

posed of bundles of fibrillæ, which are chiefly flattened in a lateral direction, so that the stratum seems to consist merely of apposed bands of muscles. As each band is repeatedly indented laterally, and can be dissected into separate pieces lying one below the other, they give rise to the very complicated formation shown in fig. 10, which is specially striking from the close apposition of the bundles of fibrillæ.

The bundles of fibrillæ are more scattered in the younger animals; smaller bundles of fibrillæ are also found here lying towards the ectoderm in the intermediate layer of connective tissue. It is quite conceivable that these smaller bundles may have migrated from the ectoderm into the mesoderm, in order to supplement the mesodermal muscular layer. The state of preservation of the material did not allow me to confirm this supposition, as I could not make out whether or not radial muscular fibres were persistent in the ectoderm. In the peripheral part of the oral disk the bundles of fibrillæ pass into the tentacles, where they preserve exactly the same arrangement and position in the mesoderm.

The corona of tentacles is immediately contiguous to the wall, whilst in *Tealia crassicornis*, which in other respects is not unlike *Dysactis* in its general habit of body, it is separated from the wall by a portion of the oral disk capable of becoming pleated. The corona consists of several hundred tentacles, which are distributed in four to five rows, and decrease distinctly in size from within outwards. If we examine an animal which is developed uniformly in all sextants, we find twenty-four tentacles in the first or innermost row, and twenty-four tentacles also in the second row, which alternate with the preceding twenty-four. In the third row the number rises at once to forty-eight, which are placed in such a way that they alternate both with the twenty-four tentacles of the first row, and the twenty-four of the second row. In the fourth row the number is again doubled, so that it consists altogether of ninety-six tentacles, which still alternate with all the preceding tentacles. The last row is always irregularly developed; the number of tentacles ought to amount to 192, but only came to some 90.

It will be seen at once from this mode of arrangement that all the tentacles of *Dysactis*—and this applies to almost all Actiniæ—lie in different radii, and must therefore belong to different radial chambers; they are merely parts of a single circle which have become distributed in different rows, from being displaced in the course of growth. It follows necessarily, from the whole mode of arrangement, that the separate rows of tentacles stand in regular relation to the radial chambers, as the same principle of arrangement, viz., that each cycle contains the same number of units as all the preceding taken together, applies to both. From my own observation in making preparations, I am convinced that the twenty-four tentacles of the first series belong to the twenty-four intraseptal spaces of the septa of the first to the third orders, the next twenty-four tentacles to the twenty-four intraseptal spaces of the fourth order, and so on.

Exceptions occur to the conditions which I have laid down as regular, but these can