

secondary intraseptal, then follow the twelve tentacles of the tertiary intraseptal spaces which are visibly smaller, whilst the twenty-four last tentacles communicate with the interseptal spaces. The difference in the size of the tentacles is, however, rarely so marked as this, for a partial or complete equalisation in their size usually takes place at an early period of development.

When there are a large number of tentacles there is no room for them in a single row, but they are forced to form several rows, of which the inner are the oldest, the outer the youngest. All the tentacles of the same circle are essentially of the same size, but a difference in size may arise between different circles, which is shown by the innermost, and therefore oldest, tentacles being the largest, the outermost and youngest the smallest. If uniform growth take place in all parts of the body of the Actinia, the whole of the circles are arranged, as may often be seen, in multiples of six. For example, twelve tentacles of equal size form the innermost circle, if it be composed of tentacles of the first and second order; twenty-four, if those of the third order be added to the number; the next circle would then be occupied by the twelve or twenty-four succeeding tentacles of the sequence. There are often, however, numerous variations, caused by unequal growth in the different sextants; for example, the tentacles of the third order may have advanced into the innermost circle in one sextant, whilst in another sextant they remain in the next circle. In this way it may happen that the arrangements of the tentacles and of the septa do not correspond completely, even though they are not directly contradictory, since the tentacles of a later order are, at all events, not larger than those of a preceding order. I only know one exception to this rule, *Polysiphonia tuberosa*, to the description of which I refer the reader.

Hitherto I have only spoken of tentacles which are placed on the margin, and which always remain equivalent to each other even when, changing their position for want of space, they have retreated on to the oral disk, and become apparently arranged in several rows. I have already placed these primary tentacles in opposition to the secondary tentacles, which are associated with the primary in the Corallimorphidæ (Pl. II. figs 1 and 3). They form a system in themselves, and are placed half-way between the peripheral and oral margins of the disk. They correspond only to the intraseptal spaces, and their size is graduated according to the age of the latter. The above-mentioned rule undergoes an exception here, as each intraseptal space communicates with two tentacles, a primary placed on the margin, and a secondary placed on the disk. The Corallimorphidæ are the only exceptions which I have observed, for the Cerianthidæ, which are usually described as Actiniæ with a double corona of tentacles, cannot be considered here because of the aberrant arrangement of their septa, which are not united in pairs, thus rendering the distinction between the intraseptal and interseptal spaces impossible.

The septa bear the reproductive organs, the mesenteric filaments, and in many families