

order, the cell, although pre-eminently entitled to the name of polypidom from its appearance and use, is a living portion of the animal which it seemingly contains. The cell is in fact the outer tunic of the polype, analogous to the envelope of the compound mollusca, endowed certainly with no very sensible or active properties of life, yet in organic connection with the interior parts and liable to organic changes. The relationship in which they stand to one another is nearly, if not precisely, the same as that which the fleshy crust of the Asteroida bears to its polypes, as a comparison of the Alcyonium with the Alcyonidium or Alcyonella will render sufficiently plain; and it is not less real even in those genera where the cells, when dried, have hard calcareous and apparently impermeable parietes. For the proof of this fact,—a very important one in their physiology, and in any question touching their rank in the animal kingdom,—naturalists are principally indebted to Milne-Edwards, and I cannot do better than lay his arguments in its behalf before the reader in a translation of his own words. \* The connection is effected by means of an inner tunic which, after enclosing the polype's body as in a pouch, is afterwards reflected over the aperture of the cell,—the reflected portion becoming exterior and solidified either by calcareous depositions in its texture, or by a mutation of its thin membranous character into a horny investment better suited to the office it has now to perform of protecting the sentient body from a too rough contact of the medium in which the animals live, and from worses foes. From this mode of connection it results that when the polypes retire within, they at the same time must close the aperture to their cells, for that portion of the inner tunic which is pushed outwards by their exit, in their withdrawal follows the body by a process of invagination, becoming at one and the same time a sheath for the column of tentacula, and a plug to the aperture, which, when of a flexible material, has its margins also drawn tighter and closer together.

The polype which endues itself with this cell is widely different from any previously described; and in a system that should pretend to arrange animals according to their agreements in organization, could not be placed in one common class. Be-

\* See Additional Note, No. 4.