

the animal is very irregularly developed; the number of marginal tentacles amounts to fifty-six, larger and smaller generally alternating; two cycles, each of twenty-eight, might thus be recognised, did one not consider that the tentacles of each cycle differ markedly and somewhat irregularly in size. One is compelled to rank under the primary circlet, tentacles which in diameter are far short of tentacles of the second order. Even more irregular is the arrangement of those tentacles which are situated on the disc: their total number, twenty-three, falls into three cycles, six tentacles being placed near the mouth (oral tentacles), ten near the edge (peripheral tentacles), and seven intermediately. Despite these apparently irregular numbers, I have noticed the complete validity of a law in one-half of the animal, and it is of importance that this regular half commences with the one pair of directive mesenteries and reaches to the other, thus just completing one side of the animal. In the half in which a regular arrangement is followed, we have three oral, six intermediary, and six peripheral, accessory tentacles. The six intermediary alternate with the six peripheral, three of them standing on the same radius as the oral tentacles. If we compare with these the marginal tentacles, the larger twelve are on the radii already occupied by the tentacles on the disc, while the smaller twelve are placed on the intermediate radii. At each of two points two tentacles are present, a larger and a smaller; and, being out of accord with the law which governs *Actiniæ*, are either a token of the commencement of further growth, or constitute a case of those numerous abnormalities which occur in the group.

In the other half of the animal occur important gaps in the ground plan just quoted. The three oral tentacles are in the same place as in the other half, (one is over the chamber bounded by the directive mesenteries), but five of the intermediary tentacles and two of the peripheral are wanting. The single intermediary tentacle occurs in the region bordering on the directive mesenterial chamber just mentioned; this region is normally arranged, the peripheral tentacles being also present on it. As with the tentacles on the disc, so also the marginal ones exhibit great irregularities; their number amounts to twenty-eight; in size their relations are also variable, so that the rule, that larger and smaller tentacles alternate, is in places infringed.

The peculiar results of a macroscopic examination induced me to cut out a sextant of the animal for a closer study by means of sections, choosing that sextant of the normal side which contained the directive septa, and which only departed from the regular scheme of the *Hexactiniæ* in the presence of two supernumerary tentacles. The results were, that the mesenteries are grouped in pairs by the arrangement of their muscles thus,—one pair of directive mesenteries, and four other pairs, all of which reach to the stomatodæum. Of these four pairs I reckon one in the second cycle, two in the third, the remaining pair being developed asymmetrically and repeating the irregularity already noticed in the tentacles.

From the intra-mesenterial chamber of the directive septa are evaginated three