from the same point (fig. 4 and 5, j^3) at which the double dorsal artery (fig. 4 and 5, j^2) unites to form a single channel in the abdominal region, between the Wolffian bodies (fig. 4, q). The abdominal veins (fig. 4, i^3) are more distinct from the Wolffian bodies (q); the zigzag lines on the Wolffian bodies appear to be in direct communication with the abdominal vein, and, moreover, have a strong red tinge, from which we should judge that they are the bloodvessels of the body in which they are situated. The liver (Pl. 18a, fig. 4 and 5, r) is hollowed on its upper side, and on its lower and posterior side a dark body (fig. 5, u) is imbedded, which, from its position and green color, must be the gall bladder. The Wolffian bodies (fig. 4, q) are not quite so long as heretofore. The abdominal parietes are now closed over, with the exception of a small opening for the passage of the neck of the allantois, and the connection of the intestine and the yolk sac.

The allantois not only covers the whole body, but spreads almost as far as the vascular area (Pl. 16, fig. 3). It is most extended on that side which faces the ventral surface of the embryo, and its vessels have attained to a very large size, much exceeding, in this respect, any of those in the vascular area, even the vena afferens (r^1). The allantois of one of the figures (Pl. 15, fig. 13) representing this stage of development is very much shrunk by being withdrawn from its area of expansion and crowded up near the embryo. It will be noticed how highly vascular the whole surface of the embryo is; from the end of the head to the tip of the tail, the animal appears like a great vascular organ performing respiratory functions. This peculiarity remains permanent in some adult Turtles, namely, in the family of Trionychidæ.[1] The vascular area, as far as it extends superficially, covers about one half the yolk sac, and the vena afferens (Pl. 16, fig. 3, r^1) is plunged deeper than ever into the yolk mass. At the exterior edge of the superficial extension of this area, the downward bend of the vessels resembles very much an irregular vena terminalis, but that part of the area is altogether plunged beneath the surface of the yolk.

The paddle-like shape of the legs is no longer recognizable here; but both the anterior and posterior limbs are now divided into a cylindrical and distinctly jointed leg, and a terminal, rounded, and expanded foot, yet without the least sign of toes. This obtains not only among the higher families of Turtles, (Pl. 15, fig. 13,) but even among the lowest, the Chelonioidæ, as the next phase will show more distinctly (Pl. 6, fig. 24). This is rather remarkable as regards the Chelonioidæ, since in them the foot and leg become eventually, by a gradual metamorphosis, (Pl. 6, fig. 24, 22, 21, 20, 18, 13, 15, 14, 16,) apparently fused into one very large elongated paddle. A comparison of the feet of an advanced

[1] Comp. p. 284.