

*Retina.*—The rods are frequently granular on their surface, and their general form is very irregular from faulty preservation, but in other respects the retina is in fairly good condition. The *rods* are of two distinct kinds, as described by Greeff,—the *cylindrical* and the *club-shaped*. Each rod consists of a clear cortex or shell and finely granular contents. The cortex is probably chitinous in nature, as Greeff has shown. The transverse striation which he has described in the inner part of the cortex I only find in the cylindrical rods (Pl. XXXIVA. figs. 6), and the appearance seems to be quite an artificial one, due to a dotted coagulation on its inner surface. There is never any appearance of cleavage into disks, as occurs in the transversely striated outer segments of the rods of vertebrates. The contents of the rod consist of a clear substance containing fine granules, considered by Greeff to be protoplasm. He also describes in this substance a central axial fibre, which he thinks is connected with the inner end of the nucleus of the columnar cell-layer, and pigment-granules derived from the pigment-layer of the retina. In none of the specimens I have examined has this pigment been prolonged more than a very short distance from the outer ends of the rods, and I have never satisfied myself of its presence inside the rod, but think rather that it simply adheres to its outer surface. I shall have to refer to this subject later on when I consider the pigment-layer. I have been unable to satisfy myself of the existence of a central axial fibre. The contents of the rod seem to me to be of a vitreous nature, since it behaves in the same way towards staining fluids, and is of a similar refractive power. If this substance were really protoplasmic it ought to stain deeply with logwood, but this reagent has very little effect upon it.

The cylindrical rods are very long and thin, measuring 0·07 mm., and are situated at the centre of the fundus. The club-shaped rods vary much in breadth, probably from the manner of preservation. They do not generally show the half-ring appearance on cross-section as described by Greeff. On the contrary, I believe them to be formed by the sides of a ridge-like elevation being folded inwards so as to meet at their edges and enclose a space which becomes filled by a prolongation from the vitreous (Pl. XXXIVA. fig. 5). I only once observed the half-ring appearance, and this seemed to occur quite near the outer end of the rods only, judging by the size of the cross-sections.

At the extreme periphery, and also immediately anterior to the part of the retina possessing rods, these latter structures are represented by a thin clear layer lining the inner surface of the pigment (Pl. XXXIIIA. figs. 16, 18). Near, but not quite at, the periphery, again, the rod-layer consists of highly refracting tapering processes connected with the inner surfaces of round dark aggregations of pigment (Pl. XXXIIIA. fig. 17).

Just outside the rods we find the *pigment-layer* of the retina. Its appearance varies according to the part of the fundus which is examined. Posteriorly it forms a tolerably uniform layer about 0·01 mm. thick, of a light reddish-brown (burnt-sienna) colour, with numerous vertically elongated deposits of darker pigment-granules. Each of these