

thirty-five of these partitions. The general outline of the cells is cylindrical (*Fig. 14^b*), usually circular, but in certain cases prismatic. From the foregoing it will be seen that the hydræ have no lateral communication with each other, through the mass of the corallum, but that their relations are altogether superficial. A longitudinal section of the cells would seem to show that this is not so, when we find two cells (*Fig. 14^b, h c*) uniting below in one chamber (*m*); but we have found that this was only the case when the hydræ were down at that level, and consequently superficially related, whereas, at later periods, they were not only separated from the lower chambers by the transverse partitions, but, by the same means, from each other.

SECTION III.

SERIATOPORA SUBULATA LMK.

The intervals between the cells at the tip of the branches (Pl. XV. *Fig. 15, a b c*) are as distinctly marked out as in *Pocillopora damicornis*, and the calcareous deposit equally solid. The borders of the cells at this point are fringed by rather blunt spinules (*h*), arranged in an irregular row. At the very earliest stages of growth recognizable on the corallum, the young cell possesses a columellar projection, such as is so prominent in the older cells (*Fig. 15, j k*). Originally, then, these young cells have the form of inverted, truncated cones, which finally deepen and become parallel sided (*Fig. 15^a*), but as they do this the central columella rises, and at the same time, usually, four perpendicular partitions, at ninety degrees from each other, are thrown out from the axis to the periphery, in such a way as to produce four cavities (*Figs. 15, f i, and 15^a, d e*) around the axis. After the cell has attained a depth usually equal to its breadth, a transverse diaphragmic partition (*Fig. 15^a, f g*) is developed, and then another chamber, or rather a fourfold cavity is formed, to be eventually partitioned off like the preceding one, and so on until the end of the existence of the hydra. Throughout the whole corallum, we find the calcareous deposit solid and amorphous, so that it is not possible that the hydræ should have any lateral communication with each other, excepting at the surface of the colony. At the oldest part of the corallum the spinules are scattered, and have no trace of the serial arrangement which obtains in the younger parts of the branches.

From the peculiar characteristics of this genus, I infer that the *Corallaria Rugosa* of Milne-Edwards are more likely to have been Hydroids than true Polyps.