

which, in an old specimen, are to be found in a state of activity only near the summit, or on the new shoots. The *Thuiaria thuja* affords a remarkable example of this fact; the branches which carry the polypes dropping off in regular succession as younger ones are successively formed, so that the polypidom retains, throughout its whole growth, the appearance of a bottle-brush, the naked stem and the branched top being kept in every stage in a due proportion to each other. *Sertularia argentea*, *Plumularia falcata*, &c. are subjected to the same law,—the primary polypiferous shoots being deciduous, so that in them also the stalk becomes bare, while the upper parts are graced with a luxuriant ramification loaded with tiny architects. But in our eagerness to generalize, let us not forget that there are some species, as *Sertularia pumila*, *abietina*, &c., in which this process of successive denudation is not observable,—perhaps, however, because of their form, which is not of a kind to be altered by it, and hence unnoticeable, or because the duration of the whole is too fugitive to permit the law to produce a visible effect.

There are facts which appear to prove that the life of the individual polypes is even more transitory than their own cells; that like a blossom they bud and blow and fall off or are absorbed, when another sprouts up from the medullary pulp to occupy the very cell of its predecessor, and in its turn to give way and be replaced by another. When speaking of flexible corallines Lamouroux says, "Some there are that are entirely covered with polypi through the summer and autumn, but they perish with the cold of winter: no sooner, however, has the sun resumed his revivifying influence than new animals are developed, and fresh branches are produced upon the old ones."* Of the *Tubularia indivisa*, Sir John G. Dalyell tells us that "the head is deciduous, falling in general soon after recovery from the sea. It is *regenerated at intervals* of from ten days to several weeks, but with the number of external organs successively diminishing, though the stem is always elongated. It seems to rise within this tubular stem from below, and to be dependent on the presence of the internal tenacious matter with which the tube is oc-

* Corall. Flex. p. xvi.