

## CHAPTER X.

## CIRCULATION.

§ 1. *Diffused Circulation.*

ANIMAL life, implying mutual actions and reactions between the solids and fluids of the body, requires for its maintenance the perpetual transfer of nutritive juices from one part to another, corresponding in activity to the extent of the changes which are continually taking place in the organized system. For this purpose we almost constantly find that a circulatory motion of the nutrient fluids is established; and the function which conducts and regulates their movements is emphatically denominated *the Circulation*. Several objects of great importance are answered by this function; for, in the first place, it is through the circulation that every organ is supplied with the nutritive particles necessary for its development, its growth, and its maintenance in a healthy condition; and that the glands, in particular, as well as the other secreting organs, are furnished with the materials they require for the elaboration of the products, which it is their peculiar office to prepare. A second essential object of the circulation, is to transmit the nutritive juices to certain organs, where they are to be subjected to the salutary influence of the oxygen of the atmosphere; a process which in all warm-blooded animals, combined with the rapid and extensive distribution of the blood, diffuses and maintains throughout the system the high temperature required by the greater energy of their functions. Hence it necessarily follows that the particular mode in which the circulation is conducted in each respective tribe of ani-