"Amongst the pelagic forms the most conspicuous are the Alciopidæ, a group which seldom comes under the eye of the British zoologist, and which are so delicate that great care is necessary in preserving them. One of the best memoirs on these Annelids has recently been published by R. Greeff, and most of the forms collected by the Challenger agree generally in structure with those described by him. Two or three new forms however occur, one (*Alciope antarctica*) frequenting the surface of the Antarctic Ocean in company with *Cleodora*, and the others in the warmer waters near Honolulu. The first mentioned has its head formed almost wholly by its two great eyes, which project prominently outward in front of the constricted neck. Moreover, the corneæ of these eyes are invisible from the dorsum, being so placed that they look outward and downward. The anterior feet have the form of large globular processes. Another (*Alciope quadrioculata*) is characterised by the presence of four eyes, two occupying almost the entire central area of the head, with the corneæ directed outward, while two others, somewhat rudimentary, look outward, forward, and slightly downward. The third form (*Nauphanta*) with massive lateral lamellæ, somewhat resembles *Notophyllum*, one of the Phyllodocidæ, the head however bearing two great eyes with the corneæ directed outward.

"The presence of large eyes has hitherto been associated with the Alciopidæ, but the explorations of the Challenger have made us acquainted with a similar condition in a closely allied group, viz., the Phyllodocidæ. This new form (*Genetyllis oculata*), instead of being a surface form, frequents a depth of 500 fathoms near the Pacific entrance of the Celebes Sea, south of Mindanao. In the form of its body and the size of its eyes it resembles an *Alciope*. The eyes (fig. 214) occupy most of the head, only a small triangular space being left anteriorly and posteriorly. The large transparent corneæ look outward, downward, and forward, and are surrounded by a belt of brownish pigment. The minute anatomy of these organs, as well as those of the Alciopidæ, has been carefully investigated by Dr. Marcus Gunn, one of the oculists of the Moorfields Hospital, London, and he finds that the head is composed of little more than the eyes and a great median nerve-mass, with which the retinæ of both eyes are continuous. It is interesting that the *Ioida*-forms (sexual buds) of the Syllidæ with large eyes are also pelagic, occurring near the surface of the ocean amongst *Sagittæ*, Copepods, Nauplii, Zoœæ, and the minute free young and ova of fishes.

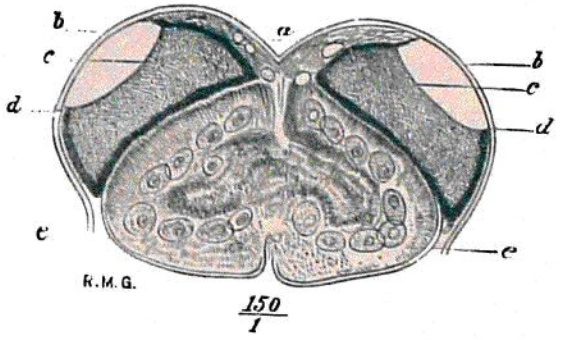

FIG. 214.—Horizontal section through both eyes of *Genetyllis oculata*, showing their relation to the cerebral ganglion (somewhat diagrammatic). *a*, Junction of the anterior part of the sclerotic,—the oval spaces are blood-vessels cut across; *b*, the cornea; *c*, finely granular, clear, structureless material, probably of the nature of vitreous; *d*, pigment-layer of retina; *e*, the large cerebral ganglion.

"In viewing the collection of Annelida brought home by the Challenger as a series of families, it is found that while the Euphrosynidæ present no new forms, the Amphinomidæ