

necessarily be ultimately attained in greater or less degree with almost any other substance, as a result of the general tendency of chemical processes to reach a condition of equilibrium, and it will therefore be well to turn to more secure fields of inquiry.

## I

### THERMAL PROPERTIES

The most familiar among such are certain characteristics of water which have been long known, and which, as the Bridgewater Treatises and other works on natural theology testify, were formerly favorite subjects of metaphysical speculation,—the thermal properties. These characteristics of water were recognized at an early stage in the development of modern science, and in many cases their special importance in meteorology and in other departments of the sciences of nature is almost self-evident.

## A

### SPECIFIC HEAT

First among these is the heat capacity or, as it is more commonly termed, the specific heat of water. This quantity has the value of