

and which, though commonly present, is yet not necessary to the existence of a zoophyte. To the structure and functions of the former I limit myself in this chapter; and should the reader find the outline given in relation to some of the families too slight and sketchy, I may advertise him that he will find it filled up with greater detail in the observations which it is intended to prefix to each separate order.

The description usually given of the structure and functions of polypes in general has been derived principally from an examination of the Hydra—a naked species which inhabits ponds and ditches. A polype is thus represented as being a somewhat globular or cylindrical body of small size, of a homogeneous gelatinous consistence, and very contractile, in the centre of which there is excavated a cavity for the reception and digestion of its food. The aperture to this cavity is placed on the upper disk of the body, and is encircled by one or two series of filaments or tentacula which are used to capture the necessary prey, and bring it within reach of the lips; while the opposite end serves the purpose of a sucker to fix the creature to its site, or being prolonged like a thread down the hollow sheath, to connect it with its fellow-polypes of the same polypidom, which by this means become compound animals, “the whole of whose parts are animated by one common principle of life and growth.” There are no organs of sense, no limbs appropriate to locomotion, no circulating vessels, no nerves, nor lungs, nor gills, no chylopoetick viscera, nor intestine, for there is “but one conduit both for purgation of their excrements, and reception of their sustenance;” and when to these negations there is to be added the want of generative organs, a being of simpler organization than the polype can scarcely be conceived; and, perhaps, it is actually the simplest, for the infusory animalcules which had been placed underneath them in the scale of organization, are now known to possess a much more complex structure.

Such is the idea of a polype we obtain from the writings of Ellis, and the description of its general structure given by Lamarck,\* after an interval of seventy years, is identically the

\* Anim. s. Vert. ii. 10. Bosc, Vers, ii. 216.—Lamouroux in 1810 and 1812 had indeed asserted that the polypes with polypidoms could not, in relation to their structure, be compared with the fresh-water hydra, but that they approxi-