PART III.

lowed on their under surface, (fig. 6a, a,) and, in combination with the kidneys, (fig. 2, b, fig. 6, b,) are arched on the upper surface corresponding to the arch of the shield above them. The duct (fig. 2, c, fig. 6, c, fig. 6a, c, c", fig. 6b, c) of the Wolffian bodies lies in a furrow between the latter (a) and the kidneys, (b,) and is very conspicuous from its size, so that it might be mistaken for an oviduct, were it not that it is just as large in the male (fig. 6, c, fig. 6a, c, fig. 6b, c) as in the female. It empties (fig. 6a, c") on the ventral side of the cloaca, (4,) and at the base of the allantois (o). The kidneys (fig. 2, b, fig. 6, b, fig. 6a, b, fig. 6b, 6) are considerably increased in size, and have a very distinct outlet (fig. 6, e, fig. 6a, e) on the dorsal side of the cloaca, (l,) and between the bases of the anal pouches (g). The uriniferous tubes of the kidneys are very much convoluted, a feature by which they may be very readily distinguished from the Wolffian bodies, in which the uriniferous tubes run parallel from the outer to the inner edge. The genital organs (fig. 6a, n, fig. 6b, n) are not so slender and tapering as in the last stage, and each has a distinct vas deferens (fig. 6, f, fig. 6a, f) in the male. The anal pouches (fig. 6, and 6a, g) are developed into large, deep sacs, which have nearly the proportions of those of the adult. The cloaca (fig. 6, and 6a, 1) is very broad and deep, and is flattened on the lower side. The allantois (Pl. 13, fig. 1; Pl. 15, fig. 4, 5, 6; Pl. 16, fig. 2; Pl. 18, fig. 9, 9a) occupies a little more than one half of the egg, and completely envelops the embryo. The umbilical opening is surrounded by a very large and broad trumpet-shaped border (Pl. 16, fig. 2b).

The toes are quite long and prominent, (Pl. 15, fig. 4; Pl. 16, fig. 2b; Pl. 18, fig. 9, 9a; Pl. 25, fig. 8,) and separate in all those Turtles which are not webfooted when adult.

The yolk sac does not always contain a uniformly yellow mass, but more or less of its superior portion is of a semi-albuminous nature (Pl. 13, fig. 1). In this stage the yolk sac fills the lower half of the egg up to an horizon, (h_i) which is nearly the same with the greatest diameter of the latter. By peeling off the shell and varnishing the shell membrane, the whole internal organization of the egg around the embryo may be as plainly seen as represented on Pl. 13, fig. 1. In fig. 10, Pl. 15, there are two embryos in one egg, but one is much smaller than the other, and considerably less developed; the larger one, however, belongs to the stage just described.

In the succeeding stage (Pl. 14, fig. 13; Pl. 15, fig. 7, 8, 8a, 9; Pl. 18a, fig. 1; Pl. 20, fig. 4, 4a; Pl. 23, fig. 3; Pl. 24, fig. 10, 10a, 10b) the embryo has assumed an erect position, having the right and left sides of the body on the same plane, and parallel with the horizon. The head is proportionately smaller, more elongated, and narrower; excepting among the Chelonii, in which it remains oblong, the shield is nearly circular.