embedded in a fissure, varying in shape in different species, and are reduced in size and modified in form, the capacity of vision being confined to two small points, one on the upper or dorsal, and the other on the lower or frontal surface (Pl. XIII. fig. *a*), and in each it exists only to a limited extent, the organ being without the power of movement. Yet in the young, as may be assumed from the appearance of the embryo of *Willemœsia* (Pl. XX. fig. 2), as observed previous to the escape of the brephalos from the ovum, the ophthalmopoda are globular in form, and distinctly pedunculated.

It is interesting to find in the same geological epoch some specimens of *Eryon* that are blind, and others with large and probably well-developed organs of vision. But it is not more remarkable than that living and adult specimens of *Cambarus* should be found with the ophthalmopoda in all stages of development, from the well-formed eyes of those that live in the waters of America that are open to the sun, to the blind forms dwelling in subterranean caves where light never penetrates. The loss of vision is not necessarily a disadvantage to a species, while its surroundings, both in relation to food and companionship with others necessary for its existence, are convenient, since sight is useless where there is no light and the absence of the organs of vision may lessen the risk to life while the conditions are permanent, but should these be withdrawn or vary, the want of sight must be detrimental in the struggle for existence and thus be a prelude to the extinction of a species.

The species of the Eryonidæ live at the bottom, where their food is abundant; for in the ancient as well as in the modern seas the myriads of organic forms constantly falling to the bottom from the extensive area of waters above in which they live, constitutes a continuous and unfailing supply of food that comes within their reach; and thus organs of vision are not necessary for the purpose of seeking food. Thus the Eryonidæ live and renew their species under conditions where other forms might perish.

I have previously remarked that the ophthalmopoda in the Eryonidæ are depreciated in character; but it should also be noticed that the departure in the recent genera takes place, as shown in Pl. XIII. *a*, in a direction that resembles that seen in *Benthesicymus* and *Gennadas* among the Dendrobranchiata (Pl. LVII. fig. 1*a*, and Pl. LIX. fig. 1). This is a point of considerable interest, since it is the only instance in which the secondary eye or ocellus is observable in the Trichobranchiata. In the division Dendrobranchiata the ophthalmopod is generally compressed, and the ophthalmus possesses a reniform shape, which in some species has the margin on the upper and inner surface projecting somewhat beyond its limit and forming an imperfect ocellus, or small secondary visual organs, so situated that it is capable of being useful as an organ of vision when the animal otherwise is at rest.

The ophthalmopoda in most of the species are projected at the extremities of a narrow transverse rod that probably represents the ophthalmic somite, and is sometimes