so as to render them polygonal. At the surface (fig. 16b) of the hemispheres, they exhibit a pretty uniform contour. They have a perfectly globular shape, very transparent, faintly granular contents, and a single mesoblast, varying in size so as either to fill two thirds of a small cell, (fig. 16c, *a*,) or a small proportion of the larger ones. At the first glance, the mesoblast appears to be granulated; but closer scrutiny shows that this is owing to the granular contents of the parent cell, which lie in its immediate neighborhood. By the action of water, the cell wall becomes very irregular, (fig. 16c, *b*, *b'*, *c*, *c'*,) and the thickness of the wall of the mesoblast more sharply defined, and collapsed. At the time the Turtle is hatched, the cells (Pl. 19, fig. 16, *c*, 16a) are slightly polygonal, and mutually compressed. Each one has faint, granular contents, a large, single, clear mesoblast, and a minute, sharply defined, dark, oily-looking entoblast.

The Olfactory Lobes. The cells of the olfactory lobe, of the earliest stage noticed, were taken from the same brain as those of the medulla oblongata, the hemispheres, and the Schneiderian membrane. They are not so large as those (Pl. 19, fig. 16b, 16c) of the hemispheres, nor are they transparent, and the granular contents are darker (Pl. 19, fig. 18). The large, single mesoblast is perfectly homogeneous, but darker than the granular contents about it. A caudate cell (*a*) may be seen here and there, but very rarely. The action of water renders them irregular, like those of the hemispheres.

The Olfactory Nerve. At the time the young Turtle is hatched, the cells at the posterior end of the olfactory nerve, close to the olfactory bulb, are rather large, slightly elongated, and sharply polygonal (Pl. 19, fig. 17, 17a, 17b). They are very transparent, and have homogeneous contents, and each has a single, large, faint mesoblast. The walls have considerable thickness (fig. 17b). The elongation of the cells is in the direction of the axis of the nerve; this seems to indicate a tendency among them to arrange themselves in a linear series previous to the formation of nerve tubules. This tendency is carried out at the anterior end of the nerve, where there is no mistaking the relation which the nerve cells (Pl. 19, fig. 15) bear to the future nerve tubules. Here the cells are arranged in parallel lines, and have a more or less cylindrical shape, according as they are more or less united end to end, with the longer diameter running in the same direction as the axis of the nerve. Between the united ends of some of them, (fig. 15. *a*, *b*,) the walls are nearly obliterated, so that conjointly they form perfect tubules, the mesoblasts in some cells remaining distinct, to mark the position of the metamorphosed cells; whilst among others the walls stretch half-way across; and again others, though very seldom, have entire walls. They are quite transparent, although filled by scattered granular contents. The mesoblasts are identical with those at the other end of the nerve, but much fainter.