

## CHAPTER II.

## THE MECHANICAL FUNCTIONS IN ZOOPHYTES.

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 § 1. *General Observations.*

THE mechanism of an organized being is designed to fulfil various important objects. These we may distinguish into two classes; the one having reference to its internal welfare, the other to its relations with external bodies. The different parts of its system must, in the first place, be mechanically united and supported, as well as protected from injurious external impressions; and they must at the same time be so constructed as to admit of all the internal movements, which the performance of their functions renders necessary. They must, in the second place, be made capable of exerting upon external matter the actions which conduce to their well being; and, in order to enlarge their sphere of action, they must have the power of transferring the whole body from one place to another; or, in other words, of effecting its *progressive motion*.

The objects included in the first of these branches of the mechanical functions are answered by the organization both of the vegetable and the animal systems: but those of the latter belong exclusively to the functions of animal life. The power of locomotion, more especially, constitutes the most general and palpable feature of distinction between these two classes of beings. A plant, during the whole period of its existence, is fixed to the spot where it was first produced, and is dependent for the continuance of its life on local circumstances; such as the nature of the soil in which its roots are imbedded, and the qualities of the air and wa-