

The area pellucida, (Pl. 14, fig. 2, 2a; Pl. 18, fig. 8,) and the space to a considerable extent beyond it, are much more sunk than in the last stage, (p. 557, Pl. 16, fig. 6,) so as to correspond to the increased size and expansion of the allantois. The area vasculosa covers at least one half of the yolk mass (Pl. 18, fig. 8). The fork of the vena afferens, and the portion of the vena terminalis and of the omphalomesenteric vessels next to it, (Pl. 14, fig. 2a,) have sunk below the surface of the yolk mass, but yet not so far as to be invisible. In another instance (Pl. 14, fig. 2) the vena afferens ( $r$ ) itself, and at least one half of the vena terminalis, ( $r^1$ ,  $r^1$ ) have sunk considerably below the level of the vascular area, and retracted within its former boundary. What appears to be a circular vessel in the place of the one that is now depressed is the line along which the vessels of the area vasculosa bend upon themselves, and plunge into the yolk mass, in order to join the vena terminalis ( $r^1$ ,  $r^1$ ).

The yolk sac has decreased considerably in bulk, and occupies about two thirds of the cavity of the shell, the other third being filled by the embryo and its envelopes. The lungs (Pl. 24, fig. 3, 3a) of an embryo four days younger than this are much more developed; their transverse diameter is much greater at the base than at the apex, so that they resemble in figure the adult state; and the cavity of each is subdivided into two compartments, (fig. 3a, 2, 2,) namely, the original one, running along its whole length, as in the last stage, (fig. 2a, 2,) and another, much shorter, which branches from the main channel at the base of the lung, and trends toward the ventral side of the animal. The epithelial layer, (fig. 3a, 2, 2,) which lines this double chamber, is much thicker than in the last phase, not only in the lungs, but also in the windpipe, (2'') especially where the two bronchiæ branch (5). The cavity of the lungs is as yet very narrow, resembling a mere slit along their length.

Up to this period the head has exhibited moderate proportions when compared with the trunk of the embryo, so that its size has not attracted any particular attention. In the next stage, (Pl. 15, fig. 13; Pl. 16, fig. 3; Pl. 18a, fig. 4, 5; Pl. 24, fig. 11,) however, there appears a great disparity between the different regions of the body. The head has increased to an enormous size when compared with its former proportions, so that it almost equals the whole trunk; in fact, if an outline of the head and neck be laid over that of the trunk, the two will be found to be nearly equal in size. The breadth of the head, including the eyes, far exceeds that of the body, although the latter has broadened also. (See Pl. 6, fig. 25, which, although belonging to a totally different family from that of fig. 13, Pl. 15, is yet identical as regards the proportions of the body, so far as a small figure may serve for such a comparison.) The encephalon, just above the eyes, is much broader than has been noticed heretofore, (Pl.