

The *depressor of the lower eyelid* is a powerful muscular band, the origin of which is situated on the floor of the orbit, under cover of the Harderian gland. The muscle arises from the basi-sphenoid bone opposite the orbital process of the os quadratum. Its fibres pass obliquely forwards and outwards, to be inserted into the lower eyelid, as well as into the conjunctival membrane behind it. The origin of this muscle lies between the Harderian gland and the pterygoid muscle. It acts as a depressor of the lower eyelid.

The *muscles of the third eyelid* or *membrana nictitans* are arranged exactly as in other birds.

Such is also the case as regards the *ocular muscles*, the two oblique muscles arising together from the anterior and internal wall of the orbital cavity, while the recti muscles at their origin surround the optic foramen.

The *lachrymal gland* in *Eudyptes chrysocome* is of a somewhat oval form, and rather smaller than a garden pea. It lies in contact with the eyeball, under cover of the post-orbital process. From it a single duct passes off which extends downwards and forwards, to open upon the surface of the palpebral conjunctiva immediately behind the posterior commissure of the eyelids.

The *Harderian gland* is extremely large. It occupies the entire floor of the orbital cavity, resting upon the upper surface of the palate bone and pterygoid muscle. Its upper surface is in contact with the globe of the eye. The duct passes off from the anterior extremity of the gland, and, winding round the inner side of the eyeball, opens upon the conjunctival membrane covering the ocular surface of the *membrana nictitans*, opposite the anterior commissure of the eyelids. Thus, in the Penguins as in other birds, there are two glands in connection with the orbit, the duct of one of which opens behind and the other in front of the eyeball. The secretion of both is carried off by means of the lachrymal duct.

The *lachrymal duct* is single throughout. It commences at an orifice situated on the anterior commissure of the eyelids, and passes obliquely forwards and downwards to gain the nasal fossa, where it terminates close to the orifice of the duct of the nasal gland. These two ducts pass forwards parallel with one another, but while the duct of the nasal gland is deeply situated, and perforates the anterior margin of the orbit before opening into the nasal fossa, the lachrymal duct is superficially placed, and lies immediately under cover of the skin.

According to Owen,¹ the lachrymal duct in birds commences by two apertures at the nasal canthus. Such is not the case in any species of Penguin.

The *nasal gland* in the Penguins is of very large size. It occupies the deep crescentic groove situated on the upper surface of the skull, close to the margin of the orbit. Widest behind, the nasal gland diminishes to a point anteriorly, and from this extremity of the gland the duct arises. The duct passes forwards and downwards, lying in a

¹ *Anatomy of Vertebrates*, vol. ii. p. 144.