

it is closely pressed upon it. That part of the ciliary processes ( $e^2$ ) which covers the posterior surface of the iris ( $e^1$ ) is very probably identical with that which is said to "exist over the posterior surface of the iris and the projecting ends of the ciliary processes"<sup>1</sup> in the human eye. Between the membrana iridis (fig. 8,  $e^1$ ) and its posterior lining, ( $e^2$ ) there is a layer of black pigment, which extends backward till it reaches the posterior border ( $e^3$ ) of the ciliary processes, where it becomes one with the pigment layer ( $f$ ) which lines the choroidea proper ( $e$ ). It is evident, that, whatever may be their connections in the higher animals, in the Turtle, even when full grown, the ciliary processes (see Pl. 22, fig. 7,  $e^2$ ,  $e^3$ ) are not an integral prolongation of the choroida, but a separate layer, with a layer of pigment between the two membranes. The pigment layer (fig. 8,  $f$ ) just mentioned as lining the choroidea, ( $e$ ) and its prolongation, the membrana iridis, ( $e^1$ ) constituting the so-called pigmentum nigrum, forks at the posterior edge ( $e^3$ ) of the ciliary processes, and sends off a layer along the inner surface of the latter ( $e^2$ ). The pigmentum nigrum is loosely coherent to the choroidea, yet presses very closely upon it. It disappears where the choroidea sheathes the optic nerve.

In specimens preserved in alcohol, this layer, the pigmentum nigrum, has a leaden aspect with a peculiar lustre, and clings to the membrana Jacobi ( $g$ ) in preference to the choroidea, ( $e$ ) when the former is lifted off from the latter. The papillæ of the outer surface of the membrana Jacobi, plunging into the pigment layer, adhere to it much more firmly than the smooth surface of the choroidea. Next within the pigmentum nigrum ( $f$ ) is the retina, ( $g$ ,  $g^1$ ,  $h$ ) which, in a section of its thickness, appears transversely striated over nearly its whole extent,<sup>2</sup> and seemingly divided into three layers. These apparent layers are the expressions of so many different strata of peculiar nervous cells, which will be described in detail hereafter; it may suffice here to say that they are not distinct layers. The outermost stratum ( $g$ ) separates so easily from the inner one, that it has, until within a few years, been considered as a distinct membrane, under the name of "membrana Jacobi." In the Turtle, this peculiar stratum projects singly beyond the anterior edge ( $i^1$ ) of the rest of the retina, and, pressing against that part of the pigmentum nigrum which covers the anterior extension of the ciliary processes, ( $e^2$ ) extends half-way to the edge of the iris ( $e^1$ ). It is much thinner here than where it is connected with the inner strata of the retina; in the latter position it is quite thick, and uniform throughout ( $g$ ). The exterior surface of the membrana Jacobi has a beautiful golden orange color, of

<sup>1</sup> Sharpey and Quain's Human Anatomy, London, 1848, vol. 2, p. 921.

<sup>2</sup> By mistake these striae of the retina were not drawn perpendicular to its thickness, in front.