

that body, but its capsule also. The lens proper (Pl. 22, fig. 9, c^2) is formed by a hollowing of the solid mass which fills the depression in the retina, so as to leave a thin layer or outer wall attached to, and on a level with, the surface of the head, and a deeper layer or wall, from which a thick swelling (fig. 9, c^2) protrudes into the cavity (c^1) between these two walls. The outer wall (fig. 9, c) contains the elements of the conjunctiva and of the cornea, but we have not ascertained what becomes of the inner wall; it may turn out to be the iris.

The two walls of the retina (Pl. 22, fig. 9, d , d^1) have separated from each other; the outer one (d^1) remains closely pressed against its orbit, but the inner one (d) forms a partition behind the crystalline lens, (c^2) and separates it from the cavity of the retina, which contains the vitreous humor. The fold of the retina, at the lower side of the eye, continues to grow narrower, but elongates as the eye increases in size, thus forming a narrow, white streak, (Pl. 24, fig. 11,) from the crystalline lens to the point of attachment of the optic nerve. The crystalline lens becomes a perfectly independent body, and develops its cells in a shape and with an arrangement peculiar to itself (Pl. 21, fig. 30, a , b). As yet there are no eyelids, (Pl. 15, fig. 13,) and the eye is unprotected, as in Fishes. In a little later phase, (Pl. 18a, fig. 3,) the skin adjacent to the eyes begins to encroach upon their anterior surface, in the form of a narrow rim. At this time, too, the white streak on the lower side of the eye has disappeared; at least, it cannot be seen externally, since several new coatings have been developed over it. The narrow rim around the eyes grows broader, (Pl. 18a, fig. 1,) and assumes more distinctly the appearance of an eyelid, and the eyes become less prominent. Soon the rim ceases to broaden at two opposite sides of the circle which it forms, but continues to increase in the intermediate space, (Pl. 25, fig. 10,) so as to produce a broad, oval opening between the approaching opposite edges, the upper half of the rim forming the superior eyelid, and the lower half the inferior eyelid. The eyelids continue broadening until they touch each other, and may be opened or shut at the pleasure of the embryo (Pl. 15, fig. 3). They never become agglutinated to each other, as happens among Birds and Mammals. The state of the membranes of the eye at this stage has already been sufficiently described (p. 570, Pl. 21, fig. 29, 31, 32-32d). Beyond this we have not had time to trace the development of the eye, and must leave the subject for future investigation.

At the time the Turtle was hatched, a very full examination of the structure of the eye was made, the results of which we will now proceed to give. On account of the softness of the different parts of the eye at that age, it was thought advisable to begin with some preliminary studies upon specimens hardened