in Saurians.[1] The helix is a simple, round, membranous sac, with a closed fenestra rotunda, and a communication with the saccus vestibuli by means of a membranous canal. A very long columella is attached to the fenestra ovalis, which itself is closed by an opercle. The cavitas tympani is divided into two parts by a bony septum. The tunica tympani is only attached to the os quadratum. Between the two lamellæ of this membrane lies a cartilaginous plate, into which the columella is inserted.

The Eye. This organ is larger in proportion and more movable in Turtles than in other Reptiles.[2] We find in the constitution of this organ a great similarity with Birds. Not only are the protecting membranes of the eyeball in Turtles and Lizards, in contradistinction to Snakes, very much as in Birds, there being two eyelids and a membrana nictitans, but we find in Turtles also the same bony framework in the cornea as in Birds. This bony ring has been erroneously ascribed also to Crocodiles.[3] It does not exist either in these, or in Ophidians, or in Saurians, but singularly enough we find it again in all those huge Reptiles of past ages known as Plesiosauri and Ichthyosauri. The iris of Turtles is always colored, generally dark, but in some red, or even milk-white. We see, however, that this color varies much in one and the same species, as, for instance, in Cistudo virginea, in Ptychemys concinna, etc. The form of the pupil, which is vertical and elliptical in many Snakes and Saurians and in all Crocodiles, is round in all Turtles, as it is in Birds. There is, however, no pecten in the vitreous body, as in all Birds and in many Saurians; the vitreous body itself is very large. In the orbita we find two well developed glands, namely, a lachrymal gland above the bulbus, and another, a Harderian gland, behind and inside.

The Nose. While the sense of seeing, and particularly that of hearing is highly developed in Turtles, the sense of smelling is much less so; and while the former two senses exhibit in them a degree of perfection which we find elsewhere only in warm-blooded animals, Turtles do not at all stand above the level of other Reptiles with respect to the latter sense. In explanation of this we may perhaps say that the slow rhythm of the respiration, which is common to all four orders of Reptiles, does not facilitate the admission of odoriferous materials into the nose, and that it is for this reason that we find the nerves and bones of this organ

[1] In Duméril et Bibron, Erpétologie générale, vol. i., p. 399, this membrane is erroneously said not to exist in Turtles.

[2] There is one single exception to this statement; in the South-American Matamata, (Chelys fimbriata,) the eyes are remarkably small. This Turtle, however, so peculiar also in other respects, and particularly in the structure of its head, forms unquestionably a family for itself.

[3] Already Sœmmering, and later, Rymer Jones, in Todd's Encyclopædia of Anatomy and Physiology, vol. iv., p. 314, have made this statement, which we must deny, in accordance with the observations of Tiedemann, Stannius, and our own.