

present description in the lumbo-sacral series. I have before adverted to the difficulty in determining to which series that vertebra really belongs.

The caudal vertebræ do not differ much in different species. In *Spheniscus demersus*, *Spheniscus magellanicus* and *Spheniscus mendiculus* there are nine caudal vertebræ, while in every other species examined there are only eight. In *Pygosceles* the transverse processes of the caudal vertebræ are relatively longer than in other species. In *Pygosceles*, *Spheniscus demersus*, and *Spheniscus magellanicus* hypapophyses are not developed in connection with the first, second, third, or fourth caudal vertebræ. The transverse processes of the first caudal vertebra of *Pygosceles* differ from those of other species, inasmuch as they do not abut against the pelvic bones.

The table shows the number of vertebræ possessed by every species of Penguin examined, with the exception of *Spheniscus demersus*, *Spheniscus magellanicus* and *Spheniscus mendiculus*, all of which possess an additional caudal vertebra. In these, therefore, the total number of vertebræ is forty-three.

Cervical.	Dorsal.	Lumbo-sacral.	Caudal.	Total.
13	9	12	8	42

LENGTH OF VERTEBRAL COLUMN FROM ATLAS TO EXTREMITY OF PYGOSTYLE, IN INCHES.

<i>Eudyptes chrysocome</i> , from Tristan,	.	.	.	.	15½
<i>Eudyptes chrysocome</i> , from the Falklands,	.	.	.	.	16½
<i>Eudyptes chrysocome</i> , from Kerguelen,	.	.	.	.	15½
<i>Eudyptes chrysolophus</i>,	.	.	.	.	18
<i>Spheniscus demersus</i>,	.	.	.	.	20
<i>Spheniscus magellanicus</i>,	.	.	.	.	19¼
<i>Spheniscus mendiculus</i>,	.	.	.	.	15
<i>Spheniscus minor</i>,	.	.	.	.	12½
<i>Pygosceles tæniatus</i>,	.	.	.	.	21
<i>Aptenodytes longirostris</i>,	.	.	.	.	26½

THE RIBS.

The vertebral segments of the ribs are ten in number in every species of Penguin, and increase in length from the first to the ninth. Gervais and Alix¹ figure only nine in *Eudyptes chrysocome*, and Reid² found the same number of ribs in the Patagonian Penguin. The diversity of statement between these authors and myself is explicable by the fact that the tenth vertebral rib is extremely slender in every species, and that its proximal extremity does not articulate with the vertebral column. In consequence of its small size and its want of attachment to the vertebral column this rib is apt to be

¹ Ostéologie des Manchots, pl. xvi. figs. 4 and 5.

² Proc. Zool. Soc., 1835, p. 134.