

cavity, but extends to the extremity of the so-called arms. The peculiar lobed outline of the disk is owing to the development of the system of radiating tubes; and the evidence of this connection may be found in the fact, that the deeper emarginations correspond to the position of the eyes, at the end of eight simple, radiating tubes, and the lesser emarginations to the ends of similar simple tubes without eyes, combined with an even development of comparatively small tentacles, along the whole margin, with the exception of the spaces occupied by the eyes, which are, however, themselves modified tentacles. It is, therefore, plain that the form of *Aurelia* presents a pattern distinct from that of *Cyanea*, in which the tentacles are gathered up in large bunches, on the under surface of the disk, at considerable distance from the margin, facing deep indentations of its outline, much deeper, indeed, than those of the *Aurelia*, and occupying a position homological to that of the lesser indentations of the latter. It differs equally, though in a different way, from *Sthenonia*, in which the position and arrangement of the tentacles recall *Cyanea*, while the lobes of the margin are different from both, and the oral appendages quite diminutive. We shall have an opportunity, hereafter, to show that *Pelagia* must be considered as the type of another family.

SECTION IX.

GENERIC CHARACTERS OF AURELIA, AND SPECIFIC CHARACTERS OF THE AURELIA FLAVIDULA OF NORTH AMERICA.

In families composed of a single genus, naturalists have generally been satisfied with the statement, that the generic character coincides with that of the family; but, if genera are founded in nature and based upon a different category of characters from those which distinguish families, this practice ought not to prevail. It may be more difficult to ascertain the characteristics of a genus which stands alone, and to discriminate between those structural features which are generic and those which belong to the family; but, surely, if a second genus should be discovered at a later time, belonging to a family up to that period containing a single genus, from that time forward, at least, the older genus could no longer be said to be characterized by the same features as the family. Our ignorance, therefore, of the existence or non-existence of other genera in nature does not alter the case, and I hold that it is incumbent upon a naturalist, at least to attempt to trace the characters of such a genus. In the family of *Aurelidæ*, it appears to me, that the single genus of which I have any knowledge is likely to be characterized by those structural peculiarities which, having no direct bearing upon