

of capillaries, evidently evincing a high state of vascular organization and activity. As regards the other parts of the embryo, we have but little to notice that is new, except to point out the already minute ramifications of bloodvessels in the head, a feature not represented in the two embryos last mentioned. At this stage, the so-called vena terminalis also merits particular notice, inasmuch as it has now become as distinctly a vessel as it ever will be. In Turtles' embryos this vein never becomes a single perfect circular channel, as is the case among Birds. Wherever there appears to be a single large current, it will be found, upon close examination, to be made up of an infinite number of minute anastomosing vessels. (See Pl. 17, fig. 6, which, although a little older, exhibits the same appearance.) It will soon be seen that this peculiarity becomes a more prominent and readily noticeable feature in further advanced stages.

At this age, the diameter of the vascular area of this species, and of all the other species with oval eggs, is broader in one direction than in the other, its greater breadth corresponding to the longer axis of the egg. In globular eggs there are no such differences; but the vascular area always continues more or less circular. In their younger stages of development, oval eggs also have a circular vascular area, as is shown in the case of *Nanemys guttata* (Pl. 18, fig. 7). We have mentioned previously the growing tendency of the vessels of the vascular area to trend in a direct line from the point of their origin towards the vena terminalis. This tendency is now carried out to the utmost in this egg, so as to give to the vessels a stiff and rigid appearance (Pl. 16, fig. 6).

The next older stage (Pl. 14, fig. 2, 2a; Pl. 18, fig. 8; Pl. 18a, fig. 6-10; Pl. 24, fig. 2, 2a; Pl. 9e, fig. 8, 8a, 9, 9a; Pl. 19, fig. 4; Pl. 22, fig. 9) offers some new and remarkable features in addition to a further development of the different organs.

The brain of this embryo (Pl. 14, fig. 2a; Pl. 18a, fig. 9; Pl. 22, fig. 9, *b*, *b*¹) has become strongly lobed, especially in the region above the eyes, where it is so prominent as to give the head a crested appearance. The lower side also projects downwards between the eyes, (Pl. 22, fig. 9, *c*), where it constitutes the optic lobe. The dorsal vertebræ reach to the tip of the tail (Pl. 14, fig. 2a). They have so approximated their opposite halves (Pl. 9e, fig. 8, *f*, fig. 8a, *f*¹) as almost to inclose the spinal marrow (fig. 8, *c*, fig. 8a, *e*) in a perfect tube. The chorda dorsalis (fig. 8, *g*, 8a, *g*, 9, *g*, 9a, *g*) is still very conspicuous, and appears to have increased in diameter. The musculo-cutaneous layer (Pl. 9e, fig. 8, *p*, *p*¹, fig. 8a, *p*, *p*¹) is separated into two portions, namely, an outer (fig. 8, 8a, *p*) or dermal layer, and an inner (fig. 8, 8a, *p*¹) or musculo-costal layer. The end of the head below the eyes is quite pointed (Pl. 14, fig. 2a). The eyes are very prominent (Pl. 14, fig. 3; Pl. 18a, fig. 7, *k*, and fig. 9; Pl. 22, fig. 9, *c*). The retina (Pl.