

larger outer, amniotic sacs, the latter no longer keeping the embryo suspended, this falls on its left side, (Pl. 13, fig. 2,) where it remains till a late period (Pl. 13, 14, 15, 16).

As the embryo increases in age and the body bends more and more upon itself, the amnios gradually follows less and less the contours of the lower side, and reaches across broader sinuses, namely, from the top of the head to the ventral opening, (Pl. 13, fig. 3; Pl. 14, fig. 4, 5; Pl. 18a, fig. 8, a^1 ; fig. 13, a^1) and from the caudal region to the posterior edge of the same opening (Pl. 13, fig. 2; Pl. 18a, fig. 8, a^2).¹ This separation from the surface, against which it formerly pressed, grows still more conspicuous, and soon the dorsal portion begins to raise itself above the back of the embryo, (Pl. 15, fig. 12,) and then the whole amniotic sac swells out, (Pl. 9c, fig. 3; Pl. 14, fig. 1, 3; Pl. 15, fig. 4, 5, 12; Pl. 18, fig. 9a,) as if distended with fluid, far beyond the outlines of the body, and thus becomes very conspicuous. Here then it is evident, that, at this age, the embryo remains in a curved position, by its own natural tendencies irrespective of its amniotic envelope. The distension of the amnios by the action of the infiltrated fluid would seem to indicate that there is a difference, at least in density, between the latter and that which is exterior to it, outside of the sac; else why should this endosmotic action take place? Unfortunately no investigation of these fluids has been made. Subsequently, in the latter stages of incubation, this distension subsides, and the amnios again closely embraces the body. In this condition it remains till the animal leaves its shell (Pl. 15, fig. 1, 2, 8, 8a, 9, 11; Pl. 18, fig. 10, 10a, 10b, 10c).

Synchronously with the changes described above, the lower opening of the body gradually narrows, and bears along with it the basis of the amnios, till finally the latter is attached to the ventral surface by a narrow isthmus, (Pl. 9c, fig. 3; Pl. 14, fig. 1; Pl. 15, fig. 4, 5, 12; Pl. 16, fig. 5,) springing from the trumpet-shaped abdominal projection.

The peripheric portion of the germinal amniotic layer still persists after its separation from its inner fold, the "amniotic sac," and may be observed even to the latest moment before the period of hatching of the little Turtle. It is recognizable not only by its relation to the other membranes, the embryonal membrane and the allantoidian sac, but also by its characteristic cellular structure, (compare Pl. 9a, fig. 28 with fig. 31, b , 31a, b ;) which will be described in another place, in connection with the histology of the various organs and of other parts of the body.

Growth of the Embryo. Immediately after the first steps are taken to bring out

¹ The largest figure of Pl. 18a marked 2, ought to bear the number 8.