

ceived from an external source, and circulating through the whole animal, there is not merely an upward growth, but creeping tubes, "full of the same living medullary substance with the rest of the body," are projected from the base along the surface of the object of fixture. "These tubes not only secure it from the motion of the waves, but likewise from these rise other young animals or corallines, which growing up like the former, with their proper heads or organs to procure food, send out other adhering tubes from below, with a further increase of these many-headed branched animals; so that in a short time a whole grove of vesicular corallines is formed, as we find them on oysters, and other shell-fish, when we drag for them in deep water." *

There are many facts which prove that the growth of these polypidoms is very rapid, but not more so than might be anticipated when it is remembered how vast is the number of polype architects; and no sooner is a new branch extended than it becomes almost simultaneously a support of new workers which, with "toil unwearyable," add incessantly to the materials of increase. Their duration is various: some have only a summer's existence, as *Campanularia geniculata*; many are probably annual, and the epiphyllous kinds cannot at most prolong their term beyond that of the weed on which they grow: but such as attach themselves to rocks are probably less perishable, for their size and consistency seem to indicate a greater age: it is thus with the *Tubulariæ* and some of the compound *Sertulariadae*.

But the life of the polypes considered abstractedly is probably in no instance coetaneous with the duration of the polypidom, for the lower parts of this become, after a time, empty of pulp and lifeless, and lose the cells inhabited by the polypes,

* Ellis and Solander's *Zoophytes*, p. 33.

" New buds and bulbs the living fibre shoots
 " On lengthening branches, and protruding roots;
 " Or on the father's side from bursting glands
 " The adhering young its nascent form expands;
 " In branching lines the parent-trunk adorns,
 " And parts ere long like plumage, hairs, or horns."

Darwin's Temple of Nature, Canto ii.