DISCOPHORÆ.

at one point (Pl. X. Fig. 1 y^1), where they are so densely packed together as to appear quite dark. The Purkinjean vesicle (p) is very clear and homogeneous, and is one quarter of the diameter of the egg. The Wagnerian vesicle (w) is a clear cell, which occupies a little less than one half of the diameter of the Purkinjean vesicle. The yolk sac (Fig. 2 v) of the mature egg is quite thick, a peculiarity before noticed, when speaking of the mature egg of Aurelia (Pl. X^{*}. Fig. 23). The yolk is divided into two kinds: an outer, thick layer (y) of very transparent, rather coarsely granular substance, and a central mass (y^1) of densely crowded dark grains. The Purkinjean vesicle has burst, but the place which it occupied is marked by a clear space (p) in the darker yolk mass (y^1) .

THE PLANULA OF CYANEA. There is a remarkable difference between the mode of development of Aurelia and that of Cyanea, and this, too, from the earliest period after the segmentation of the yolk. The embryo of Cyanea, in its globular state (Pl. X. Fig. 3), has not more than two thirds the diameter of that of Aurelia. The figure given here was drawn from a specimen magnified five hundred diameters. The vibratile cilia are very short and faint, and difficult to detect when the animal is revolving rapidly. The cells of the exterior are very prominent, so that the surface of the revolving globe appears as if papillated. They are also very transparent to a considerable depth; but, although appearing like a thick envelope, they do not as yet form a distinct wall apart from the interior mass. The bulk of the body consists of a dark gray mass of cells, in the centre of which is a clear portion, equalling one third of the diameter of the whole body. In this solid state the embryo moves about in the same manner as the young of Aurelia, and gets into the pouches of the proboscis by the same process.

From the globular state the embryo passes to a more active existence, and, increasing considerably in diameter, changes its form to a broadly ovate shape (Figs. 4 and 4^{*}), and its cilia grow to more than double their former length, and The outer transparent layer of the cells retains the become quite conspicuous. thickness of the last phase, but the inner dark gray mass changes to a great extent and its peripheric portion becomes very dark orange red, whilst the interior region, constituting two thirds of the whole body, grows very clear, like the periphery of the embryo. The revolutions of the body are now very rapid, and, its axis of rotation corresponding to its greater diameter, the embryo moves in direct lines from place to place, with the broader end forward. The vibratile cilia incline to the body at different angles at different times; when the rotation is slow they project nearly at right angles, but when it is rapid they incline, contrary to the direction of the revolution, at an angle of forty-five degrees or even less (Fig. 4"). In the latter instance the cilia appear as if swept backward by a swift current, whereas the movement of each one is completely under its own control, as may