

pronounced than in the Penguins. To the presence of these cervical curves is attributable the fact that the Penguins, when on *terra firma*, are able to maintain the peculiarly erect position which every member of the group assumes. The absence of power to produce the flexures in question would, it is evident, render the maintenance of the erect attitude impossible.

## MUSCLES OF THE WING.

### (a) MUSCLES INSERTED INTO THE SCAPULA.

#### 1. *Trapezius*.

*Trapezoïde*, Vieq d'Azyr, 1772, p. 630, No. 1.

*Trapeze*, Cuvier, vol. i. p. 262.

*Aufzieher des Schulterblattes*, p. 154, No. 9.

*Der Kappenmuskel*, Wiedemann, No. 2, p. 84.

*Retracteur superficiel*, Meckel, vol. vi. p. 22, No. 1.

*Cucullaris*, Schoepss, p. 90, No. 6.

*Cucullaris*, Selenka, vol. vi. p. 107, No. 32.

*Trapeze*, Gervais and Alix, p. 21.

*Attachments*.—The trapezius arises from the spinous processes of the dorsal vertebræ, from the second to the fifth inclusive, by means of a flat aponeurotic tendon. The fibres pass outwards with a slight obliquity forwards, and are inserted into the anterior half of the vertebral border of the scapula, as well as into the posterior recurved extremity of the clavicle.

*Action*.—This muscle approximates the scapula to the vertebral column. In this action it co-operates with the fibres of the rhomboid muscle.

*Relations*.—The trapezius is concealed by the anterior portion of the latissimus dorsi. Its deeper surface rests upon the rhomboid muscle.

*Nerve supply*.—A special branch from the first cord of the brachial plexus.

*Variations*.—In *Eudyptes chrysocome* from Kerguelen, I found the trapezius arising from the spines of the three anterior dorsal vertebræ, as well as from those of the last two cervical vertebræ. In this bird, as well as in *Pygosceles taniatus* and *Spheniscus minor*, the insertion of the trapezius is confined to the anterior third of the vertebral border of the scapula.

*Remarks*.—Gervais and Alix found the trapezius in *Eudyptes chrysolophus* attached to the spines of the last two cervical vertebræ, as well as to those of the dorsal vertebræ above mentioned. They do not mention the insertion of this muscle into the recurved extremity of the clavicle. The observations of Meckel and of Schoepss with regard to this muscle in the Penguin agree with my own.