

But this death is not in progress alone at the base of the column or branch. Generally the *whole interior* of a corallum is dead, a result of the same process with that just explained. Thus, a Madrepora, although the branch may be an inch in diameter, is alive only to the depth of a line or two, the growing polyps of the surface having progressively died at the lower or inner extremity as they increased outward.

The large domes of Astræas, which have been stated to attain sometimes a diameter of ten or fifteen feet, and are alive over the whole surface, owing to a symmetrical and unlimited mode of budding, are nothing but lifeless coral throughout the interior. Could the living portion be separated, it would form a hemispherical shell of polyps, in most species about half an inch thick. In some Porites of the same size, the whole mass is lifeless, excepting the exterior for a sixth of an inch in depth.

With such a mode of increase, there is no necessary limit to the growth of zoöphytes. The rising column may increase upward indefinitely, until it reaches the surface of the sea, and then death will ensue simply from exposure, and not from any failure in its powers of life. The huge domes may enlarge till the exposure just mentioned causes the death of the summit, and leaves only the sides to grow, and these may still widen, it may be indefinitely. Moreover, it is evident that if the land supporting the coral domes and trees were gradually sinking, the upward increase might go on without limit.

In the following of death after life "*æquo pede*," there is obedience to the universal law. And yet the polyps, through this ever yielding a little by piecemeal, seem to get the better of the law, and in some instances secure for themselves almost perpetual youth, or at least a very great age. Of the polyps over an Astræa hemisphere, none ever die as long as the dome is in a condition of growth; and the first budding individual, or at least its mouth and stomach, is among the tens of thousands that constitute the living exterior of the dome of fifteen feet diameter. In the Madrepore, the terminal parent-polyp of a branch grows on without being reached by the death-