

phase of the embryo of *Thalassochelys* (Pl. 6, fig. 20) with the very broadly webbed feet of any of the *Trionychidæ* (Pl. 6, fig. 1-6) may easily show that the dense, tough, and stiff paddle of the *Chelonioidæ* is not a retrograde metamorphosis tending to the embryonic simplicity of younger stages, (Pl. 18a, fig. 9,) but an excessive development of that which forms the soft web in *Trionychidæ*, and a hardening of its surface by the growth of closely set scales all over its surface.

In the next phase, (Pl. 14, fig. 1; Pl. 15, fig. 11, 12, 12a; Pl. 16, fig. 5; Pl. 17, fig. 4, 4a, 6; Pl. 21, fig. 22-26, 30; Pl. 23, fig. 1, 1a; Pl. 25, fig. 11,) the different regions of the brain (Pl. 23, fig. 1, 1a) are very distinctly marked out, with the exception of the olfactory lobe, (*c*.) which as yet hardly forms a sensible swelling. As a whole, the brain has about the same proportions as obtain among bony Fishes, excepting that it is strongly bent upon itself, and the hemispheres (*a*) are on a much lower level than the corpora quadrigemina (*b*). The crystalline lens of the eye has already its characteristic cells, (Pl. 21, fig. 30,) arranged in lines (*b*) and in concentric layers. The proportions of the body hold about the same relations to each other as in the last stage, excepting that the trunk is a little deeper in the region of the ventral opening. The back is more curved, the highest point of the arch being at the middle of the shield. The border of the shield is much lower, and does not run in a straight course from end to end, but curves downward, (Pl. 14, fig. 1; Pl. 16, fig. 5,) reaching lowest just above the heart, and has a rather sinuous outline. The ribs are more apparent, (Pl. 14, fig. 1,) and terminate in a broad, wavy band at the edge of the shield, each wave being opposite to a rib. The breadth of the shield is greater, and has a broader ovate shape (Pl. 6, fig. 23). The edge of the abdominal aperture projects considerably, and simultaneously broadens, so as to form a trumpet-shaped umbilical passage (Pl. 14, fig. 1; Pl. 15, fig. 12; Pl. 16, fig. 5) for the allantois and neck of the yolk sac. The allantois (Pl. 15, fig. 11) is more extended in the dorsal region of the embryo, and covers more of the yolk sac; it also embraces the whole trunk of the embryo, above and below, (Pl. 15, fig. 12, 12a,) but as yet leaves the head free. The parallelism of the arteries and veins of the allantois, mentioned in a former page, (p. 560; Pl. 18a, fig. 9,) is here (Pl. 15, fig. 11, 12) particularly noticeable, even to the tips of the smaller vessels. A more highly magnified view (Pl. 17, fig. 4, 4a) shows not only that this parallelism ceases among the very minutest vessels, the capillaries, but that the number of the latter is very large within a small space, and that they run in every possible direction. These two latter peculiarities are very different from what obtains in the superficial portion of the vascular area, (Pl. 15, fig. 11, 12, 12a; Pl. 16, fig. 5; Pl. 17, fig. 6,) where the minutest of the bloodvessels run in a more or less parallel direction to each other, and are comparatively far less