The Schneiderian Membrane. A short time before the Turtle is hatched, the cells of the Schneiderian membrane are very irregular, (Pl. 19, fig. 19, *a*,) and small, when compared with those of the olfactory lobe (fig. 18). They are very faintly and minutely granulated, and contain a comparatively large, irregular, clear, homogeneous mesoblast. In water they readily swell up to a much larger size, (fig. 19, and *b*,) and become more globular; but the mesoblast still retains its homogeneity and clearness.

The Pia Mater. At the earliest stage mentioned above, (p. 603,) the surface of the olfactory lobe was covered by a thin layer of elongated, fusiform, faintly granulated cells, in which no mesoblast was visible (Pl. 19, fig. 18a). Although these cells differ very much from those of the pia mater, over the hemispheres, at the time the young is hatched, (see Pl. 19, fig. 16, *a*, *b*, *c*,) yet, as they lie close upon the olfactory lobe, they cannot belong to any other membrane than the one in question. At the time the animal is born, the pia mater is quite thick, at least where it covers the hemispheres, and is composed of three layers of cells. The outer layer (Pl. 19, fig. 16, *a*) is quite uniform, and consists of large, pyriform, and excessively hyaline cells, each containing a large, very faint, homogeneous mesoblast. The two lower layers (*b*, *c*) consist of much smaller cells than the last. These cells are broad and irregularly prismatic, with faint, granular contents, but withal transparent. There was no mesoblast to be seen. At the point where this section was made, a bloodvessel (*d*) with an excessively thin wall, belonging to this membrane, passed along its lower surface close against the hemispheres. The blood corpuscles are slightly altered by the action of water.

The Chorda Dorsalis. At the stage when the dorsal vertebræ have developed along nearly the whole length of the body, (Pl. 12, fig. 5, 8, 9, 9a, 11, and p. 548,) the chorda dorsalis consists of elongated, fusiform, and very transparent cells, (Pl. 19, fig. 5c,) so arranged that their longer diameters trend transversely to the axis of the chorda. Their wall is very thin, but yet sharply defined. Soon, however, the walls increase in thickness, (Pl. 19, fig. 22,) and the cells broaden and become irregular in outline. At the time the brain begins to divide into lobes, (Pl. 18a, fig. 14, p. 552, 553,) and just before the heart has become three chambered, the cells of the whole length of the chorda (Pl. 19, fig. 5d) are very large, and more or less irregularly polygonal. Those at the surface (fig. 5, 5a, 5b, *a*) are very irregular, and in many instances as broad as long; they have a moderately thick wall, and mutually follow each other's outlines. In this way, lying close together, they form a continuous, smooth membrane, which incloses the looser interior cells. Where the wall of a single cell is in profile, (fig. 5, *a*, fig. 5a, *a*,) it is clear that there is no membrane exterior to the one formed by their