

There are two vessels to be seen here, one on each side of the body, which run, from the region of the allantois, forward (wood-cut 1, i^2)—as the arrows indicate (Pl. 13, fig. 2)—along the sides of the body, and empty into the heart. That these are the allantoidian veins there can be no doubt, since no other vessels are developed in this region at any time. Between the point of origin of the allantois, on the one hand, and the anterior edge of the abdominal opening, on the other, the subsidiary layer remains in open communication with the mass of yolk below.

As this layer proceeds beyond the edge of the abdominal cavity, it rises gradually, until, at the edge of the area pellucida, it comes to a level with the back of the animal, and with it presses closely against the shell membrane. At the same time it bears along, within its thickness, the vessels of the vascular area, so far as the vascular network extends. The vessels of the vascular area have become very distinct, and run more parallel to each other than heretofore. Those which arise distinctly from the dorsal artery have considerably decreased in number, but are enlarged, as regards the size and capacity of each; moreover, they have a general tendency towards one point (Pl. 13, fig. 3, g) of the body. The head and fore part of the body are sunk so much towards the centre of the yolk, that the subsidiary layer forms a very deep hood, (Pl. 13, fig. 2,) as it folds upwards around the cephalic region, and rises to a level with the other portion of the layer. About this time the body turns upon its axis, (Pl. 13, fig. 2, and 8,) so as to present its left side towards the centre of the yolk. This change in the position of the embryo has been noticed in a former paragraph, (p. 541,) where it was shown that it is owing to the closing over of the amnios, by which process that portion of the amnios which embraces the body is separated from the peripheric portion of the germino-amniotic layer, and the latter part ceases to support the body in a vertical position.

In the next more developed phase which we have investigated, the embryo is so much bent upon itself as to form a semicircle; but the head and thorax are more suddenly curved than the posterior region of the body. The end of the head is more elongated and pointed. The brain (Pl. 24, fig. 7, e^2 , e^6) is divided into at least three lobes or compartments, by two deep folds trending in the direction of the axis of the body, the deeper one of which (e^6) is behind the eye, (k) and the other before it. The eyes (fig. 7, k , and fig. 7a, k) are increased in size. The ears (Pl. 24, fig. 7, l) are very broad, trumpet-shaped. The dorsal vertebræ have extended very far into the tail (Pl. 24, fig. 14, f ; fig. 15, f); but they are very diminutive there, in comparison with those in the more anterior region of the cerebro-spinal axis, and the vertebral layer (fig. 14, f^1) extends to the tip of the much elongated tail. The heart (Pl. 18a, fig. 11, h^3 , h^4 , fig. 12,