the currents of fluid on the distribution of its own pressure, and the dynamical conditions of its motion, are in a high degree abstruse in their principles and complex in their results. It need not be wondered, therefore, if the study of this subject is very difficult and entangled, and our knowledge, after all, very imperfect.

In the middle of all this apparent confusion, however, we can see much that we can understand. And, among other things, we may notice some of the consequences of the difference of the laws of temperature followed by steam and by air in going upwards. One important result is that the atmosphere is much drier, near the surface, than it would have been if the laws of density and temperature had been the same for both gases. If this had been so, the air would always have been *saturated* with vapour. It would have contained as much as the existing temperature could support, and the slightest cooling of any object would have covered it with a watery film like dew. As it is, the air contains much less than its full quantity of vapour: we may often cool an object ten, twenty, or thirty degrees without obtaining a deposition of water upon it, or reaching the *dew-point*, as it is called. To have had such a *dripping* state of the atmosphere as the former arrangement would have produced, would have been inconvenient, and so far as we can judge, unsuited to vegetables as well as animals. No evaporation from the surface of either could have taken place under such conditions.

The sizes and forms of clouds appear to depend on the same circumstance, of the air not being saturated with moisture. And it is seemingly much better that clouds should be comparatively small and well defined, as they are, than that they should fill vast depths of the atmosphere with a thin mist, which would have been the consequence of the imaginary condition of things just mentioned.

Here then we have another remarkable exhibition