ ; but, in America, it does not extend beyond latitude  $31^{\circ}$ . The Olive thrives in the New World only, to latitude  $30^{\circ}$  but in the Old to  $36^{\circ}$  and  $44^{\circ}$  in different localities. It requires a mean temperature from  $66^{\circ}$ to  $68^{\circ}$ , and the summer not below  $71^{\circ}$ , nor winter  $42^{\circ}r$  The Plantain ranges from latitude  $0^{\circ}$  to  $27^{\circ}$  and requires a temperature from  $82^{\circ}$  to  $73^{\circ}$ . The Oction Plant ranges from latitude  $0^{\circ}$  to  $34^{\circ}$ , but does with a winter temperature af  $58^{\circ}$ , provided the summer reach  $75^{\circ}$ . These will serve as examples. The celebrated Humbold states that, where the mean temperature does not reach  $62^{\circ}6$ , vegetation is not resumed till the mean temperature of the spring months reaches from  $42^{\circ}8$  to  $46^{\circ}4$ .

We may mention also that the station of Plants, (or the localities in which they are usually found within their natural range or habitation), depends much on physical causes, and a great variety of local circumstances. For instance the Ericece and various species of Carex and Arundo, with their long creeping and vivacious roots, occupy our sterile moors and sea shores, to the exclusion of most other vegetables, because they do not seem equally suited, if at all capable of thriving in such circumstances. These, from being found in groups, and covering large continuous surfaces, are called social Plants. There are other plants which do not spread much by root, bear few seeds comparatively, and these too exceedingly light, and easily dispersed by the action of the wind, which we find scattered abroad in all soils indifferently, and in various situations corresponding with the latitude, and growing with different degrees of luxuriance in those different situations. Some light will presently be thrown on the difference in station, when we come to consider the effect on plants of the increase or decrease of altitude.

An increase of height, or elevation above the level of the sea, has an effect in some respects similar to an increase of latitude. If we ascend mountains in the Torrid Zone we find, as we proceed, the Flowers, Shrubs and Trees, of more temperate clumates; and, by proceeding high enough, even those of the Arctic Regions. On the Volcano of Teneriffe, five distinct Zones have been found.— That of the Vines, the Laurels, the Pine &c., and lastly that of the Grasses.

But, in a mean state of the Atmosphere, the decrease of the temperature is not always uniform with the height. At the Equator the Thermometer was found by the illustrious HUMBOLDT to fall in the first 1000 yards of ascent  $1^{\circ}$  in 310 feet; in the next 1000 yards  $1^{\circ}$  in 524 feet, and in the third and fourth stages the decrease was extremely rapid, and in the fifth was reduced again to  $1^{\circ}$  in 320 feet. The mean variation throughout an ascent of 15965 feet, to the limit of perpetual snow, was  $1^{\circ}$  in 341 feet. In the Temperate Zone the deerease, in the first 1000 yards, is  $1^{\circ}$  in 253 feet. In the Temperate Zone the decrease in the first 1000 yards is  $1^{\circ}$  in 253 feet; but to the height of perpetual snow, viz., 9587 feet, the decrease is more than  $1^{\circ}$  in 100 yards.

Wheat is grown in England to the height of 1000 feet, in Scotland to up-