

the form, are yet easily noticed. Now, the mode of ramification of the branching chymiferous tubes, the form of the lobes protecting the eyes, the arrangement of the folds of the ovaries and spermaries, the form and position of the digitate appendages of the sexual organs, the mode of insertion of the tentacles along the margin of the disk, the extension of the veil below the tentacles, the character of the fringes along the margin of the mouth and of the arms, are likely to belong to this category. I would therefore consider, in *Aurelia*, as generic characters, the fact that there is a narrow veil along the inner margin of the disk; that the tentacles are covered with beads of lasso-cells, and arise in sockets between flat, vertical lobules; that the eyes are protected by two broad-spreading lappets, which may be bent over the eye-peduncle; that the margins of the mouth and arms are fringed with small feelers; that the ovaries and spermaries form a wreath of lobes around the sides of the sexual pouches; that the digitate appendages, consisting of simple fusiform feelers, are arranged in many rows along the folds of the spermaries and ovaries, and occupy a band about as broad as those organs themselves; that the cavity below the sexual pouches is coextensive with them, but tapers downwards in the shape of an open funnel; and that the branching chymiferous tubes form a network of anastomoses, becoming more and more intimate towards the margin of the disk, where they lose, in a measure, their radiated arrangements, to form a closer network. But if all the points I have here enumerated are truly generic characters, and if the illustrations of the structure of the *Aurelia aurita* of Europe given by Ehrenberg are correct in their details, I entertain some doubts as to the generic identity of our species and its European representative; for Ehrenberg represents the eye on a very large scale, and yet his figure does not at all agree with that of our species; nor do the tentacles appear to be inserted in sockets and separated from one another by distinct lobes, as I have represented them, Pl. VII. *Figs.* 2, 3, and 4. No one of the many observers, who have described the *Aurelia aurita* of Europe, has made the slightest allusion to the existence of such lobes; nor is the veil below the tentacles mentioned, though it seems to be figured by Ehrenberg in Pl. IV. *Fig.* 1 of his paper, while Gegenbaur refers *Aurelia* to a group of *Acalephs*, his *Acraspeda*, which he characterizes as destitute of a veil. Again, Ehrenberg's representation of the appearance of the marginal feelers of the arms, in his Plate VIII. *Fig.* 1, does not agree with what I have seen and represented in our species (Pl. VII. *Fig.* 7, and Pl. VIII. *Fig.* 9). Whether these discrepancies indicate generic differences, such as I consider the insertion of the tentacles in the sockets, and the presence of distinct and comparatively large flat lobes between the tentacles to be, or only specific differences, such as I consider the club-shaped fingers of the arms of the European species, compared to the pointed fingers of our species