

ent layer, pressing closely upon the exterior of the "tunica granulosa," and apparently developing by the cohesion of the exterior cells of the latter¹ (Pl. 8, fig. 9). Not long after this, upon an egg just visible to the naked eye, this layer exhibits faint traces of being doubled, yet withal retains pretty nearly its pristine transparency (Pl. 8, fig. 12, *a*; Pl. 9a, fig. 13, *a*). Upon an egg one sixteenth of an inch in diameter its fibrous structure has become quite apparent (Pl. 9a, fig. 16, 16a, *a*); and another ovum one tenth of an inch in diameter is inclosed by a double membrane, the inner layer of which (Pl. 9a, fig. 18a, *a*) is as thick as the zona (fig. 18a, *e*).

On account of the appearance of bloodvessels in the stroma, at this time, by which the thickness of the latter is disguised, we can only say that it becomes a more loose, network-like tissue, the outer layer of which is very movable upon the inner. This is particularly noticeable in full-grown eggs. The bloodvessels of the stroma develop pretty uniformly over the whole of its extent, excepting a circular area at the most distal side, where they suddenly thin out into fine capillaries, anastomosing among themselves (Pl. 9, fig. 5, 7, 8, 9, 10; Pl. 9a, fig. 32). Just before the exclusion of the egg from the ovary at the breeding season, the bloodvessels become very much gorged, (Pl. 9a, fig. 32,) so that the larger eggs appear to be covered by an almost continuous blood-red layer. The bloodvessels, as they come up to this area, the region of the "cicatricula," suddenly bend upon themselves without diminishing their diameter, and commence their returning course. Now it is at this sudden bend that the capillaries which supply the cicatricula take their rise, and into this their return currents empty (Pl. 9a, fig. 32). After the exclusion of the egg, these vessels become paler, and are to all appearances fewer in number; they gradually disappear with the resorption of the corpus luteum.

The Tunica granulosa. In a former section² it has been shown, that, at the time of the formation of the egg, the cells of the Graafian follicles were not arranged in any particular manner in reference to the body which was developing among their interstices. By and by the egg has grown to such a size (Pl. 8, fig. 1, *h*¹; Pl. 9a, fig. 10) that the inclosing cells may be said to form an enveloping layer, although they have not changed in the least as regards their form; nor does this happen even when the egg has attained to a much larger size (Pl. 8, fig. 1, *o*¹; Pl. 9a, fig. 11). As we have before mentioned in passing, the cells of the follicle, around the younger eggs, are very transparent, of thin contour, with a nearly spherical shape, each containing a central, faint, and comparatively large mesoblast.

¹ See, below, p. 484.

² See Sect. 1, p. 454.