

sea. As we ascend above that level, the mean temperatures diminish in exposed situations ; but we have no sufficient observations to determine the rate of diminution. At Huggate on the Wolds, which is about 500 feet above the sea, the annual mean temperature is reduced from  $48^{\circ}2$  to  $46^{\circ}5$ . At Harrogate, which is about 300 feet above the sea, it is about the same.

The temperature of the earth and of springs issuing from it has not been sufficiently studied in Yorkshire. In my many wanderings through the county I have been usually intent on other matters, and have in consequence seldom been able to make observations on this subject. On Mickle Fell, at a height of 2000 feet, a spring was found to have the temperature of  $46^{\circ}$ , on the 3rd of Sept. 1851. On Ingleborough, at a height of 1900 feet, a spring gave  $46^{\circ}$  on the 2nd Oct. 1851.

On the temperature of the sea, my friends at Scarborough have lately supplied me with valuable information, confirming the statements in pp. 147, 150. (See Appendix.)

#### HUMIDITY OF THE AIR.

There is no such thing in nature as an absolutely dry atmosphere, though in some countries rain may be entirely unknown; there is also no part of the earth's surface constantly loaded with mist, though in the dreary regions of Tierra del Fuego this latter condition is almost reached; while Africa and Arabia yield types of remarkable dryness.

Rain, hail, and snow afford by their frequency, and the vertical depth of water which they yield in a year or month, not so much an accurate measure of the humidity of the air over the place of the observation, as of fluctuations and displacements in the mass of the atmosphere to the height of a few thousand feet—these changes being sometimes the result of causes put in action at some far-distant part of the globe, and sometimes the effect of local peculiarities, such as proximity to the sea, or to mountainous lands running in given directions.