mals, must influence every other function of their economy, and must, therefore, constitute an essential element in determining their physiological condition. We find, accordingly, that among the characters on which systematic zoologists have founded their great divisions of the animal kingdom, the utmost importance is attached to those derived from differences of structure in the organs of circulation.

A comprehensive survey of the different classes of animals with reference to this function, enables us to discern the existence of a regular gradation of organs, increasing in complexity as we ascend from the lower to the higher orders; and showing that here, as in other departments of the economy of nature, no change is made abruptly, but always by slow and successive steps. In the very lowest tribes of Zoophytes, the modes by which nutrition is accomplished can scarcely be perceived to differ from those adopted in the vegetable kingdom, where, as we have already seen, the nutritive fluids, instead of being confined in vessels, appear to permeate the cellular tissue, and thus immediately supply the solids with the materials they require; for, in the simpler kinds of Polypi, of Infusoria, of Medusæ, and of Entozoa, the nourishment which has been prepared by the digestive cavities is apparently imbibed by the solids, after having transuded through the sides of these organs, and without its being previously collected into other, and more general cavities. This mode of nutrition, suited only to the torpid and half vegetated nature of zoophytes, has been denominated *nourishment by imbibition*, in contradistinction to that by *circulation;* a term which, as we have seen, implies, not merely a system of canals, such as those existing in Medusæ, where there is no evidence of the fluids really circulating, but an arrangement of ramified vessels, composed of membranous coats, through which the nutrient fluid moves in a continued circuit.

The distinction which has thus been drawn, however, is one on which we should be careful not to place undue reli-