

finally, referred to the special description of its further development in a chapter set apart for the subject. We will now, in continuance of the subject, first consider the wall of the Purkinjean vesicle, which may be characterized as excessively tender, especially in the older eggs; and as regards its thickness, there is hardly any appreciable distance between its outer and inner surfaces till the last days of its interovarian life (Pl. 9, fig. 11b).

No two eggs of equal size contain Purkinjean vesicles of the same diameter, and a larger egg may still have a vesicle not surpassing in size that of a smaller one. This disproportion remains constant throughout the ovarian life of the egg. After the Purkinjean vesicle has defined itself, it continues to increase in size for quite a length of time, before any thing appears to disturb the homogeneity of its contents; but at last, about the time when its diameter equals perhaps one fourth that of the egg, a faint spot or two obtrudes upon the clear field (Pl. 8, fig. 8a). Difficult to recognize at first, these spots soon make plain their position (fig. 11a and 12) on the wall, where they remain, as well as those succeeding them, till quite late in the life of the parent. When the Purkinjean vesicle has reached a size but a little larger than that of the last, these spots, the Wagnerian vesicles,¹ almost entirely cover the wall of their parent, simulating, by their clearness and roundness of contour, drops of dew lining a glass globe (Pl. 8, fig. 14a). It is obviously best to describe here, at the starting point of these bodies, the mode of origin of the Wagnerian vesicles, the entoblasts of the egg cell and of the little dots, the Valentinian vesicles, the entosthoblasts of the egg cell, which arise in them. At the same time it will not be amiss to indicate the parallelism which may be traced between their growth and the mode of genesis of the yolk cells.

The clear, transparent nature of the younger states of the Wagnerian vesicles is gradually lost in a certain measure, and superseded by a pearly or milky complection, bounded by a rather dark, soft outline, (Pl. 8, fig. 15a, a,) calling to mind the appearance of the denser species of *Medusæ*, or the bluish transparency of boiled cartilage; at the same time there appears a very bright, irrefractive, eccentric spot, (fig. 15a, b,) the Valentinian vesicle.² The latter increases in size (fig. 15a, b, c, d, e, f, f¹) at a greater proportionate rate than its parent, the Wagnerian vesicle, till at its final stage it oftentimes occupies three fifths of the diameter of the generating medium (fig. 15a, f, and f¹, fig. 22, e, 24b; Pl. 9, fig. 4a); yet even then it refracts so slightly as to be hardly appreciable; but in a certain light, owing to its great transparency compared with the pearlyness of the surrounding substance, it appears darker than the latter, and under

¹ See note 1, p. 463, and note 2, p. 475.

² See note 1, p. 463.