

Variations in the Sciatic Plexus.—In all the species examined, with the exceptions of *Eudyptes chrysocome* from Tristan, *Spheniscus minor*, and *Aptenodytes longirostris*, the ninth, tenth, and eleventh lumbo-sacral nerves pass outwards together, and have no connection with the sciatic plexus. In *Eudyptes chrysocome* from Tristan, however, the ninth nerve unites with the preceding nerves to form the sciatic plexus. In *Aptenodytes*, again, only a portion of the ninth nerve enters the sciatic plexus, the remaining portion being distributed along with the tenth and eleventh nerves. In *Spheniscus minor* a portion of the eighth nerve also enters the sciatic plexus, its remaining portion and the whole of the ninth being distributed along with the tenth and eleventh lumbo-sacral nerves.

COCCYGEAL NERVES.

The coccygeal nerves escape from the spinal canal between the moveable coccygeal vertebræ. Of them I could only distinguish four, although, seeing that the moveable coccygeal vertebræ are eight in number, it appears probable that there may have been seven coccygeal nerves. However this may be, the coccygeal, together with the twelfth and thirteenth lumbo-sacral nerves, form long slender branches, which pass backwards parallel to one another, and freely communicate by means of numerous cross branches. In this way a sort of plexus is formed, which, occupying the inferior surface of the caudal vertebræ, is for the most part concealed by the depressor caudæ muscle of the same side. Escaping along the outer border of the depressor caudæ muscle, the slender trunks of these nerves pass backwards to be distributed partly to the muscles of the tail, and partly to the skin of that region.

In *Spheniscus minor* I was able to distinguish five separate coccygeal nerves.

THE SYMPATHETIC NERVE.

The principal cord of the sympathetic system of nerves is arranged in the Penguins as in other birds. In the neck it accompanies the vertebral artery through the osseous canal formed by the perforated transverse processes of the cervical vertebræ. The ramifications of this system of nerves I was unable to trace.

ORGANS OF SENSE.

THE EYE AND ITS APPENDAGES.

The Muscles of the Eye-lids.—Both eyelids of the Penguins are provided with muscles, by the joint action of which the aperture between them is enlarged.

The *elevator of the upper eyelid* consists of a broad, flat, but very thin plate of muscular fibres which arise from the fascia covering the orbital surface of the insertion of the ocular muscles. The fibres pass transversely outwards, and are inserted into the deeper surface of the upper eyelid. By the contraction of these fibres the upper eyelid is raised.